



Conference edition only

An AMCOW Country Status Overview

Water Supply and Sanitation in Zimbabwe

Turning Finance into
Services for 2015
and Beyond



An **AMCOW** Country Status Overview

Water Supply and Sanitation in Zimbabwe

Turning Finance into
Services for 2015
and Beyond



Strategic Overview

Zimbabwe's experience of water and sanitation sector development is that of a model of African sector development, collapsing within a decade. This reflects the vulnerability of sector service development built on state subsidies and donor finance, without sufficient focus on sustainability. Encouragingly, a relatively swift recovery may well be possible, given a favorable political environment, a large injection of finance, and prioritization of the sector. A second generation of reforms is now needed. They encompass: leadership, role allocation, capacity building and improving sector governance and stakeholder consultation; shifting government's role from that of implementer to facilitator; filling key policy gaps and amending policies to improve sustainability; assisting service providers to become financially viable; improving donor-government alignment; and putting in place sector monitoring and annual review processes.

There are different sets of sector targets in Zimbabwe. Estimates of coverage and investment requirements also vary considerably. An optimistic scenario for future sector development is based on WHO/UNICEF Joint Monitoring Programme (JMP) figures. In 2008, the JMP suggests that 82 percent of Zimbabweans had access to safe water and 68 percent to an improved toilet. These estimates are higher than national estimates of coverage, while the MDG targets (derived from JMP coverage estimates) are also lower than the national targets. As a result, the coverage increase, and investment, required under this scenario are more modest, while the optimistic scenario also assumes that domestic budget allocations are realized and the Multi-Donor Trust Fund commences, increasing available resources. A more pessimistic scenario would apply the higher targets and Zimbabwean sector agencies' own figures, namely that in 2008, 46 percent of Zimbabweans had access to safe water and 30 percent

to improved sanitation. The pessimistic scenario also assumes that budget allocations are minimal and external resources are restricted to humanitarian aid. Even the optimistic scenario shows Zimbabwe off-track to meet the water and sanitation MDGs.

The investment gap to meet the national targets is estimated to be as large as US\$365 million per year for water and US\$336 million for sanitation (pessimistic scenario). Even the more optimistic scenario shows a significant investment requirement. A large portion of investment is required for rehabilitating the existing extensive but dilapidated infrastructure. Sector financing is low in all subsectors. An overall financing strategy needs to be developed which takes into account Zimbabwe's current fiscal resource base and learns the lessons from the decline in the sector. In the short term, an immediate focus is required on repair and rehabilitation of critical existing infrastructure in rural and urban areas.

The Ministry of Water Resources Development and Management has now assumed leadership for the sector, rejuvenating and extending the mandate of the coordinating body, the National Action Committee. But some institutional roles still need further clarification as to who leads and owns what sector components and how resources should be channeled. Zimbabwe's results in the CSO2 scorecard, which assesses the pathway by which money is turned into water supply and sanitation services, reflects the extreme challenges that the sector now faces, especially in planning, budgeting, equity, monitoring, output, maintenance, and market development.

This second AMCOW Country Status Overview (CSO2) has been produced in collaboration with the Government of Zimbabwe and other stakeholders.

Agreed priority actions to tackle these challenges, and ensure finance is effectively turned into services, are:

Sectorwide

- Rejuvenate government decision-making structures at all levels.
- Develop one comprehensive updated water sector policy, covering all subsectors; also develop a sector strategy and financing plan to achieve updated national targets.
- Update national data sets through audits and needs assessments; and develop one monitoring framework and a process of annual joint sector reviews.
- Develop an overall sector financing strategy.
- Develop a national capacity building program.
- The urgent case for increased investment needs to be made at the highest levels.
- Institute inclusive coordination mechanisms, working in partnership with parallel financing modalities, and establish an independent sector regulator.

Rural water supply (RWS)

- Initiate a national program to repair and rehabilitate wells and boreholes.
- Update RWS mapping and needs.
- Place responsibility and asset ownership of RWS with rural district councils, and build their sector capacity, whilst encouraging support from communities and the private sector.
- Rethink maintenance/spares policy and develop a regulated, competitive drilling industry.
- Development of Sector-Wide Approach, starting with the rural sector.
- Address the needs of resettled Zimbabweans.

Urban water supply (UWS)

- Develop a financing strategy for replacing aging infrastructure.
- Update tariff policy to improve financial viability and address the needs of the poor.
- Put in place energy policies to make UWS "unsheddable".
- Rebuild the councils' capacity for financial and technical management and increase their accountability to consumers.
- Encourage private sector involvement in service management.
- Create autonomous utilities in main cities.
- Allocate UWS management to councils or to the Zimbabwe National Water Authority on objective efficiency measures.

Rural sanitation and hygiene (RSH)

- Create a specific budget line for RSH in national and local budgets.
- Initiate a national sanitation behavior change program to eliminate open defecation.
- Develop a menu of latrine options for affordable entry to improved services and clarify policies on pit-emptying and latrine replacement.
- Develop local private sector capacity for latrine construction and management.

Urban sanitation and hygiene

- Develop alternatives to high-cost sewerage-only policies.
- Develop a financing strategy for urban sanitation.
- Increase enforcement of environmental and public health controls.
- Attract or buy-in urban sanitation expertise.



Contents

	Acronyms and Abbreviations.....	6
1.	Introduction.....	7
2.	Sector Overview: Coverage and Finance Trends.....	8
3.	Reform Context: Introducing the CSO2 Scorecard.....	11
4.	Institutional Framework	13
5.	Financing and its Implementation.....	16
6.	Sector Monitoring and Evaluation	18
7.	Subsector: Rural Water Supply	19
8.	Subsector: Urban Water Supply.....	22
9.	Subsector: Rural Sanitation and Hygiene	24
10.	Subsector: Urban Sanitation and Hygiene.....	26
	Notes and References	28

Acronyms and Abbreviations

AfDB	African Development Bank	MoHCW	Ministry of Health and Child Welfare
AMCOW	African Ministers' Council on Water	MoLGRUD	Ministry of Local Government Rural and Urban Development
AusAID	Australian Government Aid Agency	MoTCID	Ministry of Transport, Communications, and Infrastructure Development
CAPEX	Capital expenditure	MoWAGCD	Ministry of Women's Affairs, Gender, and Community Development
CSO2	Country Status Overviews (second round)	MoWRDM	Ministry of Water Resources, Development, and Management
DDF	District Development Fund	NAC	National Action Committee
EMA	Environmental Management Agency	NCU	National Coordination Unit
ER&RR	Emergency Rehabilitation and Risk Reduction Program	NGO	Nongovernmental organization
EU	European Union	O&M	Operations and maintenance
GDP	Gross domestic product	OPEX	Operations expenditure
GNI	Gross national income	RSH	Rural sanitation and hygiene
GTZ	Gesellschaft für Technische Zusammenarbeit, a German technical cooperation agency	RWS	Rural water supply
HH	Household	SSA	Sub-Saharan Africa
JMP	Joint Monitoring Programme (UNICEF/WHO)	SWAp	Sector-Wide Approach
LIC	Low-income country	UNICEF	United Nations Children's Fund
M&E	Monitoring and evaluation	USH	Urban sanitation and hygiene
MDG	Millennium Development Goal	UWS	Urban water supply
MIC	Middle-income country	WASH	Water, Sanitation and Hygiene
MoA	Ministry of Agriculture, Mechanization, and Irrigation Development	WHO	World Health Organization
MoE	Ministry of Energy and Power Development	WSP	Water and Sanitation Program
MoEn	Ministry of Environment and Natural Resources Development	WSS	Water supply and sanitation
MoF	Ministry of Finance	ZINWA	Zimbabwe National Water Authority
		Z\$	Zimbabwean dollar

Exchange rate: Since the abandonment of the Zimbabwe dollar in 2009, foreign currencies including US\$ are used. All financial data in this report is stated in US\$.

1. Introduction

The African Ministers Council on Water (AMCOW) commissioned the production of a second round of Country Status Overviews (CSOs) to better understand what underpins progress in water supply and sanitation and what they and their governments can do to accelerate that progress across countries in Sub-Saharan Africa (SSA).¹ AMCOW delegated this task to the World Bank's Water and Sanitation Program and the African Development Bank who are implementing it in close partnership with UNICEF and WHO in over 30 countries across Sub-Saharan Africa (SSA). This CSO2 report has been produced in collaboration with the Government of Zimbabwe and other stakeholders during 2009/10.

