



WATER SUPPLY AND SANITATION IN ZIMBABWE'S RESETTLEMENT AREAS: A CASE STUDY APPROACH

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Abstract:

Access to clean and safe water and adequate sanitation facilities is a basic human right, yet this remains a huge challenge in many developing countries of the world. The study sought to assess access to safe water and sanitation in a resettlement area in Zimbabwe. Both qualitative and quantitative research methods were used to collect primary data. The study revealed a precarious, and unacceptable, situation regarding access to safe water and adequate sanitation in the study area. 74% of study respondents lacked access to safe water, while 57.3% had no toilet facility at their homesteads. The results of the study highlight the general poor state of service provision in the country's resettlement areas, largely due to a poorly planned and politicized resettlement programme; in addition to highlighting the drastic demise of water and sanitation infrastructure in the country following economic decline and political isolation since the turn of the century, as most of the country's water and sanitation initiative's funding partners left the country. The need for properly planned and depoliticized resettlement areas, adequately served with essential social services such as water and sanitation infrastructure, cannot be overemphasized. Zimbabwe should also desist from over-depending on donor funding for its water and sanitation initiative, and set aside specific budgetary allocation from treasury. Only then can the country have a viable and sustainable water and sanitation provision programme, with donor funding only playing a supportive role. Hence, the collapse of the water and sanitation sector following the withdrawal of funding by donors and other partners should be treated as an important eye-opener.

Keywords: water supply, sanitation, resettlement areas, land reform, water-borne diseases, Zimbabwe

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1. Introduction

Access to clean and safe water and adequate sanitation facilities is a basic human right. Yet, the availability of water and sanitation services remains a huge challenge in many developing countries (Ahmad et al, 2016; Muneri, 2015), and particularly those in Africa. A significant proportion of the African population faces challenges in accessing safe drinking water and adequate sanitation (Manzungu et al, 2016). The African continent accounts for 40% of people without access to safe drinking water, and also accounts for over 90% of the world's cholera cases due to a combination of clean water shortage and poor sanitation (Manzungu et al, 2016; UNECA et al, 2013). While most of the developing countries in East Asia, the Pacific, Latin America and the Caribbean, to a large extent, met the Millennium Development Goals (MDGs) target of halving by 2015 the proportion of people without access to safe drinking water and sanitation, it is abundantly clear that the target was elusive for the majority of the African countries, and particularly those in Sub-Saharan Africa (Odaro, 2012).

Several factors account for the poor state of water and sanitation in Africa, including poor planning, a juvenile and rapidly growing population, lack of accountability, political instability and funding shortfalls (Manzungu et al, 2016; Odaro, 2012). Public spending in Sub-Saharan Africa on water and sanitation services is typically less than 0.5% of GDP in most countries, which stifles investment in new and existing infrastructure (Odaro, 2012; Wolf, 2007). The water and sanitation challenges in the developing countries manifest more acutely in rural areas, largely due to an urban-biased development planning traceable back to colonial times and, unfortunately, still persistent in post-independence Africa.

In apparent reflection of the global picture in the developing world highlighted above, in Zimbabwe, the challenges of clean, safe and adequate water supply and sanitation are more pronounced in the rural sector compared to urban areas. At independence in 1980, Zimbabwe inherited a well-developed urban sector and a neglected rural sector, with access to safe water in urban and rural areas estimated to be around 99% and 40%, respectively, while access to adequate sanitation stood at 99% and 30%, respectively (Manzungu et al, 2016). The exceptionally high water and sanitation provision figures in urban areas were a "historical statistical construct" (Manzungu et al, 2016), dating back to the colonial era where the minority government concentrated water and sanitation facilities in the urban areas to the detriment of rural areas (Muneri, 2015).

With the attainment of independence in 1980, the new majority government concentrated efforts towards the extension and expansion of water and sanitation services especially to the long neglected rural areas through the innovative Integrated Rural Water Supply and Sanitation Programme (IRWSSP) (AMCOW, 2011). As a result of these interventions, access to safe water increased markedly in the rural areas from 40% in 1980 to 70% by the end of the millennium, while access to adequate sanitation doubled from 30% to 60% in the same time period (Manzungu et al, 2016). By the late 1990s, service coverage for water and sanitation was among the highest in sub-Saharan

Africa, with the country widely viewed internationally as a leader in innovation, policy reform and service provision in the water sector (AMCOW, 2011).

