

Water reforms during the crisis and beyond

Understanding policy and political
challenges of reforming the
water sector in Zimbabwe

Sobona Mtisi

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Results of ODI research presented
in preliminary form for discussion
and critical comment

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**Understanding policy and political challenges of
reforming the water sector in Zimbabwe**

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1. Introduction

The late 1990s witnessed a dramatic transformation in water policy in Zimbabwe, as the government embarked on a water sector reform process. Underlying this transformation was the adoption of the concept of ‘integrated water resources management’ within national policy framework. At the core of this concept was an emphasis on the management of water on the basis of hydrological boundaries, namely the catchment and sub-catchment areas, decentralisation of water management, stakeholder participation and representation in water management processes, and the treatment of water as an economic good (GWP, 2000; Calder, 1998; Heathcote, 1997; Duda, 2003). In combination, these four principles were viewed as providing an effective framework for water management aimed not only at the participation of water users in processes and decision-making on water, but also at poverty reduction and livelihood improvement¹, particularly among previously disadvantaged water users, namely communal, resettlement and small-scale farmers.

The twin objectives of the water reform were tied to the four key IWRM principles. First, and starting from the premise that water must be managed on the basis of hydrological boundaries since they constitute the ‘natural’ boundaries of a river system (Newson, 1997), was the case advanced for decentralisation. Catchment and sub-catchment areas became the bedrock upon which decentralised institutions of water management were constructed. Stemming from this, the case for decentralised institutional framework for water management was drawn from the theoretical appeal of decentralisation which postulates that a more decentralised framework is more exposed, and therefore more responsive to local needs and aspirations (Crook and Sverisson, 2001). As such, decentralisation was viewed as providing systems of water governance that are accountable to local people (cf. Blair, 2000; Crook and Manor, 1998; Manor, 1999). Added to this was the notion that decentralisation of water management provides an institutional forum for promoting participation and representation of different water users in decision-making processes. Lastly, proponents argued that treating ‘water as an economic good’, with a price attached to the resource, would lead not only to the efficient use of water, but also to generating revenue necessary for financing decentralised institutions of water management and water development more broadly.

Although Zimbabwe’s water reform reflected the embedment of the concept and principles of integrated water resources management, this was at variance with local concerns and aspirations for water sector reform. Central to local concerns was the need to ‘redress colonial injustices in the water sector’ (Matinenga, 1999; Manzungu et al, 1999; Bolding et al, 1998) as some government officials were pointing out that ‘continued privileged access to water by commercial interests – mainly large scale commercial agriculture – was at variance with the political dispensation of an independent Zimbabwe.’² It was thus argued that there was an urgent need to reform the water sector, and establish a legal framework that ensured equal access to water for all Zimbabweans. Equitable access to water was viewed as providing a basis for rural people to gain access to water for productive uses which would contribute to the improvement of their livelihoods derived from the use of water.

It is from this background that this paper examines the experiences of water reform in Zimbabwe with the view to ascertain not only the challenges and achievements of the reform in meeting its objectives thus far, but also the prospects for re-engaging with the water reform *vis-à-vis* rural livelihood improvement in a post-crisis period. This paper argues that although the post-2000 period presented complex social, economic and political challenges to water sector reform, there were inherent limitations embedded within the concept of integrated water resources management which lie at the heart of water sector reform in Zimbabwe. It is suggested that a realistic attempt to re-engage with water reform policy aimed at improving rural livelihoods in a post-crisis Zimbabwe should be aware of ‘old’ and ‘new’ issues that undermine improved access to, and management of, water for rural livelihood improvement.

¹ Refer to Soussaan (2003); Bjornlund and McKay (2003), Adaman and Madra (2003).

² Interview with an official of the Ministry of Water Resources and Infrastructural Development, 1 February 2006.

Schematically, this paper is organised into six main sections, including this introduction. The second section sets the context of the water reform by presenting a brief overview of water resources, the underlying historical background of water management and related history of land acquisition in Zimbabwe. An analysis of the post-independent water and land distribution, socio-economic development and livelihood crisis in the 1990s is conducted in the third main section. The fourth section outlines the principles and objectives of the water reform. Stemming from this is an analysis of the experiences of water reform from 1998 to 2006, which constitute the fifth section. Drawing from the experiences of water reform up to 2006, the sixth section provides suggestions and recommendations for a post-crisis recovery scenario.

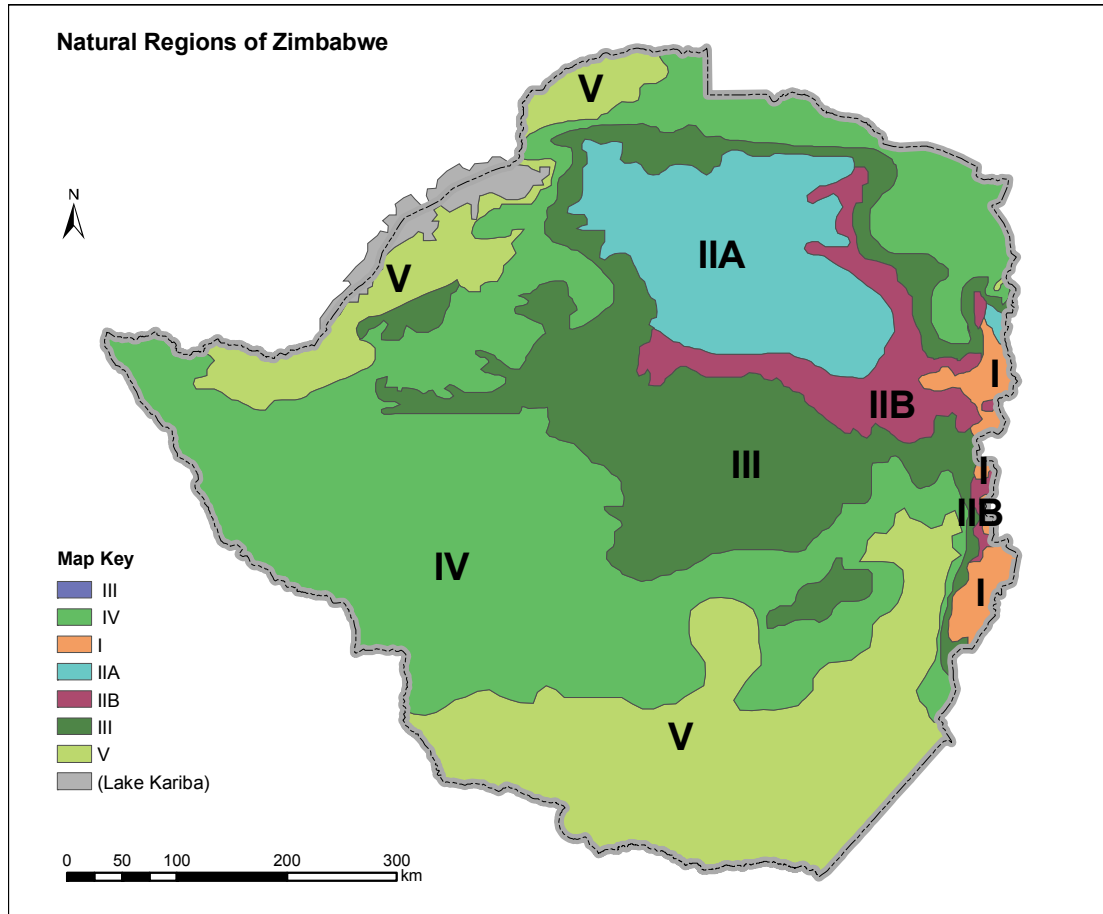
2. Hydrological and historical context of water resources in Zimbabwe

While this paper does not attempt to provide a comprehensive guide of the distribution of water resources and the historical background of water resources in Zimbabwe, it contends that it is necessary to set the discussion of water reform in context. As such, it is vital to state that there exists great variation in the spatial distribution of water resources in Zimbabwe. The country receives an average annual rainfall of 675 mm, which varies from 1,500 mm in the Eastern Highlands to less than 400 mm in the lowveld (Muir, 1994)³. Only 37% of the country receives an annual rainfall of more than 700 mm, which is sufficient for crop production (ibid).