The analysis aims to help countries assess their own service delivery pathways for turning finance into water supply and sanitation services in each of four subsectors: rural and urban water supply, and rural and urban sanitation and hygiene. The CSO2 analysis has three main components: a review of past coverage; a costing model to assess the adequacy of future investments; and a scorecard which allows diagnosis of particular bottlenecks along the service delivery pathway. The CSO2's contribution is to answer not only whether past trends and future finance are sufficient to meet sector targets, but what specific issues need to be addressed to ensure finance is effectively turned into accelerated coverage in water supply and sanitation. In this spirit, specific priority actions have been identified through consultation. A synthesis report, available separately, presents best practice and shared learning to help realize these priority actions.

2. Sector Overview: Coverage and Finance Trends

Coverage: Assessing Past Progress

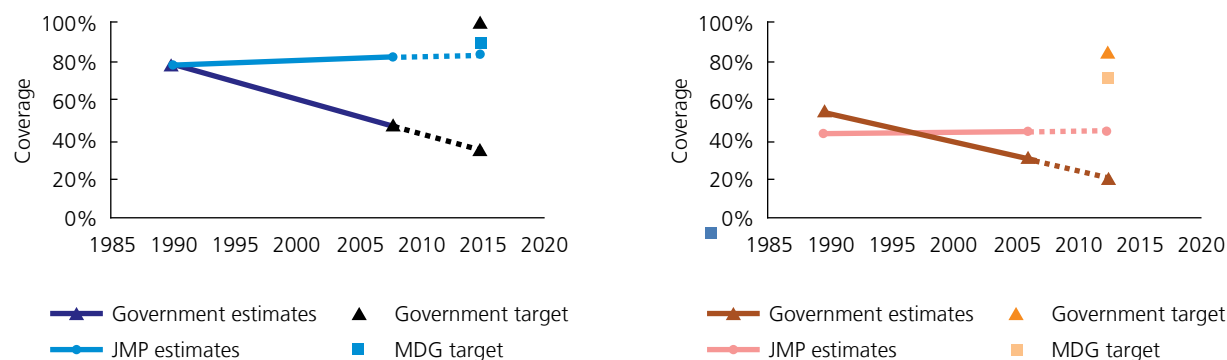
In the 20 years from Zimbabwe's Independence in 1980, overall water coverage increased from 32 percent to 56 percent and overall sanitation access from 28 percent to 55 percent.² Urban services had achieved well over 90 percent coverage by the late 1990s. Since then there has been a decline, the exact extent of which is not known.

The CSO2 compares countries' own estimates of coverage with data from the UNICEF/WHO Joint Monitoring Programme (JMP).³ The impact of these different coverage estimates on investment requirements is also assessed. There are two different sets of targets for the sector. The lower, Millennium Development Goal (MDG) targets are for 89 percent water coverage and 72 percent sanitation coverage; the government's own, more ambitious targets⁴ aim for 100 percent coverage by 2015 in all subsectors, except rural sanitation (80 percent). Estimates of coverage also vary considerably. The WHO/UNICEF JMP figures suggest that, in 2008, 82 percent of Zimbabweans had access to improved drinking water and 68 percent to an improved toilet. Government figures⁵ for 2008 estimate coverage in the range of 46 percent access to improved drinking water and

30 percent to improved sanitation facilities. Figure 1 shows the different scenarios against the goals.

At Independence in 1980, Zimbabwe inherited a well-developed urban sector and a neglected rural sector. The detailed JMP subsectoral figures show limited progress in drinking water supply over the whole period and a decline in piped supply access (see sections 6 and 9). Despite significant efforts to develop rural infrastructure, the imbalance between urban and rural services remains a distinctive feature of the sector in Zimbabwe today:⁶ 98 percent of those without an improved drinking water source live in rural areas and up to 42 percent of the rural population practices open defecation. Hidden behind the coverage statistics, there has also been a significant decline in the quality of urban and rural services (poorer water quality, intermittent supplies, and longer walking distances). Sanitation coverage has stagnated since 1990, with only a slow reduction in open defecation. Without a recovery in the water and sanitation sector, Zimbabweans will face further cholera outbreaks, more deaths, illnesses, continuing poverty, and negative impacts on livelihoods, industry, tourism, food production and agriculture, pollution of rivers and water courses: this essentially translates to more hardship, particularly for women and children.

Figure 1
Progress in water supply and sanitation coverage



Sources: JMP 2010 Report, MoHCW data on sanitation coverage, the NAC inventory and urban council estimates.

Investment Requirements: Testing the Sufficiency of Finance

A consequence of Zimbabwe’s economic recession and hyperinflation from 2000 was that government resources declined to the point of having no value and line ministries only received a fraction of what was budgeted.⁷ Without resources, established government systems for financial disbursement were unused. Most sector finance is now off-budget, managed by nongovernmental organizations (NGOs) and multilaterals. Estimating investment requirements is complicated, not only by the different coverage figures, but also by the unpredictability of resources allocated to the sector. A costing model was developed which uses government estimates of the current coverage and estimates of government resources at 2009 levels. It also assumes existing policies and that donor finance continues to be restricted to humanitarian assistance. Unit costs are largely based on those developed for an assessment of the costs of meeting the MDGs in 2007.⁸

Figure 2 and Table 1 show the large scale of the investment gap for water supply, largely as a result of the costs of rehabilitating costly urban infrastructure. The total annual CAPEX requirement for water is US\$544 million, of which US\$305 million would need to come from public investment, assuming a user contribution of 10 percent for rural infrastructure, and 60 percent for urban infrastructure. Comparing annual requirements to meet

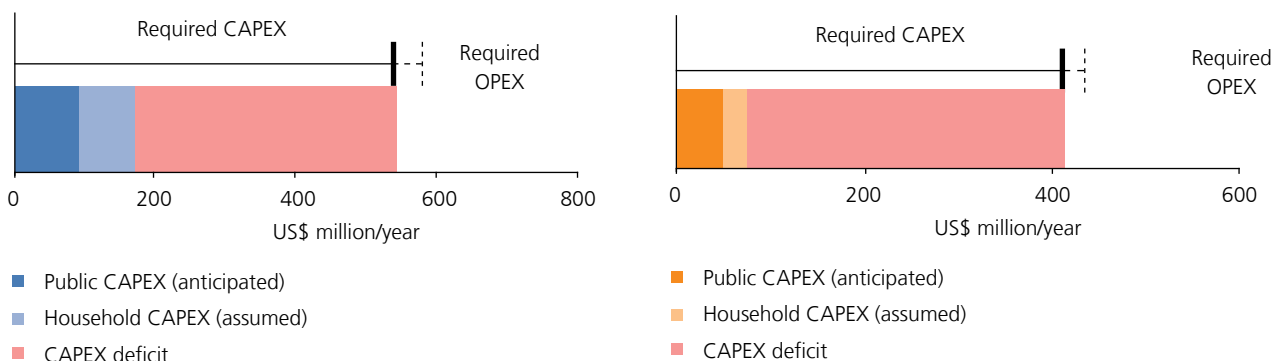
the MDGs with the current annual financing⁹ shows a gap of US\$365 million for capital investment alone.

The required increase in investment for sanitation is even greater, largely because of the costs of rehabilitating and extending urban sewerage. The total annual CAPEX requirement for sanitation is US\$415 million, of which US\$272 million would need to come from anticipated public investment. Comparing the annual CAPEX requirements to meet national targets with current annual financing (current public investment for sanitation is US\$50 million, household contributions US\$29 million) leaves a total gap of US\$336 million.

The investment gap presented above relates to the ‘pessimistic’ scenario: estimates using the higher JMP coverage figures and the lower MDG targets would reduce CAPEX financing gap, though it would still be well in excess of current available financing.

There are a number of reasons why even this depiction of investments may be over-optimistic. The first is operation and maintenance (O&M) requirements (Table 2). As in many countries, in Zimbabwe it is assumed that O&M costs will be recovered from users, though in practice this is not always achieved. If any of the annual O&M requirements have to be subsidized from the public purse, for example, utilities that do not achieve operational cost recovery, it reduces the amount available for capital investment. While user contribution policies are largely

Figure 2
Required vs. anticipated (public) and assumed (household) expenditure



Source: CSO2 estimates.

Table 1
Coverage and investment figures

	Coverage		Target	Population requiring access	CAPEX requirements		Anticipated public CAPEX			Assumed HH CAPEX	Total deficit
	1990	2008	2015		Total	Public	Domestic	External	Total		
	%	%	%	'000/year	US\$ million/year						
Rural Water Supply	70%	40%	100%	757	174	157	6	33	39	4	131
Urban Water Supply	97%	60%	100%	374	369	148	20	34	54	81	234
Water Supply total	78%	46%	100%	1,131	544	305	26	67	93	85	365
Rural Sanitation	35%	25%	80%	686	90	45	2	12	14	14	62
Urban Sanitation	99%	40%	100%	483	325	227	11	25	36	15	273
Sanitation total	54%	30%	85%	1,124	415	272	13	37	50	29	336

Sources: CSO2 costing.¹⁰

ineffective, the cost of maintaining Zimbabwe’s urban service standards is high. With the collapse of industry, incomes, and public sector finance, ability to pay has also fallen. Government guidance to relate tariffs to costs is an urgent requirement to enable sector recovery. Finally, the above investment requirements do not take into account the costs of construction of additional dams which will be needed, for example in Harare, to cater for the growth in water demand.