Since the year 2000, a combination of political, social and economic challenges has resulted in significant deterioration in water and sanitation services in Zimbabwe (Manzungu et al, 2016). The ensuing implosion of the economy, collapse of public sector investment, and flight of donor finance created a capacity gap in the repair and maintenance of an already ageing infrastructure, in addition to limiting the further expansion of water and sanitation services (AMCOW, 2011). Furthermore, declining revenue streams led to a collapse in public sector salaries, culminating in a significant exodus of skilled staff (AMCOW, 2011). The 2008-2009 cholera outbreak, involving 98 592 cases and resulting in 4 282 deaths, was simply a red flag to the deteriorating water and sanitation infrastructure in the country (Ahmad et al, 2016). Owing to a legacy of neglect, the deterioration in water and sanitation services was mostly felt in the rural areas. The proportion of the rural population with access to safe water decreased from 70% in 1999 to 61% in 2009, while rural access to adequate sanitation decreased from 60% in 1999 to 30.5% in 2006 (Manzungu et al, 2016). The decline in access to water in the rural areas was largely due to failure to maintain boreholes, the mainstay of rural water infrastructure for the country, while full latrine pits and unavailability (and unaffordability) of cement led many rural families to revert to open defecation (AMCOW, 2011). By 2010, 98% of those without an improved drinking water source were in rural areas, while 42% of the rural population was practicing open defecation (AMCOW, 2011). The apparent reversal of the huge strides that had been made in water and sanitation provision in the country in the two decades after independence, most notably in the rural areas, has further widened the inequity inherited at independence between the rural and urban sectors.

The coming of independence in 1980 also saw the new majority government embarking on an ambitious resettlement programme to redress a racially skewed colonial land ownership structure wherein white settlers owned the best agricultural land while indigenous Africans were pushed onto marginal lands. However, the pace of resettlement was constrained by the Lancaster House Agreement, which stipulated that government was to acquire land for resettlement only on a willing-seller-willing-buyer basis (Clover and Eriksen, 2009; Moyo, 2006). The expiry of the Lancaster House Agreement in 1990 saw government enacting the Land Acquisition Act of 1992 to speed up the resettlement programme through compulsory land acquisition (Chimhowu and Hulme, 2006; Wels, 2003). The pace of land resettlement was further speeded up in 2000 with the enactment of a new Land Acquisition Act, ushering in an accelerated land reform exercise code-named Fast Track Land Reform Programme (FTLRP) (Chavunduka and Bromley, 2013). The progressive implementation of the resettlement programme eventually resulted in the emergence and expansion of resettlement areas as a new sub-sector of the rural areas of Zimbabwe in addition to the communal areas. It is however sad to note that the resettlement programme, especially the FTLRP after 2000, was chaotic, poorly planned and politically motivated, with many people resettled lacking basic social services, including water and sanitation facilities (CCMT,

2014). While poor service provision in the communal areas was mainly due to apartheid and racist colonial development planning policies, in the new resettlement areas, this was largely due to poor planning by government. This study assesses access to safe water supply and adequate sanitation in a resettlement area in Zimbabwe. With the resettlement programme still ongoing, research on service provision in resettlement areas has obviously not been enough to adequately characterise the situation in these areas, hence the need for more studies so as to fully inform policy.

2. Institutional framework for rural water supply and sanitation in Zimbabwe

The institutions of the water and sanitation sector in the country are organized by law and policy according to their responsibilities for service provision (African Development Bank, n.d.). Over the past two decades, there have been changes in responsibilities for various aspects of the supply of rural water and sanitation services. The key entities active in rural water and sanitation are: (i) the National Action Committee (NAC); (ii) the Rural District Councils (RDCs); (iii) the District Development Fund (DDF); and, (iv), the Water Environmental Sanitation Working Group (WES). The detailed responsibilities for each of these services are set out below (African Development Bank, n.d.):