Geographically, Zimbabwe is divided into five agro-ecological regions on the basis of climatic conditions, farming potential and, to a certain extent, water resources (see Figure 1-1 below). Briefly, Natural Region I, which constitutes 1.6% of the country, receives an annual rainfall of more than 1,050 mm. It is suitable for a broad range of agricultural activities such as dairying, tea, coffee and intensive livestock production. The region is well endowed with rivers and forms part of the country's watershed. Annual rainfall in Natural Region II ranges from 700 to 1,050 mm, and supports significant agricultural production of tobacco, maize, cotton and horticultural crops. The region also possesses a significant amount of water resources and forms part of the country's watershed. Natural Region III receives an annual rainfall of between 500 and 700 mm, and is subject to periodic seasonal droughts, prolonged mid-season dry spells and unreliable starts of the rainy season. Agriculturally, it is a semi-intensive farming region where maize and drought-resistant crops such as cotton and sorghum are grown. Irrigation is required for other crops. Rainfall of between 450 and 600 mm per annum are experienced in Natural Region IV, which is suitable for cattle ranching and risky for rain-fed agriculture. Drought-resistant crops such as millet and sorghum can be grown. The region is less endowed with water resources. Similarly, Natural Region V is less endowed with water resources. Rainfall is normally less than 450 mm per annum and largely erratic. It is largely described as too dry for successful crop production without irrigation but suitable for cattle ranching and wildlife.

³ Natural Regions IV and V (as seen on Figure 1-1) are commonly referred to as the 'lowveld'.

Figure 2-1 Natural Regions of Zimbabwe



Source: Mtisi (2008).

It is onto this landscape of diverse variation in water resources and agricultural potential that the early European settlers embarked on a wide-scale forcible acquisition of fertile and well-watered land in Natural Regions I, II and III, and the subsequent resettlement of Africans on marginal lands – the ‘native reserves’ – which were invariably located in the lowveld (refer to Palmer, 1977a; 1977b; Moyo, 1986; Moyana, 1984 and Tshuma, 1997 for a detailed discussion on land acquisition during the colonial period)⁴. This process of European acquisition of land underlined differential patterns of productive uses of water in agriculture between Africans, located in ‘native reserves’, the modern day communal areas, and ‘African Purchase Areas’, the current small-scale commercial farms, and Europeans on ‘European Farming Land’, the large-scale white commercial farms. In view of this, one can argue that a striking feature of colonial land acquisition was a concomitant process of deprivation of water among Africans to the extent that the colonial experience did not only create a skewed distribution of land, but also an inequitable access to water.

To illustrate the point above, we take the experience of the Ndebele people in the 1890s. After the institution of the Matebele Order in Council of 1894, Palmer (1977), Moyana (1984) and Tshuma (1997) argued that most land on the Ndebele highveld was forcibly acquired by European white settlers and, subsequently, the Ndebele were resettled on two ‘native reserves’: the Gwayi and Shangani. These two ‘native reserves’ were described as ‘6500 square miles of waterless, infertile land...which the Ndebeles regarded as cemeteries and not homes’ (Phimister, 1988:65) on account of their lack of water resources and poor soils (cf. Moyana, 1984; Palmer, 1977). Of significance to note is that the Ndebele experience

⁴ For a detailed discussion of colonial land acquisition refer to Palmer, R., (1977a) *Land and Racial Domination in Rhodesia*; Palmer R.,(1977b) ‘The Agricultural History of Rhodesia’ in R. Palmer and N., Parsons (eds.). *The Roots of Rural Poverty in Central and Southern Africa*; and, Moyo, S., (1986) ‘The Land Question’ in I. Mandaza (ed.) *Zimbabwe: The Political Economy of Transition 1980 – 1986*.

introduced the practice of settler acquisition of fertile land and the concomitant resettlement of Africans on land such as the Gwayi and Shangani. Several pieces of legislation, such as Southern Rhodesia Order in Council of 1920, Land Apportionment Act of 1930 and the Land Tenure Act of 1969, entrenched and formalised the practice. Consequently, the Gwayi and Shangani effectively became the templates for all 'native reserves', marked by a lack of water resources and poor agro-ecological conditions, and underlined the demise of productive uses of water in African agriculture.

In contrast, areas designated for European settlement were invariably located in the regions richly endowed with water resources and fertile land, which formed the bedrock upon which the success of European commercial agriculture was founded (Palmer, 1977; Moyana, 1984; Moyo, 1986; cf. Arrighi, 1973).

It is within the context of land alienation and inequitable distribution of water that African irrigation schemes were developed with the view to promote productive uses of water in selected 'native reserves' on small pockets of irrigable land partly with the objective to allow the resettlement of a larger population of people whose land had been 'alienated' (Weinrich, 1975; Roder, 1965). It is in this vein that Weinrich (1975) pointed out that, contrary to widespread practice elsewhere in Africa and Asia where irrigation schemes were developed as essential bases for an agricultural revolution, in Rhodesia African irrigation schemes were developed as bases for subsistence agriculture. In short, the African irrigation sector was developed partly as a consequence of the land alienation and with the objective to accommodate, and provide subsistence agriculture for, people removed from areas designated European areas (Weinrich, 1975; Moyana, 1984; Magadlela, 1999; Rukuni, 1994).

2.1 History of water management and policy: 1976 Water Act

With the dual division of land, the colonial state established a legal and administrative framework that governed access to, and control of, water in favour of sectional interests, namely urban areas, commercial agriculture, mining and manufacturing industries (Kambudzi, 1997; Mtisi and Nicol, 2003). From the 1890s up to 1927, water was governed by a set of loosely coordinated pieces of legislation which apportioned water to a nascent urban, mining, railway and agricultural sectors. Water for agriculture was apportioned and managed under the Water Ordinance of 1913, which was repealed by the 1927 Water Act, which was, in turn, repealed by the 1976 Water Act. To this end, the 1976 Water Act became the most comprehensive piece of water legislation that set the parameters of access, use and control of water from 1976 to 1997. Central to the water legislation was the denial of access to water for productive purposes to the majority of Africans.

Several key principles underlined the 1976 Water Act. Firstly, the Act set differential access to water based on the type of water one wants to gain access to, 'private water' or 'public water'. Access to 'private water' was vested in the owner of the land on which it was found and its sole and exclusive use belonged to such an owner.⁵ The Act allowed the owners, lessees or occupiers of any land to construct wells and drill boreholes of which the amount of water abstracted was not controlled (cf. Matinenga, 1999). On the other hand, access to 'public water' was vested in the State and its use, primary purposes aside, required that a water right be granted to the user by the Water Court. Right of access to 'public water' was based on prior appropriation doctrine, which meant that access is based on the date on which an appropriation to the beneficial use of water was made. Simply put, earlier applicants had the first appropriation right of access to water.

Legal access to water and associated water rights were attached to land, and were granted in perpetuity. Thus, only individuals with title deeds to land could apply for, and be granted, water rights. This included groundwater whereby rights to water were attached to the title deed of the land on which it was found. Granting of water rights under the 1976 Water Act took cognisance of the pre-existing rights to riparian owners, which meant that each riparian owner was entitled to claim all the water

⁵ Section 32 (1), Water Act No. 41 of 1976

which he could have claimed under the previous water laws. This ensured continued privileged access and rights to water for earlier applicants.

The Act empowered the Minister responsible for water to appoint a Secretary for Water Development and other officers, and delegated to them the authority to manage water resources within the confines of the Act. The administration of the Act was the responsibility of the Water Court, which was empowered to determine applications for the use of water, and dealt with any disputes.

Institutionally, the Act put in place a decentralised water management framework through the establishment of River Boards, which were tasked with ‘regulating and supervising the operation of rights to the use of public water within an area fixed by the Minister’⁶. The area of jurisdiction of River Boards was based on hydrological boundaries or an area defined as Intensive Conservation Area. The main functions of River Boards entailed the day-to-day management of water, levying of rates on persons who had rights to use public water, charging fees for services rendered by the board, and administering water rights granted by the Water Court.

In addition, River Boards provided technical advice to commercial farmers on water issues and the application of water rights (Mtisi and Nicol, 2003). In terms of membership and representation, River Boards were constituted by water right holders, and as such, representation was exclusively drawn from water right holders. Consequently, River Boards were composed of representatives from commercial agriculture sector, town council, manufacturing and mining industries.

