

Intersections of human rights and customs: a livelihood perspective on water laws

Bill Derman, Anne Hellum and Pinimidzai Sithole

The right to water was adopted as a human right in General Comment 15 by the Committee on Economic, Social and Cultural Rights. It provides a new framework for law and policy supplanting the Dublin Principles which have too often been understood in the African context to mean water with the 'right' price. Does a human rights approach to water, especially in rural contexts, speak to the multiple ways in which men and women share and manage water? We examine if and how local norms and practices include water within a broader right to livelihood. Field research in Zimbabwe demonstrates the existence of a right to water and livelihood which can be responsive to gender and poverty. We suggest the incorporation of local norms and practices within water management laws and policies at regional, national and local levels.

Keywords: human rights, local norms, gender discrimination, livelihood, water, Zimbabwe

Introduction

Water forms part of a broad right to life that underlies rural livelihoods in Zimbabwe. It is expressed in the Romwe Catchment in southern Zimbabwe as water is life (*hupenyu*) (Nemarundwe 2003), in Shamva District as drinking water should be for everyone (Matondi 2001) and in Mhondoro Communal area as one can't deny water to anyone (Derman and Hellum 2002). The newly enunciated human right to water accords well with the practices and norms within most, if not all, of Zimbabwe's communal and resettlement areas. The idea expressed in Zimbabwe that to deny water is to deny life indicates the profounder truth that there can be no human life without water. To deny people water denies them life. The United Nations has determined that the International Covenant on Economic, Social and Cultural Rights (ICESCR) includes a right to water. In its global report on water *Water for People, Water for Life*, (United Nations Educational and Scientific Organization) acknowledges that a right to water had been implicitly recognized in the General Comment on the right to health (2000), in the Convention on the rights of the Child, (CRC 1989), and in the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW 1979). The previous global consensus around the Dublin principles with its emphasis upon water as an economic good seems to be receding in face of a growing movement toward recognizing a human right to water. The Millennium Development Goal aimed at halving the number of people without clean drinking water emphasizes the critical importance of clean water. The World Bank, which had been in the forefront of arguing that water was not a human right but an economic good that required proper financing (*Bridging Troubled Waters* 2002, *Water Resources Sector Strategy*, 2003 et. al.), has shifted toward examining human rights and equity. It would seem that the many elements of the global system are catching up to villagers.

Water reform involves changing how a nation's waters are managed and understood. Zimbabwe's water reforms were conducted principally with the four Dublin principles¹ in mind rather than the human rights frameworks also available. We have found that a common feature of customary norms and practices as observed in a wide range of contemporary studies of natural resource management in Zimbabwe's rural areas and international human rights law is the emphasis on resources that are vital for livelihood, such as food and water. We have identified principles underlying access to water and land and have been surprised at the strength of normative frameworks despite a literature which emphasizes contestation and overlapping spheres of authority. In turn, this has led us to examine if and how these normative local frameworks are consonant with some principles of the right to livelihood and right to water now embodied in a range of international instruments. This paper connects researchers' observations on the practice of a right to water in rural Zimbabwe with how that right could be considered within the broader context of a right to livelihood. We suggest that the conceptual division made between land and water does not fit with local conceptions of livelihoods or the growing evidence of the importance of the land-water interface which includes natural

wetlands and irrigation systems. We have chosen to probe these issues in Zimbabwe due to the processes of water reform and the range of studies investigating water management along with our own research.² We have not included in any depth the medium and long-term implications of the current fast-track land reform underway for the right to water and the right to livelihood (Derman and Hellum 2003, Hammar et al. 2003, Hellum and Derman 2004a & b).

This article proceeds as follows: In Part I we detail the emergence of the right to livelihood and the right to water in United Nations, African Union and other international and national documents. We then turn in Part II to a discussion of Zimbabwe's water reform and water management to set the context for the third part. In Part III we examine local norms and practices with respect to rights to livelihood and water. While we note how little the new laws have affected these, we propose greater attention to those elements of local practice which are best conserved. In the conclusions, we examine how human rights with its obligations to protect, respect, and fulfill set new responsibilities for states to accomplish. This is a significant challenge in contemporary Zimbabwe with its divergence from internationally accepted human rights standards.

Part I: Water as a part of the human right to livelihood

When Zimbabwe passed its new water acts the human right to water had not been explicitly recognized, although it had been included in some conventions (see below). In Africa, the right to water had been incorporated into national instruments in the region. For example, the right to water is embedded in the Bill of Rights in Section 27 (1) (b) of the South African Constitution. It states that everyone has the right to have access to sufficient water. Article 12 of the Zambian Constitution maintains that the State shall endeavor to provide clean and safe water. According to the Article 90 of the Ethiopian Constitution every Ethiopian is entitled, within the countries resources, to clean water. The preamble to the Namibian Sixth Draft Water Resources Management Bill of 2001 states that the Government's overall responsibility for and authority over the nation's water resources and their use, including equitable allocation of water to ensure the right of all citizens to sufficient safe water for a healthy and productive life and the redistribution of water. In more general terms, the human right to water derives from the right to life, the right to livelihood and the right to health. It has evolved through piecemeal international, regional and national law-making. It is recognized in Article 24 of The Convention on the Rights of the Child (CRC) explicitly stating that the child has a right to clean drinking water (Article 24). Article 14.2 h of the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) states that rural women have a right to enjoy adequate living conditions, particularly in relation to housing, sanitation, electricity and water supply, transport and communications on an equal basis with men. Article 15 of the Protocol to the African Charter on Human and Peoples Rights on the Rights of Women in Africa on the right to food³ obliges States Parties to "provide women with access to clean drinking water, sources of domestic fuel, land and the means of producing nutritious food". The human right to water is also recognized in the United Nations Convention on the Law of Non-Navigational Uses of Watercourses.⁴ The SADC Protocol on Shared Water Course Systems of 1995 emphasizes equitable utilization of shared water courses applying existing customary international law and community interest taking into account, among other things, the environmental, social and economic needs and the impact of intended uses of the water course (Article 2).

Safe, adequate and available water

A major shift in underlining the significance of a right to water was the General Comment No.15 of July 2002 UN Committee on Economic, Social and Cultural Rights whereby the Committee concluded that there is a human right to water embedded in article 11 in the Convention on Economic, Social and Cultural Rights (CESCR) defining the right to livelihood as including adequate food, clothing and housing. The term including, as understood by the Committee, indicates that the catalogue of rights encompassing the right to livelihood is not exhaustive but must be adapted to changing social and economic concerns such as the global water crisis (Eide 2001). Concluding that water is a human right the Committee emphasizes the interdependence between human rights in general and between access to water and the right to health in article 12,1, the right to food in article 11 and the right to life and human dignity enshrined in the International Bill of Human Rights.