- *The National Action Committee* was set up in 1987 to manage the implementation of the Integrated Rural Water Supply and Sanitation Project (IRWSSP). The NAC was largely funded from bilateral aid. With the withdrawal of donor support in 2000, its activities collapsed. The NAC was re-launched in October 2010 under the Deputy Prime Minister (Infrastructure Cluster). Because eight ministries are involved in the cross-cutting nature of water and sanitation, the Ministry of Water Resources Development and Management was made Chair of the NAC and supported by a Secretariat. The NAC's responsibilities include the review and approval of all rural water and sanitation project proposals and plans originating at district level, setting of policies and standards for the rural water and sanitation sector, and formulation of strategies for the delivery of rural water and sanitation projects.
- *Rural District Councils* are responsible for all development activities in their districts. They are required to ensure the right of access to basic water and sanitation services, and formulate development plans that integrate water and sanitation services. RDC Water and Sanitation programs are funded through the Department of Infrastructural Development Services (DID) of the Ministry of Local Government, Urban and Rural Development. They co-ordinate the activities of NGOs in the districts, and liaise with the District Development Fund on development and maintenance needs.
- *District Development Fund* is a technical parastatal responsible for the development and maintenance of non-commercial water supplies in communal and resettlement areas and research and development of appropriate technologies. Development funds for water and sanitation are channeled to the

RDCs through the Rural Capital Development Fund (RCDF) for minor activities. Major capital items are funded through the Public Sector Investment Program (PSIP).

- *The Water Environmental Sanitation Working Group* was established in 2008. With the re-engagement of the donor community in support for water and sanitation in recent years, there was need for coordination of donor activities. It is coordinated by UNICEF and includes private sector representatives. It helps to facilitate a coordinated and collaborative humanitarian response, resource mobilization, networking, and sharing of information and lessons learned. The primary focus of WES is rural communities, but its activities include support for urban activities. The main objective of the Working Group is to ensure coordination of all humanitarian-related water and sanitation interventions being implemented by donor-supported NGOs. It ensures that the NAC and UN country team are kept informed about these activities, and it promotes linkages with other relevant sector working groups, especially those responsible for health, HIV/AIDS, food security, agriculture, and nutrition.

Several institutional challenges can be identified in the above rural water supply and sanitation framework. The main institutional challenge emanates from the overlapping roles and responsibilities for the sector, with a lack of clarity among the various entities and agencies involved with service provision (AMCOW, 2011). In addition, there appears to be no proper clarification of ministerial roles. Some of the ministries involved include (AMCOW, 2011):

- The Ministry of Water Resources Development and Management (MWRDM) which leads the entire water sector and chairs NAC, responsible for sector coordination. MWRDM has responsibility for water resource management policy and development and implements using its parastatal arm, the Zimbabwe National Water Authority (ZINWA).
- The Ministry of Health and Child Welfare (MoHCW) has the responsibility for rural sanitation, environmental health education and public health.
- The Ministry of Local Government, Rural, and Urban Development (MoLGRUD) hosts rural district and urban councils and establishes policy and supports the planning operations of the councils.
- The Ministry of Transport, Communications and Infrastructure Development (MoTCID) hosts the Department for Infrastructure Development, which supervises rural infrastructure investment.
- The Ministry of the Environment houses the Environmental Management Agency with responsibility for enforcing water pollution control.

Adding to the above, there is an absence of an independent regulator, with each sector ministry regulating its own implementation, in its area of jurisdiction, without independent oversight (AMCOW, 2011). Another glaring institutional challenge spanning Zimbabwe's water and sanitation sector history concerns over-reliance on government, with very limited, if any, involvement of the private sector. The involvement of the private sector has declined in the urban sector and its potential has

not been exploited in the rural sector. The private sector should be encouraged and involved in service provision from design and supervision of civil works and drilling, to operations and maintenance of systems and facilities in both urban and rural areas, while government must lead and set a course through mobilizing, influencing and encouraging dialog between consumers, service providers, and other stakeholders to identify the best solutions (AMCOW, 2011). This would eventually reduce dependence on handouts from donors, thereby enhancing sustainability in the water and sanitation services.

Lastly, and probably most importantly, a capacity development strategy is needed to rebuild public (ministry, local authority, provincial, and district structures) and private sector institutions, including initiatives such as refresher training, use of professional consultants, improved management of outsourced contracts, and strategic use of technical assistance (AMCOW, 2011). The enhancement of capacity among the institutions will enable them to more effectively fulfill their functions through smooth operations.

3. Methodology

3.1. Study site

The Chizvirizvi resettlement area is located in Chiredzi District of Masvingo Province (Figure 1). It is bordered by Malilangwe wildlife reserve to the west, the Chitsa communal area to the south, and the Sangwe communal lands in the east in Chipinge District. To the north, the resettlement area shares a border with the Mkwazine Ranch.