Placed within the colonial context, the 1976 Water Act had the attendant effects of denying the majority of Africans legal access to water for productive uses as well as excluding them from participating in decision-making process on water. This was attained mainly through the tying of land rights and water rights, whereby rights to water were granted to landowners. Since a majority of Africans did not possess freehold title to land, the provisions of the Act prevented Africans from applying for water rights, essentially denying them a legal right to productive uses of water.

In the corollary of the above, Africans were also effectively excluded from participating in any decision-making on water on River Boards precisely because they did not have land and water rights. However, the continued exclusion of Africans from River Boards post-1980 could be attributed to government’s failure to broaden representation on River Boards since the 1976 Water Act provided the Minister responsible for water to appoint persons interested in water management, such as a representative of a communal area, to a River Board⁷. Despite this caveat, River Boards continued to represent commercial interests.

In applying for legal access to water, applicants were asked whether the water was going to be put to ‘beneficial use’. At the core of this question lay a prejudice against communal and resettlement farmers precisely because the term ‘beneficial use’ was interpreted as ‘commercial use’ (Bolding, 1998; Mohamed-Katerere, 1994). It was thus inconceivable from the Water Court’s view that communal and resettlement farmers could use water ‘beneficially’ or rather ‘commercially’. Communal and resettlement farmers’ use of water was viewed as ‘wasteful’ (Bolding, 1998; Mohamed-Katerere, 1994). This situation was compounded by the Stream Bank Regulations Act of 1952, which criminalised traditional wetland cultivation despite the fact that there was no ‘scientific’ basis for the prohibitions (Scoones, 1998; Bell and Roberts, 1991). In short, the use of the term ‘beneficial use’ as a synonym for ‘commercial use’ meant that productive uses of water among communal, resettlement and small-scale farmers were not recognised.

Another major weakness of the 1976 Water Act was the granting of water rights in perpetuity on the basis of the prior appropriation doctrine and in recognition of previous rights to water. This had the attendant effect of limiting the amount of, if not effectively denying, water to latter applicants. Van der

⁶ Section 9 (1), Water Act No.41 of 1976

⁷ Section 70, Water Act No. 41 of 1976

Zaag (1998) clearly illustrates this point in a study of Nyachowa catchment, where he observed that a commercial farm, located on the upper end of Nyachowa valley, had a first call on water and thus drew the full amount stipulated on the water right. Yet, by so doing, the commercial farmer left less water for communal irrigators, at the lower end of the valley with the effect that Nyachowa communal irrigators faced a perpetual and severe water shortage (Van der Zaag, 1998:171), even in cases where there was a general water shortage.

One of the principal features of the institutional framework established by the 1976 Water Act was the entrenchment of centralising tendencies reflected in the Water Court. All issues relating to the application of water rights and the adjudication of water disputes fell under the Water Court, which was located in Harare, the capital city. Any water user who wanted to apply for water or to seek redress in a water dispute had to travel to Harare (Manzungu, 1997). This form of centralisation militated against poor water users located in remote rural areas of the country. Water users located in distant rural areas incurred high transactional costs, in terms of the time and cost of travelling to the Water Court.

It is apparent that the 1976 Water Act entrenched great inequalities to water access and the exclusion of communal, resettlement and small-scale farmers in decision making on water. Such inequities made the need for water reform increasingly urgent, particularly given the continued use of the 1976 Water Act post-1980 within a context of persistent skewed access to water.

3. Continuity in change: access to water and land post-1980

Post-independence Zimbabwe inherited a skewed access to water and distribution of land. With reference to productive uses of water in the irrigation sector it was noted that, of the total 119,038 hectares of land, approximately 82% is on large scale commercial farms and about 7% in communal and resettlement areas (Draft Irrigation Policy, 1994:2). In terms of actual figures, an estimated 8,461 hectares were irrigated by farmers in communal irrigation schemes. This represented about 80 irrigation schemes on which farmers irrigated areas ranging from 0.1 to about 1 hectare. Small-scale commercial and resettlement area farmers irrigated about 2%, while 7% was under state-owned irrigation estates, mainly under the management of the then Agricultural Rural Development Authority (ARDA) (ibid).

The skewed irrigation development has been compounded by relatively low investment in communal and resettlement irrigation sector development by government (Rukuni, 1990), partly as a result of austerity measures promoted under the 1990s economic reform programme (WRMS, n.d.:16 -18). Consequently, limited funds were available for water development and maintenance of irrigation infrastructure, particularly among the smallholder sector (cf. ibid).

Communal area irrigation has increased by only about 4,200 hectares in a decade, from 4,300 hectares in 1983 to 8,500 hectares in 1993 (GoZ, 1994). By 1999, there was a total of 11,000 hectares under communal area irrigation (FAO, 2000). Table 3-1 below illustrates the status of irrigation development in Zimbabwe by 1999.

Table 3-1 Status of irrigation development in Zimbabwe in 1999

Sector	Area under irrigation (ha)	Proportion of total area under irrigation (%)
Large-scale Commercial	98,400	82
Parastatal Estates (ARDA)	8,400	7
Small-Scale Commercial and Resettlement	2,200	2
Communal	11,000	9
Total	120,000	100

Source: Adapted from FAO (2000:4).

To quantify the landholding at independence, it was stated that ‘about 6,700 large-scale commercial farmers owned 15.5 million hectares or 47% of total farmland under freehold tenure, 8,000 small-scale farmers owned or leased 1.4 million hectares or 4% of total farmland, while 7000 000 communal farmers occupied 16.4 million hectares or 49% of total farmland’ (GoZ, 1989; 2001; Tshuma, 1997:30; cf. Moyo, 1986; Palmer, 1990; UNDP, 2002).

Despite the changes in nomenclature, from ‘European Farming Land’ to the large-scale commercial farming sector; ‘native reserves’ to communal areas; and ‘African Purchase Areas’ to small-scale farming areas, these different types of landholding still bore the form and content that they acquired during the colonial period. In other words, large-scale commercial farming sector still held the largest proportion of prime land located in agro-ecological regions richly endowed with water resources, while communal farming and small-scale farming sectors were still on marginal lands with little or no water resources.

The inequalities of access to water were largely unchanged despite the significant ‘achievements’ in land redistribution during the first 18 years of independence. There exists a consensus among scholars that land reform up to 1998 had failed to radically change the inequitable distribution of land as well as to decongest the communal areas (cf. Masiwa, 2005). This was attributed to the inherent challenges of

the 'willing seller and willing buyer' principle as a basis for land reform, the exorbitant price tags on commercial farmland being offered for sale (Cliffe, 1988), the constitutional limitation enshrined in the Lancaster House Agreement (Cliffe, 1988; Palmer, 1990; Moyo, 1986; Weiner, 1988), limited political will and an influential intellectual and policy argument for a reduced resettlement programme (Kinsey, 1982; World Bank, 1983; Norman, 1985). Consequently, there were only 52,000 families resettled by June 1989 out of the target of 162,000 (Palmer, 1989). However, a further 20,000 new households were resettled between 1990 and 1997 (Sachikonye, 2003), which still fell short of the initial target set in the 1980s.

Even if one were to consider the resettlement of 72,000 families between 1980 and 1997 as an achievement, this was undermined by the fact most families were resettled in areas that had limited water resources. Herbst (1990) pointed out that 91% of the land purchased for resettlement was in areas that had limited water supply for both agriculture and domestic purposes. Consequently, this left beneficiaries with a feeling of being 'dumped on newly acquired land' (Herbst, 1990:49). In short, the continued inequitable access to water and land distribution from 1980 to 1997 undermined productive uses of water for agriculture and livelihood improvement among communal, resettlement and small-scale farmers and irrigators.

One of the effects of this was the persistent and increased levels of rural poverty during the 1990s. Several studies revealed an increasing trend and severity of rural poverty (Alwang et al, 2001; GoZ, 1995; Mehretu, 1994). For instance, the Poverty Assessment Survey conducted in 1995 concluded that poverty was prevalent in rural areas, with 75% of the households in the total poor category, and that the highest incidence of poverty was in the communal lands with 84% of the households followed by resettlement areas and small-scale commercial farms, both with 70% (GoZ, 1995; cf. Alwang et al, 2001).