Recognizing that water is required for a range of different purposes that are essential for human life, the Committee on Economic, Social and Cultural rights signaled three elements; water must be adequate for

human life, it must be safe and available. It also must be available on a non-discriminatory basis. Adequate water, according to the Committee, is far broader than just clean drinking water since it encompasses water for personal and domestic uses and the necessary water resources to prevent starvation and disease (6). The scope and extent of the human right to water is defined through its link to the right to life, the right to health and the right to food. In the view of the committee and especially important for this paper is that the sustainable access to water resources for agriculture is necessary to realize the right to adequate food (General Recommendation No. 12 (1999). Disadvantaged and marginalized farmers (women and men) would be entitled to special attention to have equitable access to water and water management systems, including sustainable rain harvesting and irrigation technology.

The state obligation to respect, protect and fulfill

The obligation to respect, protect and fulfill rights cuts across urban and rural water supplies and services. The obligation to respect includes a duty to refrain from interfering arbitrarily with customary or traditional arrangements for water allocation, unlawfully polluting water or destroying water services and infrastructure during armed conflicts (G.R. 15, 23 & 24). Taking note of the duty in article 1, paragraph 2, of the Covenant, which provides that people cannot be deprived of its means of subsistence, States parties should ensure that there is adequate access to water for subsistence farming and for securing the livelihoods of indigenous peoples. This aspect of the human right to water is also expressed in the Statement of Understanding accompanying the United Nations Convention on the Law of Non-Navigational Uses of Watercourses (A/15/869 of 11 April 1997), which affirms that in determining vital human needs in the event of conflicts over the use of watercourses special attention is to be paid to providing sufficient water to sustain human life, including both drinking water and water required for production of food in order to prevent starvation.

The obligation to protect requires states parties to prevent individuals, groups, corporations or other agents acting under their authority from interfering with the right to water. States parties are under an obligation to prevent private water service operators from compromising the right to equal, safe and affordable water in terms of regulatory systems including independent monitoring, public participation and penalties for non-compliance (G.R. 15, 23 & 24). Taking the human right to water beyond the nation state the Committee on Social and Economic Human Rights in General Recommendation 15 also recommends that United Nations agencies and other international organizations concerned with water including all United Nations organizations (World Health Organization, etc.) should cooperate effectively with States parties in relations to the implementation of the right to water. The Committee also recommends that the international financial institutions, notably the International Monetary Fund (IMF), the World Bank, the African Development Bank, etc. should take into account the rights to water in their lending policies, credit agreements, structural adjustment programs and other development projects. The emerging literature on the human right to water by the World Bank and the World Health Organization (WHO) suggest a paradigmatic change (WHO 2003, Salman 2004).

As regards the duty to fulfill States parties must, to ensure that water is affordable, adopt measures including: a) use of a range of appropriate low-cost techniques and technologies; b) appropriate pricing policies such as free or low-cost water; and c) income supplements. Any payment for water services has to be based on the principles of equity, ensuring that these services, whether privately or publicly provided, are affordable for all, including socially disadvantaged groups. Equity demands that poorer households should not be disproportionately burdened with water expenses compared to richer households (G.R. 15, 26 & 27). This has implications for the implementation of the user pay principle which has become ubiquitous in urban and rural settings.

Non-discrimination

States parties are also obliged to ensure that the right to water is enjoyed without discrimination on the grounds of sex, class, color religion or political opinion. States parties are to ensure that new laws, policies and programs do not deny this right either *de jure* or *de facto* to selective portions of the population. Inappropriate resource allocation can lead to indirect discrimination. Investment should, according to Comment 15, not disproportionately favor expensive water supply services and facilities that are only available to a small percentage of the population. CEDAW and Protocol to the African Charter on Human and Peoples Rights on the Rights of Women⁵ in Africa substantiates the principle of non-discrimination in relation to water, land and food security. Simply having gender neutral laws in a situation where resources (time, money, land, water, for example) are unevenly distributed between men and women, the CEDAW and

the Protocol oblige States parties to take measures to eliminate both direct and indirect discrimination.⁶ Indirect discrimination means any distinction, exclusion or restriction made on the basis of sex which has the effect that they impair or nullify, on a basis of equality between men and women, human rights in the political, economic, social, cultural, civil or any other field (CEDAW Article 1).⁷ The concept of indirect discrimination encompasses development policies and programs that on their face value are gender-neutral but in practice are biased against large groups of female users in comparison with male water users (Hellum 2005). Policies, programs and plans for improvements and investments in water, that are based on a division between domestic and productive water use, will often have a discriminatory effect. Female small farmer's water uses, for example to irrigate vegetable gardens from shallow wells on *dambos* or boreholes, have been seen as unproductive by conventional economic standards. Seemingly gender neutral investment policies targeted towards productive water uses have, as a result, often disproportionately favored expensive water supply services controlled by men. In accordance with Article 26 of the Protocol to the African Charter on the Rights of Women in Africa states parties are obliged to undertake to adopt all necessary measures and in particular shall provide budgetary and all other resources for the full and effective implementation of the rights.

Part II: Zimbabwe's water laws and water management system

The core of Zimbabwe's water reform rested on increasing access to water while ensuring the productive use of water.⁷ New participatory structures were created to increase access to water management decision-making. These are called Catchment and Catchment Councils which are based in Zimbabwe's seven hydrological zones. In addition, a new parastatal was established – ZINWA - to shift water management expenses from government to users and to increase the productive use of Zimbabwe's waters. In Zimbabwe, prior to the Water Act of 1998, large-scale commercial farmers controlled Zimbabwe's waters through a water rights system - first in time, first in line. This often made it difficult for new appropriations to be made to black small-scale farmers who had great difficulty in finding the resources to obtain water rights and to negotiate the bureaucracy to secure those rights.

Under the Act all water is vested in the President and no person can claim private ownership of any water. In presenting the first reading of the new draft Water Bill, Attorney General (now Minister of Justice) Patrick Chinamasa emphasized that:

What the existing legislation has done is that the water is the President's water but the President then put in legislation to give permission to people to exploit it and that is what is peculiarly known as the water right. (Zimbabwe Parliamentary Debates 1998, p. 1566)

In defending the abolition of the concept of private water Chinamasa also asserted the common Zimbabwean understanding of water:

Water is a public resource. It is a gift from God. None of us here are rain-makers, and that includes commercial farmers. The rainmaker is God. He provides His people and that water forms part of the hydrological cycle. (Zimbabwe Parliamentary Debates, p. 1562-63)

This is consistent with Zimbabwe's history as a centralized state while appearing to incorporate new water-management global policies (Derman, Ferguson and Gonese 2001). The 1998 water legislation transferred most national planning functions from the Department of Water Development to the new parastatal ZINWA with oversight from the Ministry of Water Development and Rural Resources. ZINWA is funded through the sale of water behind government dams, the provision of water to cities and the levying of water charges to large-scale users. Management of Zimbabwe's waters are to be shared with the new stakeholder organizations of Catchment Councils and Subcatchment Councils.⁸

Zimbabwe's waters are divided into two categories - commercial water and primary water. Historically primary water was an introduced concept stemming from a residual, non-reflective category in the earliest Southern African water laws. The first regulation of water was by the Order in Council, 1898, Section 81 pertaining to the British South Africa Company. It required the company to ensure that the natives or tribes had a fair and equitable portion of springs or permanent water. In 1927 the positive requirement of fair and equitable is changed to any decision that substantially effects the requirements for primary use of water by Tribal Trust Land (TTL) residents be approved by the Board of Trustees for Tribal Trust Land (Hoffman

1964). However, participation by ‘tribal’ and later communal area residents in water decision-making was nil.