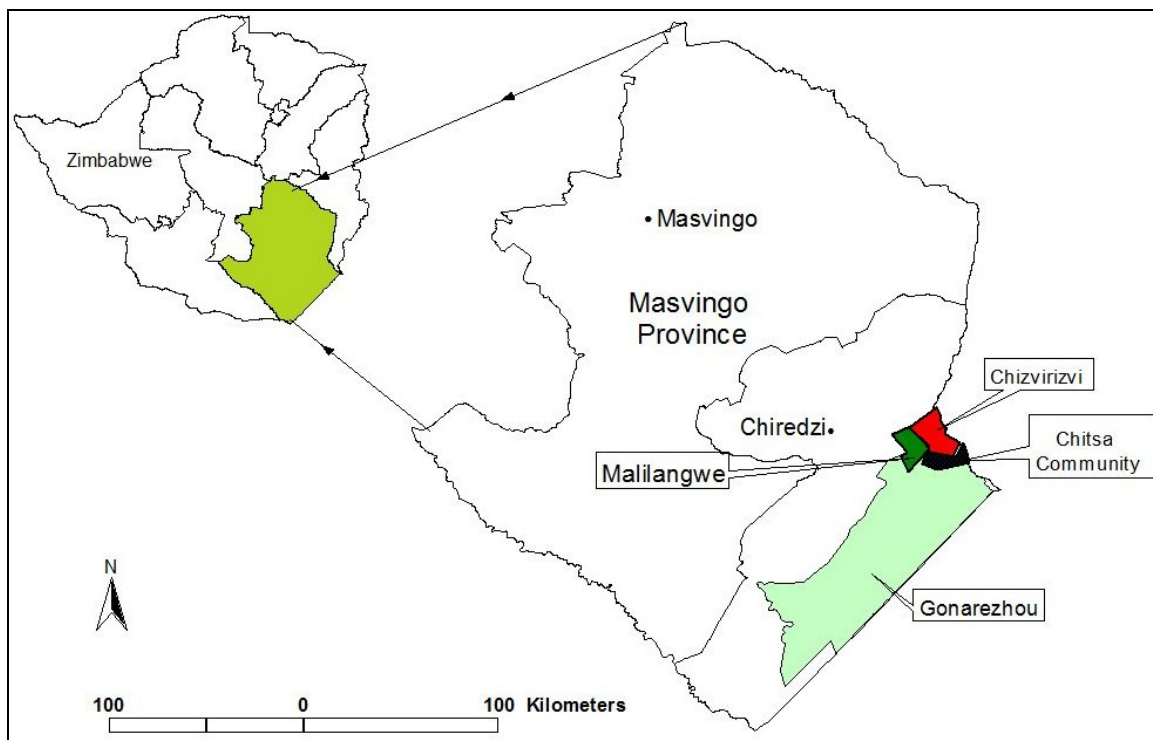


Figure 1: Chizvirizvi resettlement area (Chigonda, 2017)

Chizvirizvi is one of the earliest resettlement schemes implemented by government soon after independence in 1980. The government-driven resettlement scheme was based on a system of consolidated villages aimed at decongesting the surrounding communal lands (Hlambela and Kozanayi, 2005). The resettlement scheme was established on land purchased by government from adjacent commercial farms. Under the scheme, land was divided into clustered villages, grazing areas and cropland with each household allocated five hectares of arable land while grazing was communal. The aim of such centralised settlement was enhanced peasant access to services including electricity, roads, schools, clinics, water and grinding mills (Hlambela and Kozanayi, 2005). A total of 10 villages comprising 283 households were established in the Chizvirizvi resettlement scheme under the control of a government paid resettlement officer.

The passage of time saw the people of Chizvirizvi becoming increasingly concerned about congestion and environmental degradation in the resettlement scheme, as the five hectare arable plots were not sufficient for most households to grow enough food. The above concerns were further heightened in 1987, marking the beginning of a community-led and demand-driven vision of land use planning and natural resource management based on self-contained plots as opposed to the overcrowded cluster villages (Chirozva, 2009; Hlambela and Kozanayi, 2005). The Chizvirizvi Development Committee solicited for support from the Department of Natural Resources and the Ministry of Lands and Agriculture. A funding meeting was finally organised by the Malilangwe Trust (on request by the Chizvirizvi Development Committee) to source funds for the surveying, mapping and demarcation of plots. A total of 294 self-contained plots, each measuring an average of 85 hectares were finally demarcated out of the initial consolidated village scheme. Each of the self-contained plots could now accommodate arable farming and livestock grazing activities on the same piece of land. The beneficiaries of the resettlement scheme began occupying these plots from March 2000. The new scheme is still divided into 10 villages for administrative purposes, with each village presided over by a village chairperson.