Increased levels of rural poverty were accompanied by an overall economic decline mainly attributed to the disastrous effects of the Economic Structural Adjustment Programme (ESAP) implemented in the 1990s with the support of the World Bank and IMF. Most scholars noted that ESAP led to the de-industrialisation of the economy highlighted by the company closures (Bond, 2001; Raftopoulos, 2001), the decline of real wages in the gross national income from 54% in 1987 to 39% in 1997, and high levels of unemployment due to retrenchments across the employment sector.

Persistent inequalities of access to water and land, continued use of the 1976 Water Act, and increasing levels of rural poverty combined to partly form a potent case for water sector reform. However, this coincided with the emergence, in the 1990s, of the concept of integrated water resources management in global discourses on water management. How this shaped and defined the principles and objectives of the water reform is the focus of the next section.

4. Water sector reform in the 1990s

It is vital to state at the onset that the need for water reform emanated from two distinct concerns. One strand was partly rooted in the need to ‘redress colonial injustices in the water sector’ (Matinenga, 1999; Manzungu et al, 1999; Bolding et al, 1998). A government official stated that ‘continued privileged access to water by commercial interests – mainly large scale commercial agriculture – was at variance with the political dispensation of an independent Zimbabwe’⁸. It was thus argued that there was an urgent need to reform the water sector, and establish a legal framework that ensured equal access to water for all Zimbabweans. Equitable access to water was viewed as providing a basis for rural people to gain access to water for productive uses which would contribute to the improvement of their livelihoods derived from the use of water. This was not surprising given the history of forcible land acquisition and water alienation that occurred during the colonial period, and the resulting inequitable access to water which was divided along racial lines.

A second strand to the water reform was rooted in the global discourse of ‘integrated water resources management’ (IWRM) which was being actively promoted by the Global Water Partnership in southern Africa. In essence, IWRM sought to ‘promote the coordinated development and management of water, land and related resources, in order to maximise the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems’ (GWP 2000:22). Arguments for adopting the concept of IWRM were founded upon an awareness of an emerging ‘water crisis’ in Zimbabwe, attributed to declines in water supply in a context of increased water demand due to population growth, increased urbanisation and intensification of agriculture (Nilsson and Hammer, 1998). As such, IWRM was viewed as providing an effective and decentralised institutional framework for the management of competing water uses and interests, especially within a context of perceived ‘water crisis’.

In many ways the water reform in Zimbabwe reflects the dominance and subsequent embedment of the concept of integrated water resources management. The key principles of IWRM were outlined in the first section, and we shall not re-state them here. However, what is important to note is that the water reform shifted fundamental principles and approaches to water management. Firstly, the concept of ‘private water’ was abolished. Ownership of water was vested in the State. Similarly, prior appropriation doctrine and the associated practice of granting water in perpetuity were removed. Instead, access to water was granted through a water permit issued for a specific time period and subject to renewal. This provided, in principle, a mechanism for equitable allocation of water across a diverse range of water users. More importantly, the issuance of water permit was not tied to land. The aforementioned principles marked a radical departure from the provision of the 1976 Water Act.

⁸ Interview with an official of the Ministry of Water Resources and Infrastructural Development, 1st February 2006.

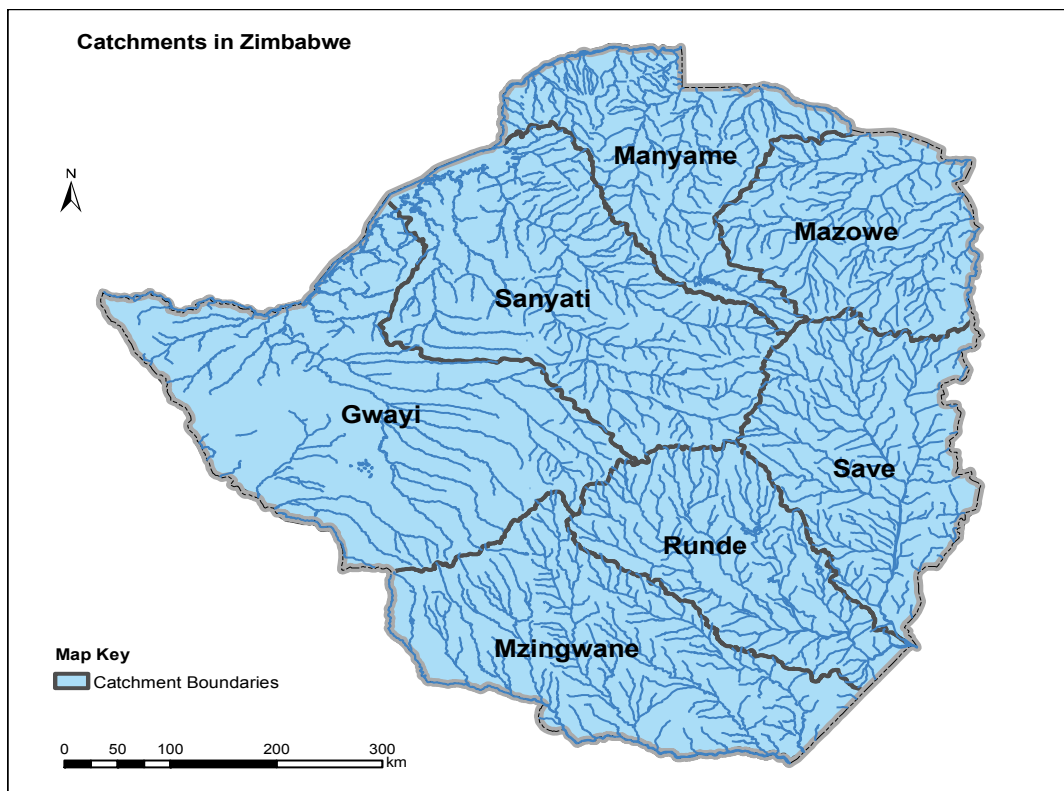
4.1 The principles of the water reform

Underlying the water reform were four key principles which were, namely;

- The State would own all surface and underground water. Primary purposes aside (i.e., domestic use of water), use of water would need approval by the State
- All people with an interest in the use of water would be involved in making decisions about its use and management
- Water would be managed by catchment areas as rivers do not match political and administrative boundaries
- Water would be recognised as an economic commodity. This was viewed as the best way achieving efficient and fair use of water, and also encouraging conservation and protection of water resources (WRMS, n.d.; GoZ, 1998)

Within this context, the 1976 Water Act was repealed by two pieces of water legislation, the Water Act and the Zimbabwe National Water Authority (ZINWA) Act, both promulgated in 1998. The Water Act of 1998 set the parameters of access and use of water as well as providing for the establishment of catchment and sub-catchment areas based on hydrological boundaries. Catchment and sub-catchment areas formed the basis for water management. In this vein, seven catchment areas were established in Zimbabwe and are shown in Figure below.

Figure 4-1 Catchments in Zimbabwe



Source: Mtisi (2008).

The creation of catchment and sub-catchment areas led to the introduction of Catchment and Sub-catchment Councils, respectively. Broadly, Catchment Councils (CCs) are composed of elected representatives, mainly chairpersons and vice-chairpersons, of sub-catchment councils. Catchment Councils also include the Catchment Manager, and other identified stakeholders.

The key functions of CCs include: preparing catchment outline plans for their respective area, determining applications and granting water permits, regulating and supervising the use of water, and supervising the performance of functions of sub-catchment councils (Water Act, 1998). Further, CCs serve as a forum for participation and decision-making for water users represented by elected sub-catchment council officials.

Below the CC, there are sub-catchment councils, which are constituted by elected representatives from diverse water user groups, which include commercial, communal, small-scale and resettlement farming sectors, local authorities, traditional leaders, and mining and manufacturing sectors. The main functions of a sub-catchment council include, *inter alia*:

- regulating and supervising the exercise of permits for the use of water within their area of jurisdiction
- collecting sub-catchment rates, fees and levies
- reporting as required to the Catchment Council on exercise of water permits in their area
- participating in the planning on water

Sub-catchment councils also serve as a platform for local level participation in water management.

The ZINWA Act of 1998, created the Zimbabwe National Water Authority (ZINWA), a parastatal, tasked with the responsibility for providing a coordinated framework for planning, development and management of water resources. Additionally, ZINWA took over the commercial functions associated with water provision which were previously performed by the Department of Water Development.