Primary water is defined in the Water Act of 1998 as water used for: 1) domestic human needs in or about the area of residential premises, 2) animal life, 3) making of bricks for private use and 4) dip tanks.⁹ In sum, it is not restricted to drinking water but seen as an integrated part of livelihood necessities such as food and housing in the communal areas. The state is obliged to respect and protect the right to primary water as embedded in the Act. What is meant by “domestic human needs in and about the area of residential premises” is, however, not clear. New innovative forms of commercial cropping emerging within the common property regimes in the communal lands, such as gardening for consumption and sale, represent a challenge in how Catchment Councils when issuing water permits draw a dividing line between commercial and primary water uses. These uses render problematic the division between commercial and primary water. Under the new Water Act of 1998, it is only water used for commercial purposes that requires a permit in terms of Section 34. Commercial waters definition depends upon use - water used for purposes including agriculture, mining, livestock, hydroelectric power, etc. It follows from the ZINWA Act Section 41 that only permitted water is subject to the user pay principle in terms of the new water levy.¹⁰ Thus rural primary water users do not have to do so.

One Catchment Council, The Mazowe, debated what constitutes the difference between commercial and primary water use. The Council Chairman suggested a technological answer: if the water is moved by hand it is primary water, if it is moved by machine then it will be considered commercial. The Catchment Manager from ZINWA present at the meeting indicated that as of yet, ZINWA had not decided what the guidelines should be in deciding whether water use was primary or commercial.¹¹ This view was contested by villagers from Bangira in Mhondoro Communal Lands who argued that they would refuse to pay for water moved by a pump to provide their vegetable gardens with water. A couple who had worked hard to establish funding for the dam so as to raise the living standard of their own and other families argued that since the surplus from the gardens was used for livelihood essentials, such as clothes, school-fees or medicine, the water use should not be seen as commercial.

This lack of conceptual and policy clarity applies to the thousands of boreholes currently used in Zimbabwe. ZINWA’s policy was to charge borehole owners for water because borehole water is no different than stream or river water. It also, like all water, belongs to the Government. On the other hand, the Presidential Land Review Committee under the Chairmanship of Dr. Charles Utete recommended that levying water from boreholes should be stopped because “it discourages investment in water resource development and the enhancement of production on farms through irrigation (Vol. I 2003: 177). In a special study on water resources and irrigation development in the post fast track land reform era commissioned by the Utete Committee primary water uses are defined as mainly for domestic use such as drinking, cooking and washing and small-scale garden irrigation is not included (Manzungu Vol. II: 59).

These different conceptualizations do not sit well with CESCERS’s definition of water as a part of the right to livelihood in General Recommendation 15. This recommendation emphasizes that the sustainable access to water resources for agriculture is necessary to realize the right to adequate food. Local management systems as described earlier cut across the commercial/primary division. In our view, human rights based approach calls for a clearer definition of primary water uses that transcends clean drinking water and includes the legitimate concerns of poor small scale farmers.

While such legal clarifications may be undertaken by the stroke of the pen, the CESCR also obliges states to take positive steps to fulfill the human right to water. Such positive steps call for long-term economic commitments implying that internal and external economic resources are invested in infrastructure that are beneficial for the poor in all of Zimbabwe’s rural areas, not just the newly resettled ones.¹² Despite the emphasis upon equality of access in the initial phases of water reform, most attention has been devoted to increasing the number of commercial water users. Zimbabwe’s new water management system was based on the premise that fees for commercial water use would be used for the development of water resources. The areas under irrigation in Zimbabwe have diminished greatly since the irrigation systems on the former commercial farms have not been sustained and older government sponsored irrigation schemes have been unable to continue in light of the harsh macroeconomic climate following the fast track land reform. According to Manzungu the total number of hectares under irrigation has fallen from 186,600 hectares to

120,410 hectares. This loss of 66,000 irrigated hectares has primarily been in the formerly large scale commercial farm sector (Manzungu Vol. II: 89).

The institutional separation of water supply from water resource management issues in the communal lands is another factor that has inhibited water development. Under the new water policy the Integrated Rural Water Supply and Sanitation Program remains separate from the above while continuing to be tasked with the supply of providing safe, protected drinking-water supplies for all rural water users and to ensure that every household had at least an improved, partially enclosed latrine. This tended to alienate primary water users who are the vast majority of Zimbabwe's water users (Manzungu 2004: 13). Water supply programs have been especially vulnerable to government service shrinkage and donor withdrawal. It is poorer women who rely heavily on water sources that are free of charge, such as borehole water for their gardens; find themselves caught in the gaps and mismatches between these different policies and institutional structures. Their water needs fall outside the scope of both the water and sanitation program and the water reform policy aimed at larger scale users.

There has been a dramatic increase in the numbers of Zimbabwe's poor. Zimbabwe has one of the highest rates of inflation in the world combined with a shrinking economy - shrinking in the sense of a series of macroeconomic measures including gross domestic product, economic growth, formal sector employment, etc. Indeed its index has fallen from a high in 1985 (UNDP p. 243) to 90th of 94 developing countries, almost the very bottom. In the past several years Zimbabwe has fallen from a medium human development nation to a low one (Human Development Report 2003). It was ranked 145th in the world in its human development index and it is this high only because of high rates of schooling. Due to Aids it is projected to have only a .2% annual growth rate - from 12.8 million people in 2001 to 13 million in 2015. 1/3 of the population is reported to be sick with Aids or HIV positive. (P. 260). Life expectancy at birth has fallen from 56 to 33.1. The indicator of inequality, the Gini Index is growing.¹³ In this context there needs to be a much greater coordination between water policies and poverty alleviation strategies.

Under the present circumstances laws, policies and practices that prioritize the needs of the poor have great urgency. The current emphasis upon commercial water may be appropriate for many users but not for the growing number of communal and resettlement farms engaged in small-scale irrigation.