3.2. Data collection

The study used both qualitative and quantitative research methods to collect primary data. A total of 150 household questionnaires were administered to Chizvirizvi residents, with fifteen households selected from each of the 10 villages through simple random sampling. The questionnaire solicited for information on sources of water for households' and the types of sanitation facilities used.

A group discussion on water and sanitation was also conducted in Chizvirizvi. Interviews were also conducted with selected key informants who included a representative from Chiredzi Rural District Council, a Chiredzi District Development Fund representative, the Councillor for Chizvirizvi, and all the 10 village heads in Chizvirizvi.

4. Results and Discussion

Table 1 illustrates the sources of domestic water available to the residents of Chizvirizvi. Only 26% of the questionnaire respondents in Chizvirizvi had access to borehole water. The remaining 74% of the respondents used water from unprotected, or inadequately protected, wells. Many people in Chizvirizvi had dug some wells at or near their homesteads to meet their water needs.

Table 1: Main sources of domestic water

Main source of water	% frequency (n=150)
Communal borehole	26.0
Unprotected well	74.0
Total	100

With only 26% of the residents of Chizvirizvi having access to safe or improved water, the results are indicative of a serious challenge regarding access to improved water in the study area. With the exception of Chizvirizvi clinic, none of the households in Chizvirizvi or institutions like schools or shopping centres had tap water on their premises. Only one school had a borehole onsite while the other schools relied on distant boreholes for their water supply.

Information gathered through interviews and group discussions highlighted that when the new Chizvirizvi resettlement scheme (with self-contained plots) was completed in early 2000, each of the 10 villages had two boreholes drilled. The boreholes were apparently inadequate to effectively serve all the residents in each village, with villagers having to travel long distances to reach the water points in their respective villages. As the economic crisis in the country deepened from mid-2000, the servicing and maintenance of boreholes became problematic due to funding shortfalls. At the time of fieldwork, only two villages in Chizvirizvi had all their two boreholes still operational, five villages had only one borehole each operational out of the initial total of two drilled in each village, while the remaining three villages had no operational boreholes left. Residents of Chizvirizvi were travelling an average of 5 kilometres to fetch borehole water as their nearest boreholes were no longer operational, with some of the residents now fetching water in other villages. Scenes of women carrying 20-litre buckets of water on their heads, or animal-drawn carts ferrying water, are quite common in the study area.

As a coping strategy to the malfunctioning boreholes in their areas, many villagers have dug some wells at their homesteads. However, most of these wells are not protected or well protected, thereby exposing the consumers to a high risk of waterborne diseases.

Interviews with officials from Chiredzi Rural District Council and the District Development Fund, responsible for supplying safe water in the district, revealed that there was a critical shortage of funding for either repairing broken down boreholes or for drilling new ones to expand the water supply service in their areas of jurisdiction. Most of the NGOs which had partnered with them in rural water provision left the

country due to the political and economic crisis that has gripped the country since the beginning of the year 2000.

Information on the type of toilet or sanitation facility used by households (Table 2) indicated that quite a huge proportion (57.3%) of interviewed households had no toilet facility at all. Only 42.7% of the survey population had pit latrines.

Table 2: Type of sanitation (toilet)

Type of sanitation	% frequency (n=150)
None (open defecation)	57.3
Pit latrine	42.7
Total	100

The latest National Population Census reported that 24% of national households had no toilet facility, 33% used flush toilets while the remaining 43% used the pit latrine (Central Statistical Office, 2012). This clearly indicates that the number of people without a sanitation facility in Chizvirizvi is far much higher than the national average. Various factors account for the high numbers of households without a sanitation facility. Firstly, high poverty levels have made it difficult for many poverty-stricken households to construct pit latrines at their homesteads. It is important to note that as much as 53% of households lived in traditional huts made of pole, dagga and thatch, while only 1.3% lived in modern houses made of brick and corrugated iron or asbestos roofing sheets. Due to grinding poverty, therefore, many households cannot afford to build pit latrines. Regarding this, one group discussant further indicated that:

“Most of us cannot afford to build modern houses for ourselves due to high costs of cement and roofing sheets. If we cannot afford to build for ourselves nice houses, we obviously cannot expect to build toilets for ourselves neither, unless someone intervenes”.