These considerations are only part of the picture. Bottlenecks can, in fact, occur throughout the service delivery pathway—all the institutions, processes, and actors that translate sector funding into sustainable services. Where the pathway is well developed sector funding should turn into services at the estimated unit costs. Where it is not, the above investment requirements may

Table 2
Annual O&M, CSO2 estimates

Subsector	O&M US\$ million/year
Rural water supply	19
Urban water supply	37
Water supply total	57
Rural sanitation	4
Urban sanitation	19
Sanitation total	24

Source: CSO2 costing.

be gross underestimates. The rest of this report evaluates the service delivery pathway in its entirety, locating the bottlenecks and presenting the agreed priority actions to help address them.

3. Reform Context: Introducing the CSO2 Scorecard

Zimbabwe’s sector development story is one of an apparent model of African sector development dramatically collapsing within a decade. It reflects the vulnerability of sector service development built on state subsidies and donor finance, without sufficient focus on sustainability. Recent developments encouragingly show that a relatively swift recovery may be technically possible, given a favorable political environment.

Zimbabwe’s water supply and sanitation infrastructure was driven by urban and commercial farming interests in the first half of the 20th century. Decentralized management was in place from an early date: urban and town services were managed through water and sewerage departments in local authorities and essentially built on the revenue from urban consumers.

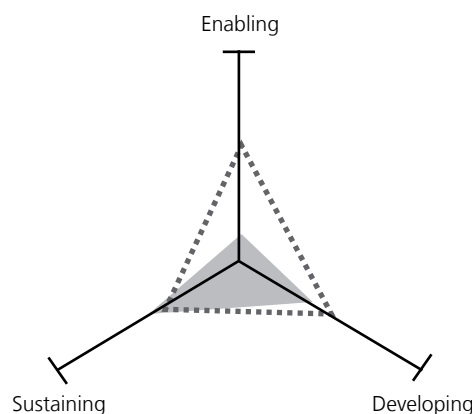
Independence in 1980 saw efforts to rebuild the country’s infrastructure, notably to extend services to the neglected Communal Lands. The 20 years ending at the millennium saw a near doubling of national coverage, marked by an innovative Integrated Rural Water Supply and Sanitation Program (IRWSSP), while the growing urban population continued to be served by decentralized municipal authorities, and coverage levels of nearly 100 percent were maintained for urban water supply and sewerage services.

From 2000–08, the implosion of the economy, the collapse of public sector investment, and the flight of donor finance have meant minimal new investments in service delivery for nearly a decade. The failure to repair or maintain an already aging infrastructure has led to a severe decline in services. Revenue streams fell and the collapse in public sector salaries led to a significant exodus of skilled staff. Capacity shortages developed in the public and private sector along the entire value chain: from local manufacturing, equipment supply, spares, chemicals and commodities, management of water treatment and wastewater plants, engineering supervision, finance, administration, project design, contract management, policy guidance, and necessary skills at provincial, district,

and village levels. A nationwide cholera epidemic in August 2008 was a red flag indicator to the state of national neglect of the sector.

The humanitarian responses to the epidemic, financial stabilization, and the creation of the Government of National Unity, have stimulated sector recovery. International donors and NGOs support a UNICEF-coordinated Emergency Rehabilitation and Risk Reduction (ER&RR) program focusing on urban areas. The Protracted Recovery Program and ZIMWASH programs are helping the transition from emergency to development approaches in rural areas. The Minister of Finance’s intention (though not realized) to allocate US\$109 million to the water sector in the 2010 budget, indicates new interest in the sector. In February 2010, ministers from the four leading ministries met and agreed on plans to restructure sector leadership to build momentum for a new era in sector development. A cabinet resolution on leadership followed and a new-look NAC was relaunched in August 2010.

Figure 3
Average scorecard results for enabling, sustaining, and developing service delivery, and peer-group comparison



■ Zimbabwe average scores
 ∴ Averages, LICs, GNI p.p. <=\$500

Source: CSO2 scorecard.

This recent history (see Table 3) puts the service delivery pathway in context, which can then be explored in detail using the CSO2 scorecard, an assessment tool providing a snapshot of reform progress along the service delivery pathway. The CSO2 scorecard assesses the building blocks of service delivery in turn: three building blocks which relate to enabling services; three which relate to developing new services; and three which relate to sustaining services. Each building block is assessed against specific indicators and scored from 1 to 3 accordingly.¹¹

Figure 3 demonstrates that with the collapse of the enabling environment, Zimbabwe is doing poorly compared with its peer group. In 2004 an updated Domestic Water Supply and Sanitation Policy was developed by the National Action Committee (NAC) and submitted to cabinet. But it was overtaken by events and the policy was not ratified or implemented. Government recognizes the need to have a current policy in place; in 2009 the NAC established a Task Force to review the draft 2004 policy. The review concluded that the policy does not reflect the current challenges of the sector and identified 12 areas that required further

consideration. Identified issues included: (a) clarity on sector leadership; (b) clarification on financing instruments; (c) sector regulation; (d) approaches to climate change and environmental protection; (e) rural water maintenance; and (f) sanitation subsidies and behavior change.

Further along the service delivery pathway, Zimbabwe's scorecard reflects the extreme challenges that the sector now faces to develop new services efficiently and sustain them, especially with regard to planning, budgeting, monitoring, equity, output, maintenance, and markets.

Sections 4 to 6 highlight progress and challenges across three thematic areas—the institutional framework, finance and monitoring and evaluation (M&E)—benchmarking Zimbabwe against its peer countries, based on a grouping by gross national income (low-income countries with per capita GNI below US\$500¹²). The related indicators are extracted from the scorecard and presented in charts at the beginning of each section. Scorecards for each subsector are presented in their entirety in Sections 7 to 10.

Table 3
Key dates in the reform of the sector in Zimbabwe

Year	Event
1980	National Independence
1981	ZIMCORD
1985	National Master Plan for Rural Water Supply and Sanitation (1985–2005) approved
1987	National Action Committee (NAC) established with the Ministry of Local Government Rural and Urban Development in the chair
1999	Water Act promulgated
1999	Establishment of Zimbabwe National Water Authority
2004	Draft Domestic Water Supply and Sanitation policy submitted to cabinet
2006	Urban water assets transferred to the Zimbabwe National Water Authority
2008	Government of National Unity established
2008	Outbreak of national cholera emergency
2008	Urban water assets returned to local authorities
2010	Cabinet approves the Ministry of Water Resources, Development, and Management to lead the sector and the NAC is relaunched.

4. Institutional Framework

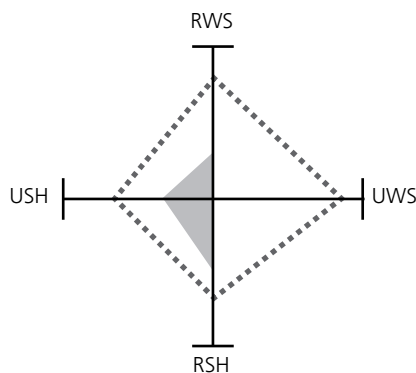
Priority actions for the institutional framework

- Implement the rejuvenated NAC decision-making structures, further clarify roles, work in partnership with parallel financing modalities, adopt inclusive coordination mechanisms.
- Government’s role should shift from implementation to facilitation.
- Establish an independent regulator.
- Fully decentralize authority for asset ownership and management to local government.
- Encourage greater private sector participation.
- Develop one comprehensive, updated sector policy covering all subsectors; develop a sector strategy and financing plan to achieve updated national targets.
- Establish a rural sectorwide approach in coordination with donors and NGOs.
- Develop a national capacity building program.

With little government finance, the activities of public institutions charged with responsibilities in the water sector declined from 2000. Zimbabwe’s institutional framework did not evolve to meet new challenges and many of the gains in earlier institutional reforms are no longer evident. The sector faces the challenge of rebuilding

sector institutions and developing approaches that reflect current international thinking. Figure 4 shows that in all subsectors Zimbabwe’s institutional framework now scores lower than its peers, based on related scorecard indicators, which include the presence of agreed subsector policies.