Part III: Local practices and norms

The new Zimbabwean water policy maintains a single uniform water management system. It overlooks that access to water is, like most other natural resources, regulated by international, national and customary norms. The regulations framing the new water management system are molded on a large scale commercial farming model without giving much thought to the needs of the traditional as well as the new and innovative forms of cropping that gradually are emerging within the common property regimes in the communal lands. In communal areas and resettlement schemes both men's and women's access to water still relies heavily on customary use rights (Pinstrup-Andersen 2000:13). These customary use rights have in part been protected as described above by the concept of primary water. In this section of the paper we explore if there might be an explicit or implicit recognition of a right to livelihood at least with respect to access to water for livelihood purposes in Zimbabwe's rural areas.

Towards this end, we have since 1999 been studying water management in three villages of Bangira, Murombedzi and Kaondera in the chieftainship of Mashamayombe in Mhondoro Communal Land (Derman and Hellum 2002, Hellum and Derman 2004a).¹⁴ This local qualitative study was part of a wider study of national water reform in Zimbabwe that has been undertaken by the Center for Applied Social Studies (CASS) at the University of Zimbabwe. We chose this area due to a rapid and recent increase in tobacco growing, a relatively high number of private wells and the existence of a dam project. Apart from dry season vegetable gardens located along streams, rivers, seasonally flooded grasslands (*vleis*) and boreholes, agriculture in this area remains primarily rain fed maize and cotton with an expansion of irrigated tobacco. Because of these trends in commercialization, we expected to find decreasing open access to the area's water resources. We made the assumption that because the deep and open wells were located on homesteads and that there was a great increase in tobacco production that these wells would become increasingly "private".

The right to safe drinking water

Our study in Mhondoro suggested that at the local level, as in human rights law, there is a right to clean drinking water. Villagers demonstrated a surprising degree of consistency over time and space in upholding the norm that no one can be denied clean drinking water (Derman and Hellum 2002). The obligation to share drinking water extended to wells which were privately dug and on basically private land. In one village, a private borehole paid for by one household, rapidly became a village source of drinking water. In another village a borehole built by the Zimbabwe Tobacco Association for irrigating tobacco seedlings became an important water drinking source for the entire village. In a third village in the study area, the private well of a widow served as a source of drinking water for almost the entire village. Based on the norm and practice of sharing, access to drinking water extends to boreholes constructed for principally commercial, dedicated or private use. The duty to share increased rather than decreased during drought periods. Such sharing cut across kinship and village borders. It has been upheld during the accelerating economic and political crisis. Water users and well-owners reported that they had never paid or received money or give gifts. To breach the norm of providing drinking water meant risking sanctions or being the target of witchcraft.¹⁵ Universal access to drinking water in Mhondoro points to a morally based duty rather than a negotiable and reciprocity based notion of property often pointed to as a characteristic feature of African customary laws (Berry 1993).¹⁶ Applicable to men and women, insiders and outsiders, it also points to a notion of equality and non-discrimination.

These findings are consistent with our readings of a series of Zimbabwean monographs on natural resource management including water, wetlands, forests and land (Matondi 2001, Sithole 1999, Derman 1998, Nemarundwe 2003, Walker n.d. and Cleaver 1998). The empirical record from communal areas in Shamva, Mutoko, Chiduku, Dande, Masvingo, Guruve, and Matabeleland all suggest that water for drinking can and should be made available for all. Nemarundwe in her doctoral thesis reports from the Romwe catchment in Chivi District, South Zimbabwe, that drinking water is made available to all no matter what the source of water. Available water sources include boreholes, riverbed wells, rivers, wells, collector wells and dams. No matter the tenurial status, whether publicly or privately owned the water sources are available for drinking water. In a powerful and clear manner she writes: 'Because water is considered *hupenyu* (life), there has been no case of denying another village access to water during drought, although rules of use are enforced more stringently during drought periods (2003: 108). The study points to actual incidents where this general ideal was challenged. One example is a well owner who prevented others from accessing his well. Two days after he locked the gate to the well he found a dead dog. In response to this the well owner later unlocked the gate (2003:113) In a similar vein Prosper Matondi who carried out his research in an area of resettlement farmers and two irrigation schemes in Shamva District near Bindura, the Provincial Capital of Central Mashonaland Province, found that drinking water remained available for all despite growing scarcity of both land and water resources. In parallel fashion, Bevlyne Sitholes research in Mutoko and Chiduku communal areas in Eastern Mashonaland Manicaland summarizes farmers' views on water as follows: 'Water should be available to all, rich or poor, but the person who impounds the water is the one who makes the river dry (Sithole 1999: 195). Frances Cleaver's study in Nkayi communal land in Matabeleland suggests that water user rules that limit poor peoples access to water are invalid. She observed that poor women got away with breaking the rules that limited water resource to certain individual users (1998: 357).

Water for gardens

Almost every family in the three villages in Mhondoro had gardens when we began our study in 1999. A quantitative survey of water management in the area demonstrated that ninety per cent of households had some form of dry season garden requiring hand irrigation¹⁷. The family gardens were usually the main responsibility of the women. The crops in the gardens are kovo, rape, onions, tomatoes, beans, ground nuts, maize, sugar cane and cabbage. There are also fruit trees including bananas, papayas (pawpaw), and mangos. They rely heavily on the common pool water resources including rivers, boreholes, deep wells and shallow wells. Gardens are often situated on land that is either seasonally flooded or holds water from the rainy season long into the dry season. The gardens are as much a source of income as of food for the family. The income is often used for meeting household needs including food, education, clothing and medical needs. As in Eastern Mashonaland and Manicaland, gardens are fairly recent. A number of elderly people, such as the headman in Kaondera and his wife and the grandmother of our local research assistant, told us that they were the first villagers to start gardening in the 1950s. They were taught to grow vegetables by an agricultural extension officer in the colonial administration, at that time termed CONEX. People expanded their gardens after independence in 1980 as a response to the continuous rise in food prices. Gardening was also facilitated

by a government scheme that set out to increase and improve water supplies through inputs like free cement for wells. The Zimbabwean government began withdrawing from rural areas during the 1990s under the combined policies of structural adjustment and decentralization. People in Mhondoro, as local communities elsewhere, have since been left to find alternative economic sources for expanding water supply for drinking water, watering cattle and irrigation. The CASS survey indicated that 70 per cent of the households in the three villages had invested work and money in water including private wells and other water resources.