The functions of ZINWA vary depending on the level at which it is operating. At national level, ZINWA advises the Minister responsible for water on formulation of national policies, water pricing, water resource development and management. At catchment level, ZINWA's role include, *inter alia*, ensuring the Catchment Council discharge its functions in accordance with the Water Act, and assisting Catchment Councils in planning and coordinating water development and management within a catchment area. Also, ZINWA has exclusive responsibility for selling, supplying and management of 'agreement water'⁹.

ZINWA, through the Catchment Manager, holds the responsibility of providing technical assistance to the Catchment Council on water issues. According to the Water Act of 1998, the role of the Catchment Manager also includes the day-to-day management and administration of the affairs of the Catchment Council. In performing these functions, the Catchment Manager acts on the advice of, and in consultation with, the Catchment Council and ZINWA officials at national level.

At sub-catchment level, ZINWA sub-offices provide technical assistance as well as advice to sub-catchment council in carrying out its duty relating to water resources supply, development and management. Specifically, ZINWA sub-offices are legally mandated to:

- encourage and assist sub-catchment councils to discharge their functions in accordance with the Water Act
- operate and maintain any water works owned by the Authority and to sell water from those.

Notably, the institutional structure of ZINWA is not necessarily tied to hydrological boundary of the catchment area, but extends from the sub-catchment area to the national level. ZINWA functions range from technical assistance, selling of 'agreement water', maintenance and management of former government owned dams, to advising the Minister responsible for water. These functions have important implications in water reform, as demonstrated in relevant sections. How the aforementioned principles and the decentralised institutional framework of water management were put in practice forms the focus of the next section.

⁹ Agreement water refers to water behind dams which were previously owned by government.

This paper draws from the experiences of Lower Save East and Budzi sub-catchment areas to examine the experiences of the reform thus far. In doing so, the paper uses the findings from the two sub-catchment areas to provide insights to the underlying theoretical and policy challenges of the water reform. As such, the paper does not attempt to generalise the findings from Budzi and Lower Save East sub-catchment areas to other sub-catchments throughout the country. Instead, it acknowledges the specificity of local hydrological, historical, socio-economic and political factors in shaping the experiences of water reform and livelihood outcomes. Nonetheless, the findings from Lower Save East and Budzi sub-catchment areas provide critical insights into the water reform which permit suggestions and recommendations for a post-crisis recovery policy.

5. Access to water under the water reform

One of the key aspects of the water reform was to open up access to water for all water users, and particularly for ‘new’ water users (i.e., communal and resettlement farmers). In the past, water was accessible to commercial interests, namely agriculture, mining and manufacturing industries, and was tied to land. The introduction of water permits, for raw water, and agreement water contracts, for ‘agreement water’, which are not legally tied to land, has provided a basis for broad-based access to water. Further, completed water permit application forms and/or a signed agreement water contract, are submitted to the local sub-catchment council office and ZINWA sub-office, respectively. This represents a significant achievement of the water reform as it untied land and water, and devolved the responsibility for water application from the Water Court in Harare to local sub-offices.

However, there are significant costs associated with the application of a water permit, as application forms have to be bought, and an application fee needs to be paid. In addition, completing a water permit application form demands a level of technical knowledge that new water users may not possess. For instance, an applicant must indicate the amount of water they intend to abstract in megalitres per second. This is not considered common technical knowledge among communal and resettlement farmers.

5.1 Complex institutional routes of access to water

Institutional access to water depends on the type of water an individual wants to obtain. For surface and ground water, a water user goes to the sub-catchment council, while for ‘agreement water’; they would go to ZINWA sub-office. For Budzi sub-catchment area, rivers and groundwater are the main sources of water, and as such, water users deal with Budzi sub-catchment council, rather than the local ZINWA sub-office. On the other hand, ‘agreement water’ is the dominant source of water in Lower Save East sub-catchment area, and water users engage with ZINWA Middle Save sub-office than with Lower Save East sub-catchment council (LSESCC).

Although the classification of water and division of institutional role suggests a neat institutional design, the reality is rather complex, revealing contradictory and parallel institutional processes at play within the water reform, to the extent that the process undermined the objectives of the reform. This is illustrated by the cases below.

Firstly, water users were not aware of which institution to consult over their water needs. In view of this, one can argue that the classification of water into raw and agreement water, and the establishment of two distinct institutions for water management has created a complex institutional environment for water access. Consequently, water users were finding it confusing to gain access to water as they were referred from one institution to another. A small-scale farmer from Nyanyadzi captured this by pointing out:

...things about water are now confusing. I wanted to take water from Nyanyadzi and start some sort of irrigation in my field. I asked people about the process of applying for water. The majority of the people I asked were not clear about the process. So, I decided to take a bus to Chimanimani Rural District Council [RDC], which is 120km away. I thought since they are the ones who deal with our needs, I would do it there and finish it at once. When I went to Chimanimani RDC, I was told to go to Lower Save sub-catchment Council offices in Chipangayi. I was shocked because I did not know about these developments....I scheduled another visit to Chipangayi to see officials of Lower Save sub-catchment council. I took another bus from Nyanyadzi to Chipangayi, which is another 120km. When I got to Lower Save Sub-Catchment Council office with my concern, I was shocked again to hear that the water I want to abstract is agreement water, which falls directly under ZINWA and not the Sub-Catchment Council. I was advised to go to Mutare, which is another 120km from Nyanyadzi. I decided I am not going

*anywhere because I will also be referred to another office, 120km away! I was paying bus fare to and from all these places. Transport is expensive these days, I cannot afford it.*¹⁰

Part of the confusion highlighted in the above quote relates to the decentralisation process in rural governance which created village development committees (VIDCOs), ward development committees (WADCOS) and rural district councils (RDC).¹¹ These decentralised institutions of rural governance were responsible for local level development, including rural water supply and development of productive uses of water within areas of their jurisdiction. Given the role of RDCs in local level development, they constitute a key focal point for water development and management.

5.2 Institutional contradictions and conflict at the local level

Within Lower Save East sub-catchment areas, the complexity outlined above was exacerbated by a lack of coordination between ZINWA Middle Save sub-office and (LSESCC) in performing their respective functions. When asked about the relationship between ZINWA Middle Save sub-office and LSESCC, an official at ZINWA Middle Save sub-office stated:

*There is a relationship between ZINWA Middle Save and Lower Save East sub-catchment council in that we all work on water, but that's where the relationship ends. I get my orders from the Irrigation Officer at ZINWA Save Catchment, while the sub-catchment council work with the Save Catchment Council... The two are related but different.*¹²

On the other hand, officials at LSESCC separately noted that there exists 'little cooperation from ZINWA Middle Save sub-office, as ZINWA officials do not frequently attend sub-catchment council meetings'.

Underlying the different views is a lack of coordination between the two decentralised institutions of water management created by parallel lines of institutional responsibility and accountability in water management. It could be argued that, since ZINWA Middle Save officials report to the Irrigation Officer at catchment level, they are accountable to the Irrigation Office, and not the LSESCC. Consequently, there is little or no coordination in local level water management as suggested by the water policy.

In Lower Save East sub-catchment area, the lack of coordination between ZINWA Middle Save sub-office and LSESCC was amplified by competing interests in levying and collection of water charges from water users. Briefly stated, the Water Act of 1998 stipulated that sub-catchment councils have the responsibility for the collection of sub-catchment rates, fees and levies within their areas of jurisdiction¹³ on behalf of ZINWA. Similarly, the ZINWA Act of 1998 tasked ZINWA sub-offices with the exclusive responsibility 'to operate and maintain any water works owned by the Authority and to sell water therefrom'.

Yet, at the onset of the water reform in 1999, LSECC had the responsibility for levying and collecting water charges for water users in the sub-catchment area. This was premised on the view that water in Save River, the main source of water for water users in the sub-catchment, was surface flow of the river, and hence conceived as raw water. It was therefore the responsibility for LSESCC to collect water charges, which had the added importance of providing the sub-catchment council with revenue central to the financing its administrative and participatory functions. Revenue accruing to LSESCC was in form of a commission paid as a proportion of the total of the water levy paid by water permit holders. We shall return to this point later, but it is important to note that LSESCC actively collected water charges from 1999 to mid-2002.