Figure 4
Scorecard indicator scores relating to institutional framework compared to peer group (see endnotes)¹³



■ Zimbabwe average scores
::: Averages, LICs, GNI p.p. <=\$500

Source: CSO2 scorecard.

A first step in rejuvenating the sector has been the clarification of ministerial roles. Roles and responsibilities for the sector are spread amongst several government agencies. In June 2010, the Cabinet agreed on sector leadership, the responsibilities of key government ministries, and a coordination framework. Figure 5 presents the new sector coordination arrangements.

The main sector roles are now subdivided amongst the following agencies:

1. The Ministry of Water Resources Development and Management (MWRDM) leads the entire water sector and chairs a redesigned 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).
2. The Ministry of Health and Child Welfare (MOHCW) has the responsibility for rural sanitation, environmental health education and public health.

3. 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.
4. The Ministry of Transport, Communications and Infrastructure Development (MOTCID) hosts the Department for Infrastructure Development, which supervises rural infrastructure investment.
5. The Ministry of the Environment houses the Environmental Management Agency with responsibility for enforcing water pollution control.
6. The District Development Fund is a technical parastatal with responsibilities for rural water supply and maintenance.

Over-reliance on government is a central lesson of Zimbabwe's recent sector history. Government must lead and set a course. It must mobilize, influence, encourage dialog between consumers, service providers, and other stakeholders to identify the best solutions, and avoid dependence on handouts. The main institutional challenges are:

Capacity in MoWRDM. The designation of MoWRDM to lead the sector challenges the ministry to increase its capacity to fulfill new functions and for the smooth operation of the NAC and NCU.

Lack of clarity in rural sector roles. Further clarification is needed on rural responsibilities, both at ministerial and local levels.

Developing one comprehensive sector policy and a sector strategy. In consultation with consumers and sector stakeholders, there is a need for NAC, in phases, to develop one sector policy, incorporating policy improvements in all subsectors. A sector recovery strategy is also needed, providing the basis for detailed sector development plans. A disaster risk management plan is also required to address sector threats, including managing extreme climatic events and climate change.

The limited engagement of the private sector. The involvement of the private sector has declined in the urban sector and its potential not exploited in the rural sector.

The private sector should be encouraged in both urban and rural service provision, from design and supervision of civil works and drilling, to billing, to operations and maintenance of systems and facilities, small and large.

Absence of an independent regulator. Each sector ministry regulates its own implementation, in its area of jurisdiction, without independent oversight. Establishing an independent regulator with authority to enforce license provisions, issue regulations, undertake independent tariff reviews and benchmark performance is an important step to improve sector governance and performance.

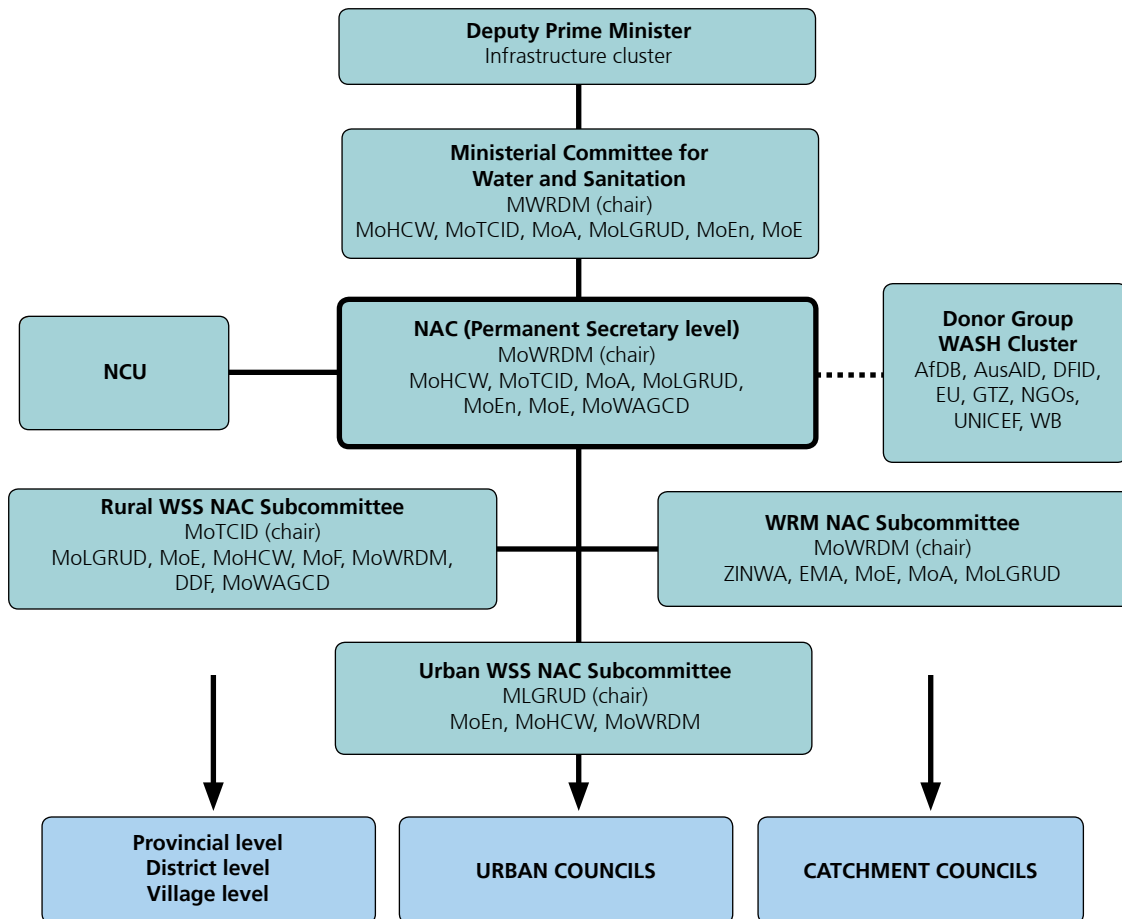
Lack of professional utilities for the big cities. There are no independent or semi-autonomous utilities in Zimbabwe. Municipal departments are responsible for developing, operating, and maintaining facilities; collecting revenues; and managing expenditures. International best practice suggests that Zimbabwe should develop autonomous, professional utilities for its major cities.

The transition to local authority service management. ZINWA remains responsible for water services in many small centers.¹⁴ The strategy for managing these centers needs review, to identify options for local capacity enhancement, enabling ZINWA to focus on core water resource management tasks.

Lack of accountability to residents or mechanisms of recourse for consumers. Consumer voice is weak for water and sanitation services. Increased responsiveness to consumers would provide important future checks and balances to improve service management.

Address capacity. A capacity development strategy is needed, both to rebuild public (ministry, local authority, provincial, and district structures) and private sector institutions. Initiatives might include: refresher training, use of professional consultants, improved management of outsourced contracts, and strategic use of technical assistance. A program to determine critical needs, improve service conditions and provide incentives for skilled Zimbabweans to return to fill key gaps might be considered.

Figure 5
Zimbabwe water and sanitation coordination structure



- Note:*
- AfDB = African Development Bank
 - AusAID = Australian Government Aid Agency
 - DDF = District Development Fund
 - EMA = Environmental Management Agency
 - EU = European Union
 - GTZ = German technical assistance
 - MoLGRUD = Ministry of Local Government Rural and Urban Development
 - MoA = Ministry of Agriculture, Mechanization and Irrigation Development
 - MoE = Ministry of Energy and Power Development
 - MoEn = Ministry of Environment and Natural Resources Development
 - MoF = Ministry of Finance
 - MoHCW = Ministry of Health and Child Welfare
 - MoTCID = Ministry of Transport Communication and Infrastructure Development
 - MoWAGCD = Ministry of Women's Affairs Gender and Community Development
 - MoWRDM = Ministry of Water Resources Development and Management
 - NAC = National Action Committee
 - NCU = National Coordination Unit
 - NGO = Nongovernmental organization
 - WB = World Bank
 - WSS = Water and sanitation sector
 - ZINWA = Zimbabwe National Water Authority

5. Financing and its Implementation

Priority actions for financing and its implementation

- Development of an overall financing strategy for the sector.
- The urgent case for increased investment needs to be made at the highest levels.
- Reviewing tariff policy, re-establishing a culture of service payment, ring-fencing sector finance in councils, and instituting performance requirements for revenue generation.
- Shadow alignment with donors as a step towards returning to on-budget financing.

The scorecard indicators relating to financing and its implementation measure the existence and functioning of financing mechanisms and efficiency in the use of finance. As can be seen from Figure 6, Zimbabwe's average scores are comparable with, or better than, the peer-group average across most subsectors, except for Rural water supply (RWS). The main financing challenge is not efficient utilization or lack of mechanisms, but the severe unavailability of finance (see subsector breakdown in Figure 7).