Our study from Mhondoro suggests that the right to water as part and parcel of rural livelihoods extends beyond the right to clean drinking water (Hellum 2005). Households who needed garden land were allocated appropriate land.¹⁸ They were mainly irrigated by women and children by means of common pool resources from nearby rivers or shallow wells on wetlands. Crops grown in these gardens generated income that paid for children's education, food, clothing and farm equipment and provides vegetables for household consumption and nutrition. In recent years of drought and economic hardship the produce from women's gardens are essential source of livelihood. In one of the villages everyone we interviewed stated they had obtained the headmans explicit or implicit approval to access land for gardens on *vleis* or close to rivers. The gardens, the Sabhuku said, were important sources of livelihood and self reliance. For this reason he had not taken action when people allocated themselves gardens without his permission. Another reason was fear of revenge in terms of bad spirits, *Angozi*. This suggest the existence of an underlying norm of sharing. A similar pattern was observed in another village where peoples gardens were moved from the wetlands to communal gardens close to a newly constructed dam. Everyone was granted land for gardens in this area. If the land allocated for the communal gardens was insufficient the headman saw it as his duty to allocate more land. None of the villagers we talked to had paid for the land. This suggests a wider right to livelihood that not is limited to clean drinking water but extends to access to garden land with available water sources. While the case of access to gardens with available water resonates a deep concern for livelihood it is, unlike the right to safe drinking water, not available on a universal and non-discriminatory basis. Outsiders do not have access and the land is, in principle, allocated to the male head of household on behalf of the family.

The right to water for gardens appears to be subject to greater contestation than a right to drinking water. Local communities will act to sanction breaches of these norms. For example, Nemarundwe, provides a short illustrative case of water conflict at a small dam between richer and poorer, women and men, livestock owners and non livestock owners (Nemarundwe 2003). During a drought year the dam committee chairman sought to stop villagers from planting gardens until it was clear that there was enough water for livestock. Garden project members protested indicating that such a move would disadvantage poor farmers who after all did not own livestock and depended on the irrigated plots for their livelihoods (2003: 166). The dam chairman proceeded to seal off (with the assistance of two other villagers) all outlet valves at the dam so that no water could flow to the garden. As a result he was challenged publicly by villagers. The dam chairman then let out all the water, until it was below the outlets. The dispute's resolution required external authorities to help sort out the conflict. The dam chairman was subject to a tribunal organized by the RDC and the NGO supporting the project. He was reprimanded and the villagers called for him to resign from the dam committee. However, he apologized to the project members and promised to cooperate with other farmers in conserving water resources.

Unlike sources of drinking water shallow wells for irrigation of gardens may be fenced off to protect the crops. Prosper Matondi's study from Shamva focused on the growing scarcity of arable land near water (Matondi 2001). As is the case throughout Zimbabwe, *dambo* gardens are located near the streams dissecting the *vleis* that also are used as grazing areas. However, over time they are used more for gardens than grazing. With the presence of livestock, gardens have to be fenced to prevent that animals eat the produce and drink from the well. The fencing of vegetable gardens along rivers or on wetland is common practice all over Zimbabwe. This suggests that land once is allocated for gardening, the land and the water available for irrigation becomes family property. Access to both land and water may as such be restricted on the basis of kin.

Dr. Bevlyne Sithole has produced the most detailed social science work on *dambos* in Zimbabwe (Sithole 1999). Her research was carried out in Mutoko (Mashonaland East Province) and Chiduku (Manicaland Province) communal areas. As in other *dambo* areas, these are locations for multiple uses including fruit trees, fish ponds, grazing areas, brick making, woodlots, sacred areas, and reed areas. Sithole documents increased desiccation of *dambo* areas and thus increased difficulties in using the *dambos* particularly in using

water for small-scale irrigation. According to Sithole (and also Matondi 2001) the main mechanism for sharing scarce livelihood resources under these conditions is subdivisions among kin within the household.

While the right to drinking water is afforded to everyone regardless of village belonging, kinship and marital status access to land with available water for gardening is as a main rule allocated to the male head of household on behalf of the family. Yet livelihood concerns crosscut the male status rule so as to make land available to single and childless women, widows and divorcees. While married women, due to these formalities, have been seen as landless Dr. Sithole, observed that women seem to be acknowledged by most men as owners of the garden (1999, p. 80).¹⁹ This strongly suggests that ownership within the family is not acquired through rules concerning family representation but by actual use and work on the land.

While accepted within and amongst local communities these norms are frequently overlooked and disregarded in development policies, projects and practices. In one of the largest resettlement projects in a communal area in the Zambezi Valley, Derman (1997) reports that women farmers could no longer maintain their dambo gardens since they were moved away from streams and rivers. Boreholes were provided for drinking water and watering livestock. There was no broader concern for livelihood as people were left to dig their own well gardens for vegetables. Some women continued walking long distances to keep up their gardens while other families invested in private wells. For many women the only solution was to use the scarce borehole water for irrigating vegetables. Because of the very dry conditions and livestock water requirements there are great pressures upon borehole which has meant that many women have had to give up or reduce their gardens.

The right to livelihood

As we have seen rural people in Zimbabwe see land and water as closely interconnected in fulfillment of livelihood needs. But livelihoods are no longer just about access and use of land and water in rural areas.²⁰ Access to basic livelihood resources such as health, food and housing also depend on cash. Like many rural southern African residents, Zimbabweans, are dependent upon remittances from kin in cities or abroad, or reliant upon their own engagement with paid jobs or market activities. Households and families are quite different and even in a one rural area there are significant differences between them in terms of reliance upon land and water. Yet, within the context of this mixed rural livelihood structure, *dambo* or wetlands cultivation has particular significance since they have grown in importance due to the unpredictability of Zimbabwe's rains, increased reliance upon cash crops and the possibilities of hand irrigation. *Dambo* garden cultivation is a recent phenomenon. For example, Sithole documents that *dambo* cultivation in Mutoko and Chiduku in Eastern Mashonaland and Manicaland stems from the establishment of mission schools and hospitals in the mid-twentieth century (1999: 140). In general, as found by Derman and Hellum, the major garden crops come first from large-scale commercial farms and then from agricultural extension during and after the colonial period. The mixed character of these uses and principles that are neither traditional nor modern show how rural people in their livelihood strategies draw on a wide variety of sources.

Both clean drinking water and access to land with available water is shared between and within village households on a day to day basis. The norm of sharing underlie trouble-less cases in terms of everyday life practice but it is also confirmed by ideal statements from villagers (what people say) and more importantly trouble cases both from our own, Namarundwe and Sitholes research. A number of incidents where people who had refused to share their drinking water were subject to revenge in terms of poisoning or death of animals points to the existence of spiritually sanctioned norms. Access to garden land remains relatively open compared to rain fed fields. Like water, denial of land for gardens was believed to bring with it supernatural sanctions. Villagers also took action through local dispute resolution agencies when someone broke the rules concerning water sharing both in relation to drinking water and water for gardens.

Our reading of Matondi, Namarundwe, and Sithole, who all focus on communal area water management, suggest that in situations of scarcity of common pool resources the norm of sharing is placed on the kin. This perspective seems highly appropriate and relevant since this scarcity has been created by the unequal divisions between land and water in the commercial farm sector and the communal and resettlement areas. The pattern was that rather than deny some families or households access to *dambo* land, the gardens were subdivided into smaller areas.