¹⁰ Interview with a small-scale farmer in Nyanyadzi, 30/7/2002

¹¹ See Makumbe (1998) for a detailed discussion of decentralisation in local governance.

¹² Interview with an official for ZINWA Middle Save sub-office, 28 March 2006.

¹³ Section 24 (4a) (5a) of the Water Act, 1998

However, from mid-2002 ZINWA Middle Save sub-office assumed a prominent role in the collection of water charges within the sub-catchment at the expense of the LSESCC. ZINWA Middle Save's prominence rested upon the classification of water flowing through Save River as 'agreement water'. This was based on the fact that Save River received a significant proportion of water from Rusape, Ruti, Siya and Osborne dams. Therefore, water flowing in Save River and drawn by water users in Lower Save East sub-catchment council was 'agreement water'. Consequently, ZINWA Middle Save sub-office has the sole institutional responsibility for the management of water in Save River, and, more importantly, for the collection of water charges.

One of the effects of classifying water in Save River as agreement water and the institutional prominence of ZINWA Middle Save was not only to undermine the revenue accruing to LSESCC, but it also threatened the viability of LSESCC and its ability to perform its administrative and participatory functions. It is sufficient to note that the functions of sub-catchment councils were intricately tied to the collection of water charges, within the precepts of self-financing of decentralised institutions of water management. The LSESCC case *vis-à-vis* ZINWA Middle Save sub-office reveals the debilitating weakness of tying self-financing and participatory functions of decentralised institutions of water management, particularly in contexts where water users rely on agreement water. This finding has relevance to catchment and sub-catchment areas dependent upon agreement water.

In contrast, evidence from Budzi sub-catchment indicated that the sub-catchment council is able to finance its participatory and administrative functions partly because of its reliance on a significant amount of raw water, which the sub-catchment council has 'exclusive' role in collecting water charges from water permit holders. Despite the challenges in collecting water charges, an official attributed the financial viability of the sub-catchment council to the significant number of water permit holders.

5.3 Recentralisation of water management

Party politicisation is particularly marked in Zimbabwe post-2000 – most evidently in the emergence of A1 and A2 farmers as a new group of water users under the fast track land resettlement programme. Undoubtedly, the fast track land resettlement has increased the number of people with access to land, and therefore has potential to provide a basis for improved access to water for some new farmers. In Lower Save East sub-catchment area, two dimensions to the fast track land resettlement were observed.

One dimension was observed among communal farmers affiliated to the ruling party in Mutema and Tawona communal lands, who actively demanded irrigation plots in Tawona (New Extension) Irrigation Scheme. An official noted that about seventy percent of the people who were allocated plots in the Tawona Extension were ruling ZANU-PF party supporters, whose names were submitted by local ruling party representatives.¹⁴ Despite the deployment of political narratives of fast track land reform to gain access to an irrigation plot, such beneficiaries were willing to adhere to principles of water reform, mainly paying for water. To this end, it can be stated that membership of the ruling party was used as a means to gain access to irrigable land without necessarily resulting in a challenge to the underlying principles of the water reform.

The second dimension of political access to land and water emerged among A2 irrigators, who forcibly acquired commercial irrigated farms in Middle Sabi Commercial Irrigation Scheme from 2000 onwards. The fact that one of the extensive processes of compulsory acquisition of land in Lower Save East sub-catchment was mainly centered on Middle Sabi Commercial Irrigation Scheme could be viewed as revealing an underlying demand for water for productive agriculture.

After the violent acquisition of commercial irrigation farms, A2 irrigators formed the Middle Save Farmers' Syndicate to represent their broad political, land and water interests. Given the political

¹⁴ Interview with a key informant, (MTMKI), Mutema Communal Area, 12 December 2005

strength of A2 irrigators, which stemmed from their links to the ruling party, water issues pertaining to the Syndicate were channelled through the local structures of war veterans, and the institutional nodes that linked war veterans to district and provincial administration. At provincial level, water issues were further transmitted through the office of the Provincial Governor to the Minister of Lands, Rural Resettlement for Special Affairs in the President's office who, ultimately, aired the Syndicate's water grievances directly to the Minister of Water. To illustrate this, an A2 irrigator noted:

When we were complaining about water, we went to seek audience with the District Administrator in Chipinge, in his capacity as the chairman of the Lands Committee, and he suggested that the water issues that we were raising required higher authority... we then went, together with the District Administrator, to discuss our water problems with the Provincial Governor. The Provincial Governor felt the issue wanted ministerial approval, and we again went to discuss our water problems with the Minister of Lands, Rural Resettlement for Special Affairs in the President's Office¹⁵.

In so doing, the Syndicate sought representation and debate on water issues through institutions of local and political administration to underline their allegiance to the ruling party as well as ingratiating members of the Syndicate with politicians and, by sleight of political expediency, frame and represent their water issues. Consequently, members of the Syndicate neither actively sought representation nor participation in LSECC.

Further, in raising and framing their water concerns, the Syndicate drew from ruling party narrative by viewing water reform through a racialised lens, or as a form of 'sabotage', 'counter revolutionary' and, more broadly, an antithesis to the fast track land resettlement. Three A2 irrigators in Middle Sabi Commercial Irrigation Scheme separately remarked:

Who is sub-catchment council? Who is ZINWA? We don't know them... They are not the ones who brought me here. ZINWA and sub-catchment council are for white farmers...¹⁶

It will be counter revolutionary to acquire this farm and then run full speed to ZINWA and pay for water. Land and water is our heritage, inhaka yedu, and you don't pay for what belongs to you¹⁷

Water charges are a form of sabotage to derail the land reform programme, especially among us new farmers¹⁸

A common thread that runs through the above quotes is that they strike at the heart of the water reform by revealing the unwillingness of A2 irrigators to engage with decentralised institutions of water management, and thereby undermining their effectiveness as 'appropriate' institutions of water management and decision making. Perhaps more significant observation was the unwillingness among a majority of A2 irrigators to pay for water. The third quotation captures the common perception among A2 irrigators in Middle Sabi Commercial Irrigation Scheme regarding paying for water. Yet, by not paying for water, A2 irrigators deprive decentralised institutions of water management with the revenue critical for their effective functioning and viability, and ultimately wrecking havoc to the notion of self-financing central to the water sector reform. This is of crucial importance given that A2 irrigators have become the major water users.

¹⁵ Interview with a key informant at Middle Sabi, 28 April 2006.

¹⁶ Interview with an A2 irrigator (A2MSK1) in Middle Sabi Commercial Irrigation Scheme, 2 May 2006

¹⁷ Interview with an A2 irrigator (A2MS1) in Middle Sabi, 20 April 2006.

¹⁸ Interview with an A2 irrigator (A2MS3), Middle Sabi, 28 April 2006.

5.4 Participation: issues and challenges

The water reform introduced radical changes regarding the participation and representation of water users in the management and decision-making on water. By identifying a broad range of water users as stakeholders in water management, the 1998 Water Act provided a legal basis for the representation and participation of previously excluded water users, namely communal, resettlement and small-scale commercial farmers. Findings from Lower Save East and Budzi sub-catchments have shown increased representation of new water users. In short, the new politics of inclusiveness and participation, at least stated formally, have encouraged local level participation in water management at the sub-catchment council level.

Yet, the participation and representation of new water users have been fraught with problems. For instance, participation at sub-catchment level was often stacked against new water users who lack financial resources to travel to attend sub-catchment council meetings. One local chief who participated in Budzi sub-catchment council noted:

At first we were not given money for bus fare. We went to attend the meetings when we have our business to do in town (i.e., Chipinge). We pushed for transport allowances, and then we were given Z\$500...This money is not even adequate for transport....This is the main reason why people from Chimanimani and myself do not attend these meetings¹⁹.

Identification and classification of water user groups, from which representatives are elected to the sub-catchment council, is problematic. The identification of traditional leaders, communal, resettlement and small-scale commercial farmers, as the 1998 Water Act does, to provide a basis for electing representatives to constitute a sub-catchment council, rarely exist in rural reality.

In Lower Save East sub-catchment area, the selection of the Chief Mutema to represent traditional leaders and communal farmers showed that the current Chief Mutema neither resides in Mutema Communal Lands nor derives a livelihood from subsistence agriculture to effectively represent the interests of communal farmers. Instead, the current Chief Mutema is a successful entrepreneur resident in Harare, far removed from the communal areas that he is legislated to represent.