Key issues that need addressing include:

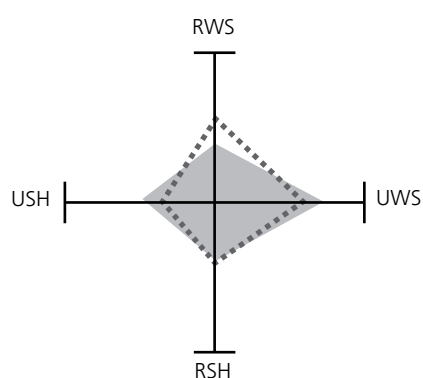
Development of a sector financing strategy. The assumptions and financial instruments in the sector reflect a financing strategy dependent on central government and donor finance. A new strategy to meet the MDGs or national targets is urgently required for the current environment and opportunities. Water budgets and revenue should be ring-fenced. The financial performance of council-run utilities needs benchmarking and performance management systems need to be put in place.

Tariff settings and guidelines require urgent review. Weak, nontransparent systems, deriving insufficient revenue to cover costs, predominate. Guidelines are urgently needed for tariffs that make for financially sound management, whilst addressing the needs of the poor.

Severe constraints on local revenue generation continue. The habit of nonpayment of water bills by many consumers, including government departments, has become entrenched. The development of cost recovery strategies is a priority.

Absence of specific budget lines for sanitation or hygiene. Budget lines are specifically needed for hygiene promotion and sanitation behavior change. Lack of finance is a central issue limiting MoHCW from carrying out its water, sanitation, and hygiene responsibilities.

Figure 6
Scorecard indicator scores relating to financing and its implementation, compared to peer group¹⁵



■ Zimbabwe average scores
 :::: Averages, LICs, GNI p.p. <=\$500

Source: CSO2 scorecard.

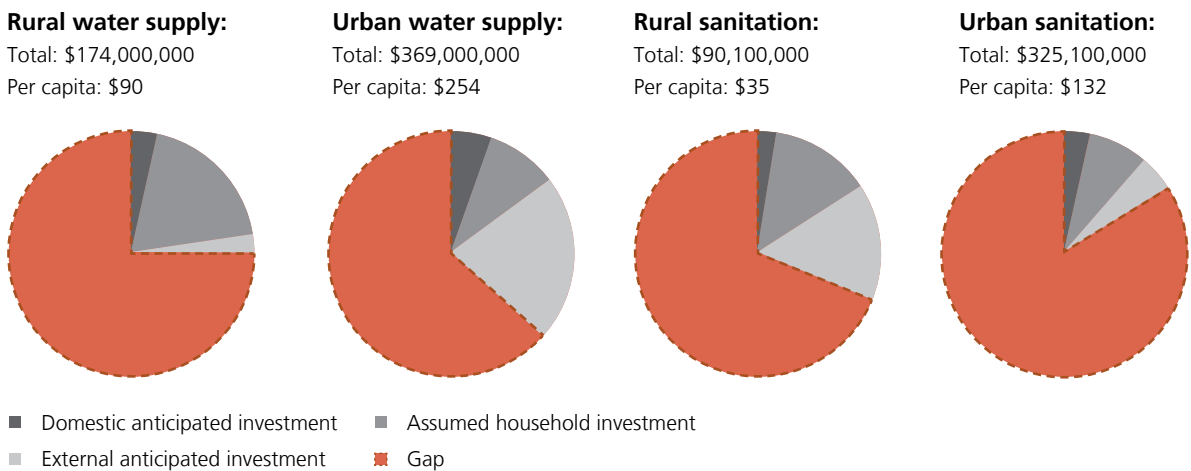
Shadow alignment with donor finance. An important step in the transition from emergency to development approaches in the sector is close consultation between government and donors. Programs, such as the ER&RR program, should be aligned with, and help to rebuild, government systems.

Leveraging private sector finance. It is unlikely that the private sector will be willing to invest in water and sanitation services in Zimbabwe and take on significant risk in the current climate. It would, however, be beneficial

to explore ways in which the private sector can augment capacity, improve cost recovery (through management contracts to improve billing), and operational and maintenance efficiency.

Creation of an urban capital development fund: When public finance begins to flow, mechanisms will be needed to make strategic allocations. A rural capital development fund exists; the creation of a similar urban fund would enable efficient allocations against performance criteria.

Figure 7
Overall and per capita investment requirements and contribution from different sources



Source: CSO2 scorecard.

6. Sector Monitoring and Evaluation

Priority actions for sector monitoring and evaluation

- Update all sector inventories and undertake needs assessments; and develop one monitoring framework and a process of annual joint sector reviews.
- Review M&E functions and new strategies put in place for collecting, collating, storing, and reporting.

Zimbabwe has three main locations for sector monitoring—ZINWA (gathering and updating information on national water resources, and tracking progress of services under its management); NCU and the Environmental Health Department (monitoring the rural sector—the last inventory was undertaken in 2004); and MoLGRUD (tabulating information of all services managed by local authorities). Capacity to update these databases has greatly diminished and the quality of official sector information is weak. With no method in place for tracking the breakdown of services and updating these national inventories, existing service coverage data is no longer regarded as reliable. Sector

analysis is also weak and is not regularly used to provide strategic direction to the sector.

Zimbabwe needs to rebuild its sector information systems, as indicated by Figure 8, which shows its low performance in related scorecard indicators, compared to peer group countries. Key steps are:

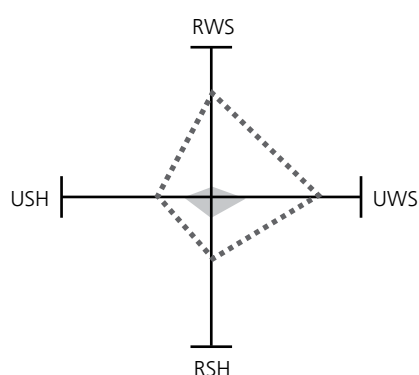
Gather baseline data. All national sector inventories and databases need updating. Needs assessment and mapping of facilities are urgently required, especially in the rural sector. Databases developed by donors and NGOs should be harmonized and definitions aligned with government systems, to aid the development of national databases. Focus is needed to better understand disparities between data sets. Definitions of sector data are not explicitly linked to MDG definitions and goals.

Update data management and analysis. Management systems and procedures need to be updated in all aspects of data management, including storage, updating, analysis, and reporting. Systems should adopt modern information technology approaches.

Adopt systems of annual reporting on sector progress. When capacity is restored, Zimbabwe should revert to its prior practice of annual reports and hosting annual sector reviews with its partners.

Commission key studies in complex areas to solve critical problems and give policy options. Priority subjects for further study are: tariffs, rural maintenance, capacity building, development of public-private partnerships, financing, monitoring, and sustainable sanitation.

Figure 8
Scorecard indicator scores relating to sector M&E, compared to peer group¹⁶



■ Zimbabwe average scores
::: Averages, LICs, GNI p.p. <=\$500

Source: CSO2 scorecard.

7. Subsector: Rural Water Supply

Priority actions for rural water supply

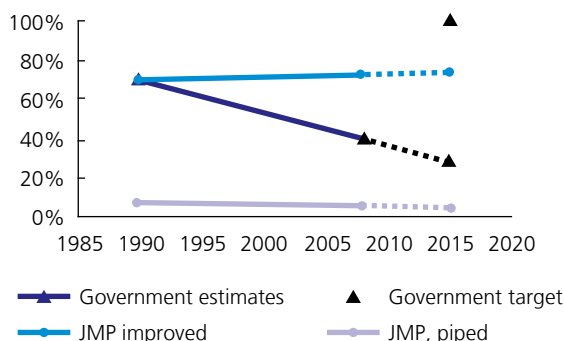
- Develop a national program to repair and rehabilitate wells and boreholes.
- Update RWS mapping and needs.
- Place responsibility and asset ownership of RWS with rural district councils, and build their sector capacity, whilst encouraging support from communities and the private sector.
- Rethink maintenance/spares policy and develop a regulated, competitive drilling industry.
- Development of SWAp, starting with the rural sector.
- Address the needs of resettled Zimbabweans.

According to JMP figures, the RWS sector has stagnated since 1990, with piped water access declining. The government's own estimates reflect the breakdown in public sector finance and loss of capacity for repairs, maintenance, and spares. Many rural boreholes and wells—the mainstay of the rural water infrastructure—are now not functioning.¹⁷ This, combined with the legacy of neglect in communal lands, has resulted in great inequity of access between urban and rural areas. The JMP reports that 98 percent of those without an improved drinking water source are in rural areas.