All in all these practices from different parts of Zimbabwe point towards the existence of a set of interrelated norms of sharing of land and water that are essential for livelihood. The widespread acceptance of these norms appears to be vital in local communities' ways of handling poverty and food security. These local norms and practices are resonated in the emerging human rights law seeing water as part of the right to livelihood in a broad sense encompassing both clean drinking water and adequate access to water for subsistence farming and for securing livelihoods.

These findings from Zimbabwe are not necessarily matched by the situation in other Southern African countries. Research on irrigation schemes, wetland and stream-bank gardens in Malawi by Anne Ferguson, Diamon Kambewa and Pauline Peters in the Likangala Basin point in a different direction. As throughout Africa, these wetland fields and gardens have become increasingly important because they are more water secure than upland fields and they can be sites for formal irrigation schemes. A key distinction made by the Malawi research team is between stream-bank gardens and wetlands cultivation.²¹ Stream-bank gardens tend to reside within the sub-lineages and clans of chiefly families. Peters contends that these should be viewed as family property rather than customary land (2004: 15). Due to the lands scarcity, rental of stream-bank land has been growing along with the level of rents. There is little or no stream-bank land left to allocate. Wetlands appear to have become valuable for cultivation much later than stream-bank gardens. They belong to villages and chiefdoms and thus access to them has been at the request of customary authorities. There has been a shift from symbolic gift-giving to obligatory annual payments that resemble rents. (Peters 2004: 15). The Malawi team argues that the new land and water policy documents for Malawi do not take into consideration stream-bank and wetlands gardens which are essential for rural livelihoods. This has also been the case in Zimbabwe.

Part IV: Conclusions and reflections

In principle, the human right to water and the right to livelihood embedded in international and regional African instruments protect the poor, women, children and families by setting standards that are binding for international, national and local policy, law and decision makers. To take these abstract principles down to people's realities on the ground tensions and gaps between international, regional, national and local norms and practices will have to be explored in different political, social and economic contexts. We suggest that such an emphasis could be used for an active research program to examine if and how research findings from Zimbabwe can be expanded to other regions and nations within SADC.

Primary water can be a starting point for national legislation and policies to include a right to water and a right to livelihood. The idea of a right to primary water for basic human needs including domestic, animal and house building functions is unique in the region. It has meant that such waters so far have been protected from the growing demand for 'user pay' which, according to the Water Act, is restricted to commercial water. However, the pressures upon a more privatized water sector, led by the Zimbabwe National Water Authority, to be self-financing in the context of a national economic crisis demonstrates the need for greater legal and political clarity for primary water. Priority should be increased on how to use primary water for socially beneficial and development purposes other than simply expanding commercial water use. Primary water enables the concept to be developed in the light of local concerns and the wider regional and international human rights laws.

Local discourses and practices of distribution and management of water speak to the emerging notion of water as a human right. Despite the recent origins of *dambo* cultivation and gardens, they have been utilized under a principle of a right of access to both land and water for livelihood purposes. The concept of livelihood, as locally understood, has responded to a changing social and economic environment by including sale of produce but with the understanding that it is for socially understood purposes including education of children, health expenses, clothing, house repair etc. along with the consumption of garden products. It cuts across a narrow distinction between commercial and primary water. From a local livelihoods' perspective, it makes little sense to make a distinction between garden products that are directly consumed by the family and products that are sold to provide for medicine, food or clothes. Once again rural peoples' decision making seems highly responsive and sensible in light of changing survival requirements and should guide laws and policies.

Neither the Zimbabwean land reform nor the water reform addresses how to assist those engaged in small-scale irrigation. The priority has been given to commercial waters and to redeveloping irrigation systems in what had been the large-scale commercial farming sector. In Zimbabwe, most communal area irrigation is outside of formal irrigation schemes. Neither the Zimbabwe water acts nor recent policy documents make any mention of how to support informal irrigation carried out in Zimbabwe's communal areas and increasingly in the former commercial farm lands. This has to do with the division between the development functions for communal and resettlement areas tasked to Rural District Councils and central government, water management functions given to Catchment Councils, ZINWA and the Ministry of Water Development and the rural water supply functions which are separate from the new institutions of water reform.

The current multi-level and multi-layered political and economic crisis in Zimbabwe poses challenges to using human rights as a framework for reform. Because international human rights are considered to be incompatible with the current Africanist directions of the Zimbabwean government neither the Covenant on Economic, Social and Cultural Rights, the Convention on the Rights of the Child nor the Protocol to the African Charter on the Rights of Women (among others) have been deemed irrelevant to the government's policies. Our research suggests that this dichotomous perception of African culture and human rights is false in so far as the rights to water and livelihood are concerned. It shows that prevailing norms and practices in communal areas and the emerging human right to water and livelihood provide common ground for a new framework facilitating active and direct support to small-scale (and often poor) farmers.

Some selected research and policy suggestions:

- Local water management strategies and principles be researched to see how they can be used to reformulate policy designed to reduce poverty in the region.
- In the longer term we suggest that water management incorporate the right to water and livelihood implied in 'primary water', embedded in local practice and the human right to water.
- Communal tenure rights be recognized for wetlands and small scale irrigation where appropriate and desired by farmers. Women in poor families rely heavily on common pool resources in terms of land and water for their gardens. Given the complexity but also tenuousness of women's access to land we suggest that a model of one size fits all ('formalization' or registration) may work to disadvantage women even further. We look forward to seeing several models with guiding principles drawn from the right to livelihood, right to water and the Protocol to the African Charter on the Rights of Women and CEDAW to be made available for communities to select ones most appropriate for them.
- Laws and policies must undergo a gender impact analysis in order to identify potential discriminatory effects. One problem is that water sources used by female small farmers, for example irrigation of vegetable gardens by borehole water, by conventional economic standards have been seen as unproductive. As a result of the gendered character of land and water uses, seemingly gender neutral investment policies have often disproportionately favored expensive water supply services controlled by men. This may lead to indirect discrimination in terms of both CEDAW and the Protocol of the Rights of Women to the African Charter.

References

- Berry, S. 2002. Debating the Land Question in Africa in *Comparative Studies in Society and History*. Vol.44 (4): 638-668.
- Bolding, A., Manzungu, E. and Zawe, C. 2004. Irrigation Policy Discourse and Practice: Two Cases of Irrigation Transfer in Zimbabwe in P. Mollinga and A. Bolding (editors.) *The Politics of Irrigation Reform: Contested Policy Formulation in Asia, Africa and Latin America*. Aldershot, UK: Ashgate.
- Bryceson, D., 1999. *Sub-Saharan Africa Betwixt and Between: Rural Livelihood Practices and Policies*. African Studies Center Working Paper 43. Leiden.
- Derman, B. 1997. How Green Was My Valley! Land Use and Economic Development in the Zambezi Valley, Zimbabwe in B. Isaac (editor) *Research in Economic Anthropology*. Volume 18. Greenwich, Ct: Greenwood, pp. 331-380
- Derman, B. 1998. Balancing the Waters: Development and Hydropolitics in Contemporary Zimbabwe in J. Donahue & B. Johnston (editors.) *Water, Culture and Power*. New York: Island Press, pp.73-94.