With reference to 'communal farmers', evidence in Lower Save East and Budzi sub-catchment areas has indicated that 'communal farmers' exist as a disparate group of water users, highly differentiated along social, economic and political lines, and rarely organised around water issues to permit the election of a representative of communal farmers.

Similarly, although communal irrigators are organised around water issues, they do so under the aegis of the Irrigation Management Committees. However, Irrigation Management Committees do not extend beyond the irrigation schemes which they are established for. Therefore, there is no sub-catchment-wide organisation of, and for, communal irrigators to provide a basis for electing a representative of communal irrigators to the sub-catchment council. Findings from LSESCC indicated that in reality the representatives of communal irrigation sector, who sit on the sub-catchment council, are elected representatives of their particular schemes and not of the sector as a whole. By extension, they represent the interests and concerns of a particular irrigation scheme, where they belong.

Genuine participation in water management can only occur when water users and their representatives are informed and knowledgeable about the water reform. Yet, new water users had little knowledge about the reforms and the legislation that set the parameters for their participation, 8 years after the reform. A representative of Mutema scheme stated:

¹⁹ Interview with Headman Dzingire, Chimanimani, 12 March 2002.

I did not know what the water reforms were and what was being discussed...I had never heard about the Water Act, let alone seen it...It was only ARDA managers and white farmers who knew what was going on...they were the only ones talking. Me and other communal farmers and settler farmers kept quiet because we didn't know what these water reforms were²⁰

As such, a lack of knowledge about the water reform made it arguably difficult for new water users to effectively participate and make informed decisions on water management processes at sub-catchment level.

5.5 Party politics and participation in Lower Save East Sub-Catchment Council

The politicisation of LSESCC has increasingly alienated a majority of water users who have resorted to non-participation in sub-catchment council meetings. Many respondents from communal, resettlement and small-scale commercial farmers interpreted the ascendancy of a local businessman-cum-politician to the position of chairperson of the LSESCC as personal aggrandisement carefully played under the guise of the ruling party to gain leadership of the sub-catchment council. This view was strengthened by the subsequent firing of the secretary by the new chairperson on the following basis:

The secretary does not seem to support the government Agrarian Reform Programme as it links with the Water Act and she has negative racial attitude towards black water users and councillors unless they are members of the Large Scale Commercial Farmers²¹

The outlined 'charges' were viewed by key informants as trumped-up and meant to dismiss the secretary by drawing from the volatile post-2000 politics.

Further, the new chairperson increasingly politicised discussions on water management to a point where it was stated that 'most representatives decided not to attend sub-catchment council meetings'. One representative of LSESCC remarked:

Even though I should attend sub-catchment council meetings...I cannot go and listen to the chairman and his trivial party politics... everything that is wrong is because of the opposition party or white farmers...First, he (the chairperson) is not a farmer in Lower Save East sub-catchment...He is there because he is member of the ruling party ...he is destroying the sub-catchment council!²²

What is evident from the above is that non-participation of most representatives was argued to be a result of the ruling party narratives being filtered into local institutional processes of water management. For Lower Save East sub-catchment, ruling party political narratives are deeply contested at the local level mainly because of a long history of strong opposition to the party. Consequently, the importation of ruling party politics in LSESCC has resulted in the non-participation of some of the intended beneficiaries of the water reform.

²⁰ Interview with a former representative of Mutema Scheme, 5 November 2005, Mutema Irrigation Scheme.

²¹ Memorandum: Performance Report for Sub-Catchment Council Employees, dated 23 September 2002.

²² Interview with a Lower Save East sub-catchment council representative, 23 January 2006.

6. Conclusions and recommendations for a post-crisis recovery water reform policy in Zimbabwe

The thrust of this section is not to dispute the merits of Zimbabwe's water reform in improving access to water of previously disadvantaged water users and providing a decentralised framework for water management. Rather, it is to point out the contradictions embedded in the current water reform, and then to state how the water policy can be improved so that it can better contribute to participatory processes in water management, poverty alleviation and the improvement of rural livelihoods. As such, this section will first draw conclusions on the basis of the evidence presented, and then suggest recommendations emanating from specific findings. Secondly, a broader set of recommendations will be suggested premised upon a broad understanding of the implications of the water reform policy.

Of crucial importance to note in Zimbabwe's water reform is that, while the water reform was built around neo-liberal principles couched within the concept of integrated water resources management, the implementation coincided with a radical transformation in state governance, partly as a consequence of strong political opposition to the ruling ZANU (PF), and the implementation of the fast track land reform programme. Such developments from 2000 onwards provided a challenging context for the water reform, not least because the transformation of the State and the narratives that informed the fast track land reform were anachronistic to the neo-liberal approaches embedded in the water reform. Consequently, policy recommendations suggested in this section take into account the intrinsic limitations of the underlying principles of the water reform itself, as well as the challenging political and socio-economic context within which the water reform was implemented.

Analyses in the previous sections have shown that the water reform was mainly driven by the global IWRM discourse, which has principally shaped the water reform policy in Zimbabwe. This was achieved at the expense of local historical grievances of past denial of access to water. Therefore, it can be concluded that the proponents of IWRM paid insufficient attention to the historical and political dimensions of water resources in Zimbabwe. Broadly, the historical construction of communal areas (the then 'native reserves') and communal irrigation schemes in marginal agro-ecological areas, characterised by limited water resources, poor soils, drought proneness, high population densities and degraded environmental conditions, features acquired during the colonial period, are what still currently define rural areas, and their access to water for productive agriculture.

Within this context, the water reform was implemented and overlaid on top of an underlying maze of inequality of water access and skewed distribution of land, to the extent that the reform continued to provide privileged access to water to water users who already enjoyed better access to water and land. As such, the water reform provided limited possibilities for increased productive uses of water for new water users residing in communal and resettlement areas.

Stemming from the above findings, this paper contends that any attempt to reform the water sector with the view to improve productive uses of water in rural areas must confront the historical legacy of inequalities of access to land and water, which has perpetuated under the current fast track land reform. Therefore, it can be justifiably suggested that a post-crisis water reform policy, must first seek to adapt the concept of IWRM to the local context, and promote aspects of the concept which articulate with local struggles for improved access to, and control of, water resources for livelihood improvement. One way of attaining this is to promote wide-scale participation of all people in the debate about the water reform, its principles and objectives over a long period of time. This will also entail seeking genuine policy suggestions from all stakeholders on how the water policy can be improved, particularly the poor. Such an approach will break-free from the stranglehold that government and donors have on water policy making process.

In keeping with the need to adapt IWRM to the Zimbabwean context, this paper suggests that the water reform must be linked, in innovative ways, with a land reform programme, which is aimed at providing access to productive land to rural people for livelihood improvement. It is with the combined access to

productive land and water, that water can be productively used to alleviate poverty and contribute to economic growth.

In the corollary of the above, it can also be stated that although access to fertile land is crucial to productive uses of water, new water users need access to a broad portfolio of other assets central to the productive use of water. These include, among many others, functioning irrigation technology and infrastructure. Evidence from communal irrigators in Lower Save East sub-catchment has shown that a dilapidated irrigation infrastructure and malfunctioning boreholes underlie a lack of access to water for irrigation. A post-crisis water reform policy may need to have a broad conceptualisation of access to water that covers technological problems affecting the smallholder irrigation sector, and new water users, more generally. Accordingly, a new water policy should focus on various issues related to irrigation technology, such as the development, provision and maintenance of relevant low-cost irrigation technology to communal farmers.

One of the key aspects of the water reform has been the creation of parallel institutional processes of water management, which are often contradictory to each other. Although ZINWA institutions provide technical assistance and advice to catchment and sub-catchment council, they are under effective government control and represent a 'deconcentrated' system of water governance. On the other hand, catchment and sub-catchment councils are constituted by popularly elected representatives and represent the democratic aspect of the water management. Yet, analysis in the previous sections has shown that ZINWA undermines decision making at catchment level, and the viability of sub-catchment councils in sub-catchment areas that predominantly rely on agreement water. Furthermore, the separation between technical and participatory aspects of water management, which lie at the heart of the parallel institutional process, have resulted in the compartmentalisation of water services, which does not augur well with livelihood improvement goals.