CSO estimates indicate a RWS investment shortfall of US\$131 million per year, to meet the national target of 100 percent coverage by 2015. The household contribution to CAPEX in communal water points is low (around 10 percent of total costs, that is, current anticipated public finance of US\$49 million per year will leverage a further US\$4 million from households). There is also a considerable shortfall in O&M finance (\$19 million).

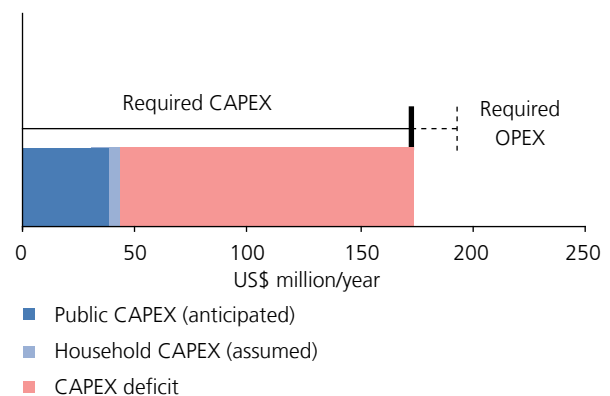
The RWS scorecard in Figure 11 shows low scores all the way along the delivery pathway. The scorecard uses

Figure 9
Rural water supply coverage



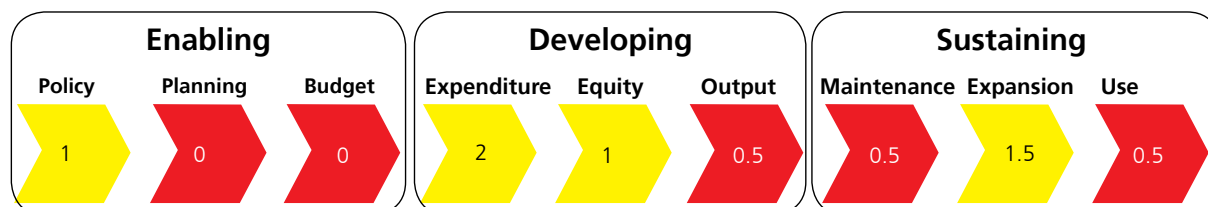
Sources: JMP 2010 report, NAC inventory.

Figure 10
Rural water supply investment requirements



Source: CSO2 costing.

Figure 11
Rural water supply scorecard

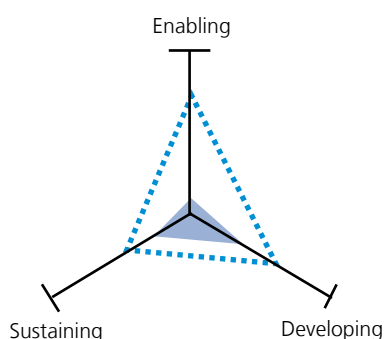


Source: CSO2 scorecard.

a simple color code to indicate: building blocks that are largely in place, acting as a driver on service delivery (score >2, green); building blocks that are a drag on service delivery and require attention (score 1–2, yellow); and building blocks that are inadequate, constituting a barrier to service delivery and a priority for reform (score <1, red).

Figure 12 shows that Zimbabwe’s performance falls some way below the peer-group average. The major challenges in the RWS subsector are:

Figure 12
Average RWS scorecard scores for enabling, sustaining, and developing service delivery, and peer-group comparison



■ Zimbabwe average scores
 ■ Averages, LICs, GNI p.p. <=\$500

Source: CSO2 scorecard.

RWS information systems. Updated rural information is urgently needed to direct repair and rehabilitation efforts—the low score for the maintenance building block in Figure 11 in part reflects the out-of-date inventories mentioned in Section 7.

Responsibility for development and ownership of rural water assets. Government or donors essentially cover all the costs associated with RWS development. A more sustainable policy would be that the responsibility for development, ownership, and upkeep of water assets lies with local authorities. Government may assist the poor, but consumers would contribute capital development costs, with tariffs collected to cover O&M costs.

Rural maintenance policy. A robust rural maintenance policy is less dependent on government finance. Rural districts should assume this responsibility, whilst exploring options for contracting out to small-scale private contractors. The current low score for maintenance also reflects the minimal of cost recovery for these purposes.

Drilling policy. Clarification is required on rural drilling policy. The District Development Fund does not have the capacity to drill the required boreholes, nor can government afford to subsidize all boreholes. Drilling tenders should be competitively bid at market prices to encourage development of a domestic drilling industry. Without resolving this question, the output of the subsector will remain very low, as depicted in the score for this building block (Figure 11).

Spare parts supply and manufacturing standards.

Spare parts delivery now depends on central government procurement—policies are needed to encourage private sector provision of spare parts. Policy is also required to improve quality control on locally manufactured RWS pumps and equipment.

Sector-Wide Approach (SWAp). There may be considerable advantages for Zimbabwe to return to the development of a SWAp, beginning with the rural water supply and sanitation sector.

Resettlement areas. The collapse of commercial farming removed service provision for farm workers and resulted in new resettlements, adding an additional burden to the state in servicing the resettled populations. The need in newly-resettled areas should be assessed and policies established for RWS, rural sanitation and hygiene (RSH), and irrigation needs.

8. Subsector: Urban Water Supply

Priority actions for urban water supply

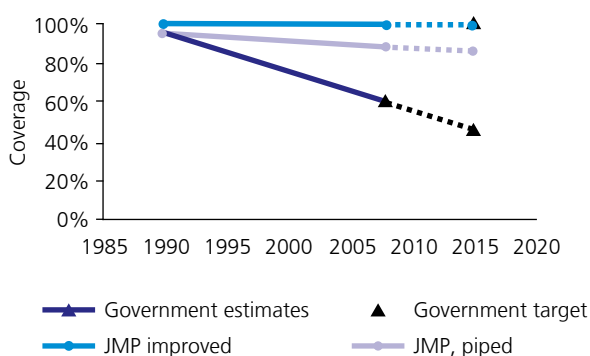
- Develop a financing strategy to replace aging infrastructure.
- Develop and implement new tariff guidelines that enable financial recovery and address the needs of the poor.
- Put in place energy policies to make UWS “unsheddable”.
- Rebuild the capacity of councils for financial and technical management.
- Increase the accountability of urban service providers to consumers.
- Encourage private sector involvement in service management.
- Create autonomous utilities in main cities.
- Allocate management to councils or ZINWA on objective efficiency measures.

Urban water services, based on national utility data, have declined from their once high standards. Failure to repair or maintain an already aging infrastructure has led to a severe decline in services. Reports from urban settlements, including growth centers, give a consistent picture of high levels of unaccounted-for water, distribution systems in need of repair, and effluent and raw sewage outflows entering rivers and dams, which are often the major sources of bulk water supply. A great many water treatment plants are dysfunctional, do not have the power to pump consistently or lack chemicals. Intermittent power supply to water services is a major contributing factor. While there is again a substantial discrepancy between the JMP and national estimates, the former’s depiction

of access via piped connections (grey line) also shows a decline, suggesting the substantial deterioration in network infrastructure which lie behind the government supply-side estimate.

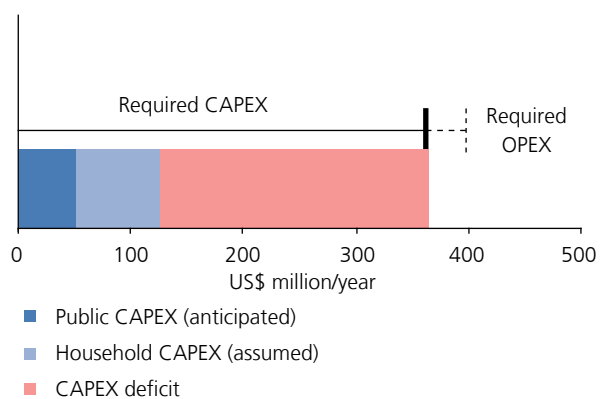
Reaching government targets is estimated to require additional investment of US\$234 million per year, almost twice the current anticipated CAPEX from public funding and households. The costing model follows the policy assumption, that users will contribute 60 percent of the total costs of urban water supply, but in practice this is unlikely to be leveraged: ineffective cost recovery from user fees is a significant limitation to further investment. The case of Harare is, however, encouraging: in response

Figure 13
Urban water supply coverage



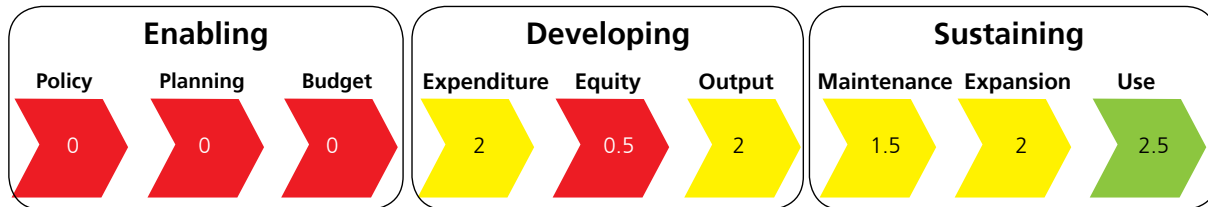
Sources: JMP 2010 report, NAC inventory, and urban council estimates.