Some of the households not affording to buy cement for toilet construction have gone on to construct pit latrines using clay for brick laying and plastering. However, most of these structures have collapsed as they are not durable. The villagers lamented that, unlike with water provision where Chiredzi Rural District Council and the District Development Fund had been actively involved with borehole drilling in their area, they were, unfortunately, not getting any assistance for the construction of pit latrines. For some households, that apparently seemed to afford to construct toilets at their homesteads for themselves, the large land holdings in Chizvirizvi with relatively high bush densities, coupled with ignorance on sanitation issues, have encouraged them to continue with open defecation. This has falsely, and dangerously, reduced the sense of urgency on the need for these households to construct toilets, thereby setting a health time bomb.

The availability of sanitary facilities and access to safe water are major determinants of household health. The pollution of water due to inadequate sanitation facilities is a major concern as it leads to human illness and death. Over three million

people in developing countries die of water-borne diseases every year, the majority of whom are children under the age of five (United Nations Environment Programme, 2007). More particularly, the morbidity and mortality rates from water-borne diseases such as cholera, typhoid, diarrhoea and dysentery are relatively high due to poor quality of drinking water and inadequate sanitation facilities (African Ministerial Conference on the Environment and UNEP, 2006). An estimated 56% of rural households in Zimbabwe had access to safe sanitation in 1997 while in 1999 this had increased to 60% (Government of Zimbabwe, 2004). Access to safe water was estimated at 73% of rural households, rising to 75% in 1999 (Government of Zimbabwe, 2004). Zimbabwe's MDG target to ensure that every household has access to a toilet within the homestead and to potable water within 250 metres by 2015 (Feresu, 2010; Government of Zimbabwe, 2004) was certainly not achieved, as is clearly demonstrated in Chizvirizvi. The Sustainable Livelihoods Framework identifies good health as one of the key assets for the successful pursuit of livelihoods (Scoones, 1998). The water supply and sanitation situation in Chizvirizvi predisposes the residents to ill health, which may eventually lead to the ineffective pursuit of various livelihood activities by those affected, thus resulting in increased poverty.

Interview with the sister-in-charge at Chizvirizvi Clinic, and also sentiments from group discussants, highlighted that the spread of cholera in Chizvirizvi during the 2008-2009 outbreak of the disease across the country, was strongly linked to the poor water supply and inadequate sanitation facilities among households in the area. Some of the wells that had been dug by most households in Chizvirizvi are at risk of faecal contamination due to the high incidence of open defecation. In addition, some households have sited their latrine pits too close to the wells, thereby increasing the possibility of groundwater contamination.

5. Conclusion and Recommendations

The study has revealed a precarious situation regarding safe water supply and adequate sanitation in the study area. Considering the fact that these are basic human needs essential for daily survival, such a situation is unacceptable.

The study results highlight some salient points that are seminal in understanding, and hopefully solving, the water and sanitation issues both in the study area and the country at large. Firstly, it highlights the general poor state of service provision in the country's resettlement areas. While the resettlement programme has, in some circles, been hailed as the Holy Grail for decongestion and poverty reduction in the communal areas, it has, unfortunately, recreated the same poverty in the newly resettled areas in the form of communities poorly served with basic essential social services including water and sanitation facilities as the study has shown. Secondly, the results also point to the painful reality of the demise of water and sanitation infrastructure following the economic decline and political isolation of the country since the turn of the century, as most of the NGOs that were crucial funding partners for the country's water and sanitation initiative left the country. The preceding point leads to a

third and very important highlight, an overreliance on donor funding by the country for its water and sanitation drive, which certainly is not sustainable.

There is, therefore, need for the country's politicians to depoliticize the land reform programme as currently is the case. This will give way to properly planned resettlement areas well served with the various essential social services they certainly cannot thrive without, including water and sanitation infrastructure. Very often, and simply for cheap political mileage, the politicians have hurriedly resettled people without any proper planning, especially during elections.

If the country is to have a viable and sustainable water and sanitation programme, it should have specific budgetary allocation for this from the fiscus, and desist from depending too much on donor funding which, when it ceases for whatever reason as the study has shown, everything crumbles. Donor funding should only be an add-on to what government is already doing and not vice versa.

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