Perhaps one way of resolving the contradictions and parallel processes that are embedded in the water reform is to better integrate the functions of ZINWA Catchment officials and Catchment Council representatives. Rather than the Catchment Manager being wholly accountable to ZINWA national office, it may be better if the institutional structure is reformed in such a way that the Catchment Manager is accountable to Catchment Councils, and, by extension, to the local constituency of water users.

Similarly, officials from ZINWA sub-offices should be held accountable to their local sub-catchment council and an array of water users. This can be achieved by reforming the water legislation which provides the basis for the establishment of two parallel institutional processes. In addition, the legislative reform during a post-crisis recovery period may also be conducted with the view to empower catchment and sub-catchment councils in decision-making process on water, and thus repeal the current provisions of the Water Act and ZINWA Act which systematically eviscerates the democratic content of local level water management.

The integration of ZINWA and Catchment and sub-catchment councils can be complemented by the restructuring of ZINWA at national level. The restructuring may entail reducing the direct influence that the Minister responsible for water has on ZINWA itself, and indirectly, through the powers he wields in appointing ZINWA Board members. While the important role of the state in water resources development and management through ZINWA is acknowledged as vital, this paper argues against the use, or rather abuse, of government role in the water sector, for political mileage. In short, this paper recommends that ZINWA must be restructured to limit the dominance of the Ministry of Water Resources, and the increased role of catchment councils in water policy issues at ZINWA national level.

One major issue is the politicisation of access to, and management of water partly as a result of the politics that surrounded fast track land reform. The dominant political narrative that accompanied fast track land reform had the attendant effect of overt politicisation of access to water, with local political organisations of A2 farmers using 'new' institutional routes of water management, by-passing decentralised institutions of water management and thereby undermining the effective functioning of

ZINWA, catchment and sub-catchment councils. Yet, on the other hand, and regardless of the adverse effects such politicisation had on water reforms, this may provide opportunities for holding decentralised institutions of water management accountable to water users, and for providing voice to water users, as well as aligning politics and water policy.

Fostering greater cooperation and coordination between ministries responsible for land, water and agriculture may precipitate coherence in policy processes aimed at reforming the three sectors for positive livelihood outcomes. At the local level, this may provide a basis for institutional linkages between institutions representing 'new farmers' with those of local level water governance (i.e., ZINWA, catchment and sub-catchment councils), and, to a certain extent, land governance. For the post-crisis water reform policy, local level institutions of water management must be dynamic and flexible enough to engage and incorporate these new institutions representing new farmers but also robust enough to ensure that there is effective communication and debate on water issues.

With reference to water user pays principle, the findings in this paper has indicated that there classification of agreement and raw water, and associated responsibilities for the collection of water fees, has led to contestation between ZINWA sub-office and the sub-catchment council in Lower Save East sub-catchment, which has adversely affected the sub-catchment council. Although there are merits in the distinguishing between raw and agreement water fees, this study suggests that, in sub-catchment areas which predominantly have agreement water, the water legislation should provide for such sub-catchment councils to be obtain a certain percentage of the agreement fees so that they will be able to fund their administrative and participatory functions.

Given that the treatment of water as an economic good was aimed at raising revenue partly for water development, this paper suggests that one way of re-engaging with this principle in a post-crisis water reform policy is to seek ways of using locally-generated revenues for specific water development programmes or as responses to local problems of water access. As currently conceived, water charges appear as government-driven 'water taxes' extracted from local water users for government coffers. This remains the case despite the existence of the Water Fund and PSIP, which, in principle, were aimed at using part of the revenue collected locally to fund local water development programmes. A post-crisis water reform policy can provide greater local control of water charges by catchment and sub-catchment councils aimed at local level water development. Revenue raised could also be used in funding water development projects and repair and maintenance of irrigation infrastructure within communal irrigation schemes.

However, the paper acknowledges that local control of revenue can only exist in sub-catchment areas with significant water development and a significant number of water users actively using water for irrigation. In sub-catchment areas where there is little water development, government and other actors (e.g. private sector, NGOs and other development agencies) should be active in funding water development since there might be inadequate local revenue to fund such activities, and the functioning of decentralised institutions of water management.

Broadly, it is recommended that there is need for sequencing and prioritisation of policy issues within the water sector. The current IWRM based water reform seems to place more emphasis on water management, at the expense of water development. Therefore, a future water policy in Zimbabwe must, first and foremost, prioritise water and irrigation development in communal, small-scale commercial, and resettlement areas – both new and old schemes. Such water and irrigation development can be usefully be conducted by private, public and non-governmental organisations.

Further, the development of, and improved access to, markets for irrigated produce should lie at the core of a reformed water policy. Although this falls outside the scope of this paper, it is pertinent to state that markets play a crucial role in poverty alleviation and rural livelihood improvement as they provide an arena in which agricultural produce is traded, and different services to the water sector are provided, and interactions with the wider economy, takes place. Given the long history of limited engagement with markets among communal, small-scale commercial and resettlement farmers, and

the related differentiation of access to markets among new water users, there may be need for government, private sector and non-governmental organizations to actively intervene and promote the engagement of new water users with markets, in ways that encourage genuine pro-poor market approaches to socio-economic development.

In sum, it is apparent that there were challenges and opportunities in Zimbabwe's water reform, some embedded within the IWRM concept, while others were linked to the post-2000 economic and political developments. By identifying such distinct issues, it is hoped that the analysis in this paper contributes to an understanding of the opportunities and challenges for re-engagement with the water reform policy in a post-crisis recovery period.

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Appendix 1: Key Features of the Five Natural Regions of Zimbabwe²³

Natural region	Key features
I	Occupies a total of 5,835 km ² and constitutes 1.56% of the country, exclusively in the Eastern Highlands along the border with Mozambique. Natural Region I receive more than 1,050 mm of rainfall per year with some rain in all months of the year and has relatively low temperatures. It is a specialised and diversified farming region with forestry, fruit, dairying, tea, coffee, vegetables and intensive livestock production dominating agricultural production.
II	The size of this Natural Region is 72,745 km ² representing 18.68 per cent of the total area. Annual rainfall ranges between 700 – 1,050 mm and is confined to the summer season, October to March. Northern Mashonaland is largely in Natural Region II, where flue – cured tobacco, maize, cotton, sugar beans and coffee can be grown as well as sorghum, winter wheat, groundnuts, seed maize, barley and various horticultural crops. Animal husbandry such as poultry, cattle for dairy and meat is also practiced.
III	Constitute 17.43% of the total land and is spread out across 67,690 km ² . Rainfall ranges between 500 – 700 mm per annum and comes as heavy, infrequent falls. The region is subject to periodic seasonal droughts, prolonged mid-season dry spells and unreliable starts of the rainy season. Agriculturally, it is a semi-intensive farming region where maize and drought -resistant crops such as cotton, sorghum and soya beans are grown. Water storage and irrigation are needed for other crops. Most of the land is also used for extensive beef ranching. This region occupies much of Mashonaland and Midlands Province.
IV	The region is 128,370 km ² in size constituting 33% of the total area of the country, located in the low-lying areas, north and south of Natural Region III. The mean annual rainfall is between 450 and 600 mm. It is suited for semi – intensive animal husbandry and is marginal for rain-fed agriculture as yields for maize are a mere 0.5 tonnes per hectare. Millet and sorghum are the common crops grown.
V	It comprise 26% covering 112,810 km ² , mainly located in the south east of Zimbabwe and in the Zambezi valley to the north, a region commonly referred to as the ‘lowveld’. Rainfall is normally less than 500 mm per annum and largely erratic. Natural Region V is suitable for extensive animal husbandry. The northern lowveld may have more rain but topography and soils are poor for crop production. South east lowveld is largely described as too dry for successful crop production without irrigation. However, the irrigable soils in the south-east lowveld have facilitated extensive irrigated agriculture of sugar cane, wheat, cotton, beans, tomatoes and fruits. Some of the key irrigated agricultural plantations or estates are located in Chiredzi, Triangle, Mkwesine, Hippo Valley, Chisumbanje, and Middle Sabi.

²³ The remaining 3.1 percent consists of land unsuitable for any form of agricultural use within the limits of contemporary agricultural knowledge and technology.



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