Figure 14
Urban water supply investment requirements



Source: CSO2 costing.

Figure 15
Urban water supply scorecard

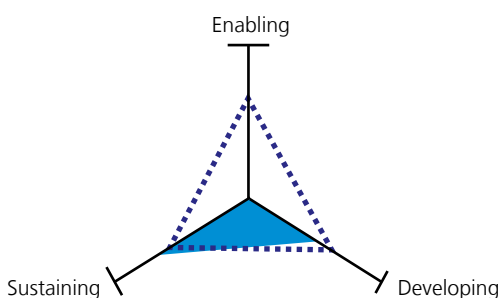


Source: CSO2 scorecard.

to cholera, following a US\$17 million investment in increasing water production and replacing aging pipes, the city authorities claim over a 50 percent increase in coverage in a six-month period. Urban water supply (UWS) can recover, but the investment needs are substantial, both for urgent rehabilitation as well as for development of new water sources.

Zimbabwe’s urban councils have much ground to recover in establishing a sound enabling environment and put in place realistic policies, plans, and budgets—as can be seen from Figure 15 and Figure 16, the UWS subsector receives a score of zero throughout these building blocks, due to factors such as the absence of an up-to-date subsector policy, investment plan or annual review, and the lack of clear budget lines and finance in general. In addition, through the service delivery pathway the score for expenditure is limited because, while levels of budget utilization are perceived to be relatively high, only the main cities have audited accounts and balance sheets. Equity considerations are not used to direct the limited resources

Figure 16
Average UWS scorecard scores for enabling, sustaining and developing service delivery, and peer-group comparison



■ Zimbabwe average scores
 :: Averages, LICs, GNI p.p. <= \$500

Source: CSO2 scorecard.

or allow for local participation. No consolidated asset and location inventory exists for UWS services. Plans exist for water resource development and service expansion for some urban centers, but many are out of date and need to be recosted. Major areas for attention in UWS include:

Financing strategy, regulation, and tariffs. A financing strategy is needed for replacing aging infrastructure and to enable urban authorities to move to financial viability. Key steps are the introduction of regulatory mechanisms, including tariff guidelines and benchmarking of performance improvement such that service providers can attract new investment.

Incentives in transfers. There is currently no connection between service quality and state support: MoLGRUD should link future capital investments to improved service provision and operational efficiency, restore sustainability and, over time, reduce reliance on national funding for subsidies and investments.

Capacity building. Support and incentives are needed for councils to develop capacity for investment planning, project implementation and procurement, and contract out works and construction supervision.

Balance of management between ZINWA and local authorities. The current situation—where some urban areas still have their services managed (and owned) by ZINWA—needs rationalization and an objective efficiency measure developed for deciding on management responsibility.

Creation of autonomous utilities. Most large cities have found that water and sewerage services require management by professional utilities, rather than by a municipal department.

Addressing the urban poor. Zimbabwe is experiencing a fast rate of peri-urban growth and specific strategies will be required to address these growing communities.

9. Subsector: Rural Sanitation and Hygiene

Priority actions for rural sanitation and hygiene

- Create a specific budget line for RSH in national and local budgets.
- Start a national RSH behavior change program to eliminate open defecation.
- Develop a menu of latrine options for affordable entry to improved services; and clarify policies on pit-emptying and latrine replacement.
- Develop local private sector capacity for latrine construction and management.

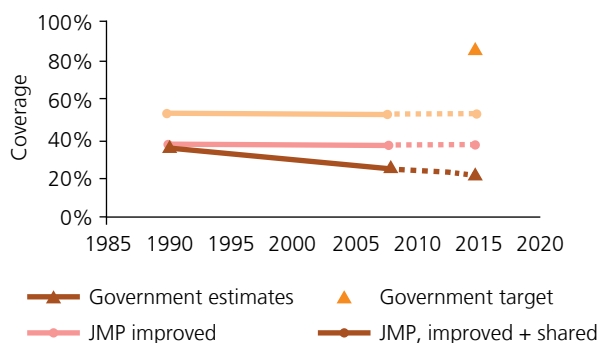
JMP data shows a flat trajectory in rural sanitation coverage, despite a vigorous rural sanitation program in the 1980s and '90s using innovative technologies, a disciplined cadre of environmental health extension workers, and government subsidies to cover the cost of building materials that could not be sourced on-site. Government estimates show a significant decline in rural sanitation coverage. With capital subsidies drying up, few new facilities have been built. Meanwhile aging superstructures, full latrine pits, unavailability (and unaffordability) of cement, have led many rural families to revert to open defecation. The latest Multiple Indicator Cluster Survey study estimates that 42 percent of the rural population still practices open defecation.¹⁸

The estimate of the CSO2 costing model is that a total of US\$90 million per year is required for sanitation hardware alone (that is, not including promotion and marketing

costs).¹⁹ The model assumes that households contributions will match public finance, that is, the current projected funding of US\$14 million per year will leverage the same amount in household funds. This scenario leaves a CAPEX deficit of US\$62 million per year. However, as discussed later, policy on subsidies vs. promotion requires clarification.

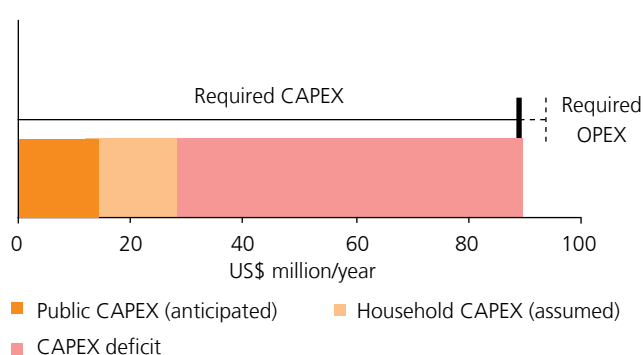
The upstream building blocks of the rural sanitation delivery pathway (policy, planning, and budget) score poorly (Figure 19). The collapse of the earlier program has meant minimal expenditure, output, and no resources or use of targeting mechanisms to assist the poor. The sustainability of the services has also been weak, with insufficient markets (in terms of sanitation goods and services) further inhibiting rates of uptake of sanitation and hygiene by households. The subsector performs well below the average of peer countries (Figure 20). The main issues that need to be addressed in rural sanitation are:

Figure 17
Rural sanitation coverage



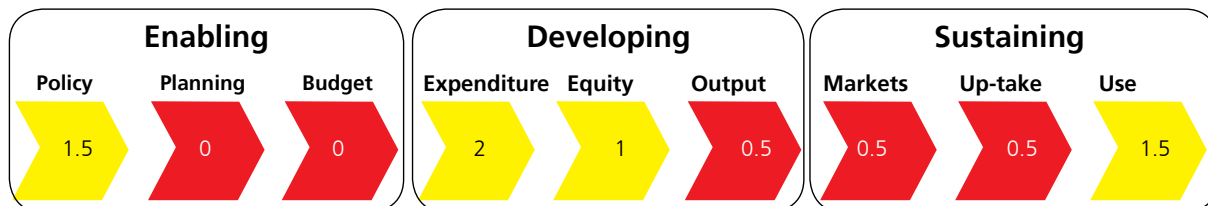
Sources: JMP 2010 report, MoHCW data on sanitation coverage, and NAC inventory.

Figure 18
Rural sanitation investment requirements



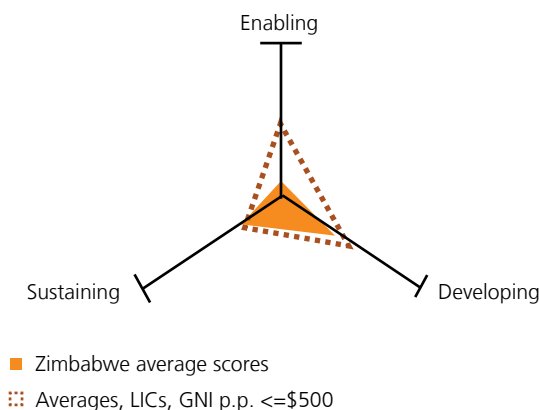
Source: CSO2 costing.

Figure 19
Rural sanitation scorecard



Source: CSO2 scorecard.