- Derman, B and Hellum, A. 2003. Neither Tragedy nor Enclosure: Are There Inherent Human rights in Water Management in Zimbabwe's Communal Lands in T. Benjaminsen and C. Lund (editors) *Securing Land Rights in Africa*. London: Frank Cass, pp. 31-50.
- Derman, B. and Gonese, F. 2003. Water Reform: Its Multiple Interfaces with Land Reform and Resettlement in M. Roth and F. Gonese (editors) *Delivering Land and Securing Livelihood: Post-Independence Land Reform and Resettlement in Zimbabwe*. Harare and Madison, WI: Centre for Applied Social Sciences, University of Zimbabwe and Land Tenure Center, University of Wisconsin. Pp.287-307.
- Dube, D. and Swatuk, L. 2002. Stakeholder Participation in the New Water Management Approach: A Case Study of the Save Catchment, Zimbabwe. *Physics and Chemistry of the Earth* 27: 867-874.
- Eide, A. 2001. The Right to an Adequate Standard of Living Including the Right to Food, in A. Eide. A. Krause & A. Rosas (editors.). *Economic, Social and Cultural Rights: A Text-Book* Dordrecht: Kluwer International
- Ferguson, A. and Mulwafu, W. 2004. Irrigation Reform on Malawi's Domasi and Likangala Smallholder Irrigation Schemes: Exploring Land-Water Intersections. Madison, Wisconsin: BASIS CRSP Final Research Report.
- Hammar, A., Raftopolous, B. and Jensen, S. 2003. *Zimbabwe's Unfinished Business. Rethinking Land, State and Nation in the Context of Crisis*. Harare: Weaver Press.
- Hellum, A. 2001. Towards a Human Rights Based Development Approach: The Case of Women in the Water Reform Process in Zimbabwe. *Law, Social Justice and Global Development*. University of Warwick Online Journal. Available at <http://elj.warwick.ac.uk/global/issue/2001-1/hellum.html>.
- Hellum, A. 2005. Family gardens, livelihood and the right to water: Exploring the gendered intersection of domestic and productive land and water uses in local, national and international law in A. Hellum, G. Steward, S. Ali and A. Tsanga (editors) *Human Rights: Interfacing Women's Realities and Plural Legalities*. Harare: Weaver Press.
- Hellum, A. and Derman, B. 2004a. Re-negotiating Water and Land Rights in Zimbabwe: Some Reflections on Legal Pluralism, Identity and Power. In J. Murison, A. Griffiths, K. King, (editors) *Remaking Law in Africa*. Centre for African Studies, University of Edinburgh, Edinburgh, pp. 233-260.
- Hellum, A., and Derman, B. 2004b. Land Reform and Human Rights in Contemporary Zimbabwe: Balancing Individual and Social Justice through an Integrated Human Rights Framework. *World Development* 32(10) pp. 1785-1805.
- Matondi, P.2001. *The Struggle for Access to Land and Water Resources in Zimbabwe: The Case of Shamva District*. Doctoral thesis, Swedish University of Agricultural Sciences, Uppsala.
- Manzungu, E. 2004. Water for All: Improving Water Resource Governance in Southern Africa. London: International Institute for Environment and Development Gate Keeper Series No. 113.
- Mtisi, S. and Nicol, A. 2003. Caught in the Act: New Stakeholders, Decentralisation and Water Management Processes in Zimbabwe. Sustainable Livelihoods in Southern Africa Research Paper 20. Brighton: Sustainable Livelihoods in Southern Africa Research Paper Series.
- Moore, D.S. 1995. *Contesting Terrain in Zimbabwe's Eastern Highlands: The Cultural Politics of Place, Identity and Resource Struggles*. Doctoral Thesis, Stanford University, Palo Alto, CA.
- Nemarundwe, Nontokozi. 2003. *Negotiating Resource Access: Institutional Arrangements For Woodlands And Water Use In Southern Zimbabwe*. Doctoral thesis, Swedish University of Agricultural Sciences, Uppsala
- Per Pinstrup-Andersen, P. 2000. Introduction in B.R. Bruns, and R. Meinzen-Dick (editors) *Negotiating Water Rights*. New Delhi: Vistaar
- Peters, P. 2004. Inequality and Social Conflict Over Land in Africa. *Journal of Agrarian Change* 4(3) pp.269-314. London: Blackwell.
- Peters, P. 2004. Informal Irrigation in Lake Chilwa Basin: Streambank and Wetland Gardens. BASIS Report. Madison, WI: BASIS CRSP.
- Salman, S. and McInerney-Lankford, S. 2004. *The Human Right to Water. Legal and Policy Dimensions*. Law, Washington, D.C.: World Bank.
- Schreiner, B. and van Koppen, B. 2003. Policy and Law for Addressing Poverty, Race and Gender in the Water Sector: The Case of South Africa. *Water Policy* 5: 489-501.

- Sithole, B. 1999. *Use and Access to Dambos in Communal Lands in Zimbabwe: Institutional Considerations*. A Thesis submitted in partial fulfillment of the requirements for a PhD at the Centre for Applied Social Sciences, University of Zimbabwe, Harare.
- Sustainable Livelihoods in Southern Africa (SLSA) Team. 2003a. *Decentralisations in Practice in Southern Africa*. Capetown: Programme for Land and Agrarian Studies, University of the Western Cape.
- Sustainable Livelihoods in Southern Africa (SLSA) Team. 2003b. *Rights Talk and Rights Practice: Challenges for Southern Africa*. Capetown: Programme for Land and Agrarian Studies, University of the Western Cape.
- United Nations Development Programme. 2003. *Human Development Report: Millennium Development Goals: A Compact Among Nations to End Poverty*. New York and Oxford: Oxford University Press.
- UNESCO. 2003. *Water for People, Water for Life: The United Nations World Water Development Report*. Barcelona: United Nations Educational, Scientific & Cultural Organization & Berghahn.
- van Koppen, B., Sokile, C, Hatibu, N., Lankford, B., Mahoo, H. and Yanda, P. 2004. *Formal Water Rights in Tanzania: Deepening the Dichotomy?* Colombo, Sri Lanka: International Water Management Institute
- World Bank. 1993. *Water Resources Management: A World Bank Policy Paper*. Washington
- World Bank. 2002. *Bridging Troubled Waters*. Operations Evaluation Department, Washington, DC.
- World Bank. 2003. *Water Resources Sector Strategy: Strategic Directions for World Bank Engagement*. Washington, D.C.: World Bank
- World Bank. 2003. *World Development Report 2003. Sustainable Development in a Dynamic World*. Washington and N.Y.: World Bank and Oxford University Press.
- World Health Organization. 2003. *Right to Water*. Health and Human Rights Publication Series; no 3, WHO.
- Zimbabwe Parliamentary Debates. Vol, 25, No. 26, Tuesday, 3rd November, 1998
- Zimbabwe, Government. 1998a. Water Act, No. 31/1998. Harare.
- Zimbabwe, Government. 1998b. Zimbabwe National Water Authority Act, No. 11/1998.
- Zimbabwe, Government. 2000a. Statutory Instrument 33. Water (Catchment Councils) Regulations.
- Zimbabwe, Government. 2000b. Statutory Instrument 47 of 2000. Water (Subcatchment Councils) Regulations.
- Zimbabwe, Government. 2000c. *Towards Integrated Water Resources Management*. Harare: Government of Zimbabwe Printers.
- Zimbabwe, Government. 2003. *Report of the Presidential Land Review Committee under the Chairmanship of Dr. Charles Utete, 2 Volumes*. Harare: Government of Zimbabwe.

Notes

1. The four Dublin Principles are: (1) Freshwater is a finite and vulnerable resource, essential to sustain life; (2) water is an economic and social good; (3) Water development and management should be based on a participatory approach involving users, planners and policy-makers at all levels; and (4) Women play a central part in the provision, management and safeguarding of water. The thinking behind these principles has been incorporated into policy documents authored by the World Bank and other donor organizations (World Bank 1993, 2002, 2003).
2. Water reform has been part of the general process of decentralization. The argument runs that Aif natural resources are managed at the local level, then they will be looked after better and more efficiently, resulting in improved opportunities for sustainable livelihoods (SLSA Team 2003a: 3). There was, however, no discussion of the local practices and norms which can influence or even determine whether decentralization will be successful.
3. The Protocol was adopted by the 2nd Ordinary Assembly of the African Union, Maputo, 11.July 2003
4. The statement of understanding states that in determining vital human needs in the event of conflicts over the use of water courses Aspecial attention is to be paid to providing sufficient water to sustain human life, including both drinking water and water required for production of food in order to prevent starvation
5. The introduction to the Protocol states that Articles 60 and 61 of the African Charter on Human and Peoples Rights recognize regional and international human rights instruments and African practices consistent with international norms on human and people's rights as being important reference points for the application and interpretation of the African Charter.
6. This obligation is embedded in Article 1 of the CEDAW and in Article 2 in the Protocol to the African Charter on the Rights of Women

7. There is a substantial literature on different dimensions of Zimbabwe's water policies and water reform including Dube and Swatuk 2002, Derman, Ferguson and Gonese 2001, Mtisi and Nicol 2003, Hellum and Derman 2003, Derman and Gonese 2003, Manzungu, Bolding and Zawe 2004, among others.

8. These are the Sanyati, Manyame, Mazowe, Save, Runde, Mzingwane, and Gwayi.

9. Water Act 1998 section 32(1)

10. In accordance with Section 41 in the ZINWA Act The Minister may, in consultation with the approval of the Minister responsible for finance, by statutory instrument, impose a water levy on any person holding a permit issued in terms of the Water Act (Chapter 20:24).

11. Research Notes, February 2000. At a Mazowe Catchment Council meeting there was a discussion whether to ask the Centre for Applied Social Sciences to suggest a definition for commercial water. This discussion ended when the Council's Chair suggested the technological definition.

12. There has been a large decline in support to communal areas due to the emphasis upon land acquired during the Fast Track Land Resettlement Programme.

13. Schreiner and van Koppen were disturbed at the high Gini Index for South Africa in 2002 - 59. Zimbabwe's was 56.8 in 1995 which was in part due to large-scale commercial farmers. However, there is much evidence to indicate its growth in the past several years although much statistical gathering has been halted.

14. Mhondoro Communal Land is situated in Chegutu District, which is made up of commercial farm, small-scale commercial, communal, resettlement and urban areas 120 kilometers west of Harare. The major river that flows through this high plateau area is known as the Mupfure. It is part of the larger Sanyati River Catchment south east of Harare and flows through communal and commercial land including the city of Chegutu.

15. The norms of sharing and potential sanctions exist in those areas of the three catchments where the CASS water research team has been working.

16. There is an intense debate on the degree and extent to which access to land can be obtained through kin ties and networks and the extent to which it is being concentrated and access controlled by an emergent property class (Berry 2003, Peters 2004). Increasing land concentration and control will have significant consequences for access to water.

17. CASS BASIS survey data, CASS 2000-2001.

18. Informal irrigation land constitutes the vast majority of irrigated lands in Zimbabwe's communal areas. Yet the Irrigation Strategy of 1994 which was carried out in preparation for water reform focused only on government sponsored formal irrigation schemes covering only 2,000 hectares at that time (GoZ, 1994).

19. This is not straightforward. Sithole writes 'It seemed impossible for women and men for that matter to think about ownership in terms of this belong to this one or that one' (1999: 80).

20. The process of decreasing dependence upon agriculture alone has been called by Deborah Bryceson (1999) de-agrarianisation.

21. Derman found in the Zambezi Valley that stream-bank fields, in contrast to dry season gardens, were in the hands of relatively few chiefly families (1997). The key distinction was between rainy season fields and dry season gardens.

Acknowledgments

We would like to thank the anonymous reviewers of this article for their helpful comments and suggestions. Bill Derman was supported in his research by a Fulbright-Hays Research Grant, a Wenner-Gren Foundation Grant for Anthropological Research and the BASIS CRSP for Water and Land Research in Southern Africa. Anne Hellum has been supported by the Ministry of Foreign Affairs/Norwegian Research Council Program Development Grant for the Institute of Women's Law at the Faculty of Law, University of Oslo and the NORAD funded cooperation between the Institute of Women's Law (University of Oslo) and the Women's Law Centre at the University of Zimbabwe. Mr. Pinnie Sithole's research has been supported by the BASIS Mentors' Program and the BASIS CRSP for Water and Land Research in Southern Africa.

Contact addresses

Bill Derman, Department of Anthropology, Michigan State University, East Lansing, MI 48824, USA
(derman@msu.edu)

Anne Hellum, Faculty of Law, University of Oslo, 0130, Oslo, Norway (anne.hellum@jus.uio.no)

Pinimidzai Sithole, Centre for Applied Social Sciences, University of Zimbabwe, Harare, Zimbabwe
(spinimidzai@yahoo.com)