Figure 20
Average RSH scorecard scores for enabling, sustaining, and developing service delivery, and peer-group comparison



Source: CSO2 scorecard.

Focus public sector finance on promotion and behavior change. Prior subsidy-led approaches to rural sanitation are now not affordable: a continuation of this policy will not achieve widespread improvements in public health. An alternative approach would give priority for scarce public sector sanitation finance to be spent on demand creation, promotion and behavior change using modern behavior change techniques. This would aim to stimulate households' own investment in sanitation services, encourage pit-emptying and latrine replacement, and attract credit and other resources. Subsidies and public finance could then be targeted to the indigent and institutional sanitation.

Eliminating open defecation. To address the public health risks of open defecation, priority focus should be placed on mass sanitation behavior changes to stimulate the demand for sanitation and eliminate open defecation.

Specific budget line for sanitation. A specific budget line needs to be established for sanitation and hygiene activities. Experience suggests that unless sanitation funds are ring-fenced, these allocations are spent on water instead. This approach is in line with the 2008 African Union summit's Sharm El-Sheikh Declaration, which endorsed the importance of specific budget lines for sanitation.

Upgradeable sequences of Zimbabwean sanitation technologies. The policy of only having one standard option, the Blair Ventilated Improved Pit latrine, does not cater for the range of demand and affordability for rural sanitation services, especially considering the increased costs and the poverty of many rural Zimbabweans. Instead, an upgradeable sequence of sanitation options should be considered, which allow more affordable entry, as well as assisting households who want a higher standard of service.

Encouragement of the private sector. Sustainable sanitation service development requires long-term partnerships between the public and private sectors. Current policy assumes that the government plays most roles in RSH. Greater private sector engagement in the rural sanitation sector is required, not only in the manufacture of components, their distribution and marketing, but also in providing construction, emptying and maintenance services which respond directly to consumer demand.

10. Subsector: Urban Sanitation and Hygiene

Priority actions for urban sanitation and hygiene

- Develop alternatives to high-cost sewerage-only policies.
- Develop a financing strategy for urban sanitation.
- Increase enforcement of environmental and public health controls.
- Attract or buy-in specialist urban sanitation expertise.

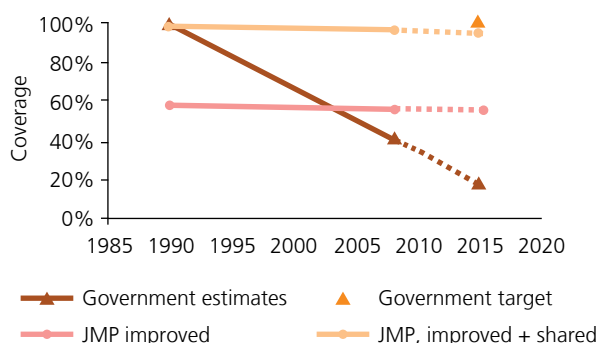
The urban sanitation subsector in Zimbabwe once had one of the highest coverage levels in Africa, including for networked sewerage. The economic collapse has led to a severe decline in services, reflected in both data sets, though the government estimates of coverage present a far more rapid deterioration. Lack of water flow causes frequent sewer blockages. Densification means that many more households use the same infrastructure. Many wastewater treatment plants are now dysfunctional.

CSO2 estimates show a massive capital investment gap of US\$273 million per year, relative to the US\$325 million per year required to meet national targets, requiring a six-fold CAPEX increase to rehabilitate neglected services. Current anticipated CAPEX has fallen to US\$51 million,

even assuming a 30 percent contribution by households. OPEX is also well below what is required, ultimately increasing the burden on public funds as facilities require more significant rehabilitation work.

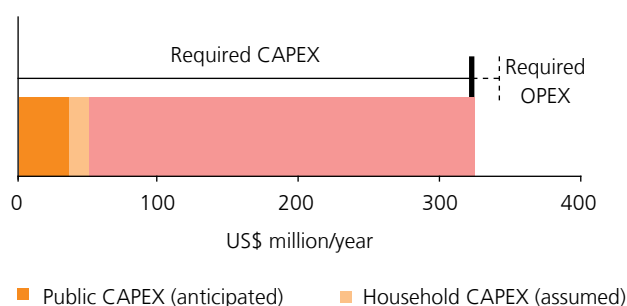
The urban sanitation and hygiene (USH) scorecard shows poor upstream and downstream scores (Figure 23), though Zimbabwe’s urban sanitation sector still outperforms many of its peers for building blocks relating to sustaining services (Figure 24). This is due to relatively well developed markets for sanitation, with services for construction and pit emptying provided by the private sector. In contrast, there has been widespread neglect of service management by councils and the sustainability of the services has been weak.

Figure 21
Urban sanitation coverage



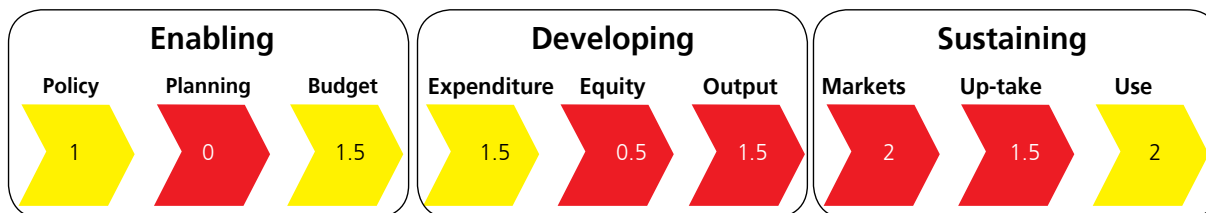
Sources: JMP 2010 report, MoHCW data on sanitation coverage, the NAC inventory, and urban council estimates.

Figure 22
Urban sanitation investment requirements



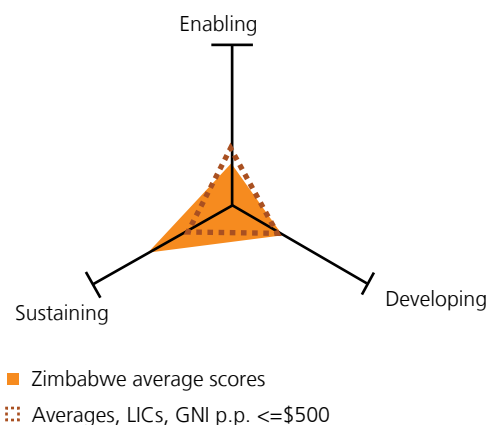
Source: CSO2 costing.

Figure 23
Urban sanitation and hygiene scorecard



Source: CSO2 scorecard.

Figure 24
Average USH scorecard scores for enabling, developing and sustaining service delivery, and peer-group comparison



Sources: CSO2 Scorecard

From an institutional and financial perspective, USH policy issues are similar to those confronted in the UWS subsector. Additional challenges include:

Alternatives to high-cost sewerage-only policy. A specific USH policy challenge facing Zimbabwe is whether it is realistic to have a goal of 100 percent sewerage coverage in urban areas. If not, policies on lower-cost approaches

need to be considered. Lower-cost technologies would decrease investment costs for the local authority and the consumer, and provide services that are easier to manage, with less environmental risk when sewage treatment fails. In any case, the selection of wastewater treatment options should take sustainability and environmental impact more centrally into consideration. Also, at present some cities have by-laws prohibiting the construction of pit latrines in urban areas. Proposed policy changes would need consultation with consumers.

Financing strategy for urban sanitation. A review is needed of strategies to refinance the USH sector. Options such as specific sanitation levies or sale of wastewater for irrigation might be considered.

Enforcement of environmental and public health controls. Zimbabwe has the environmental and public health legislation in place to hold councils to account, but monitoring and enforcement is weak.

Specialist expertise. The USH sector has suffered from skills loss. A specific capacity-building initiative is needed to attract back, or buy-in, the specialist engineering expertise needed to rehabilitate and manage sewerage and wastewater treatment facilities in Zimbabwe's cities and towns.

Notes and References

- ¹ The first round of CSOs was carried out in 2006 covering 16 countries and is summarized in the report, 'Getting Africa On-Track to Meet the MDGs on Water and Sanitation'.
- ² Government estimates.
- ³ JMP estimates are based on a linear regression of nationally representative household surveys.
- ⁴ Government of Zimbabwe. 2004. Domestic Water Supply and Sanitation Policy, draft.
- ⁵ Derived from MoHCW data on sanitation coverage, the NAC inventory, and urban council estimates.
- ⁶ UNICEF. 2010. Improved Access to Drinking Water and Sanitation in Zimbabwe, 1990–2010.
- ⁷ A 2007 sector assessment quotes a total annual sector allocation of Z\$3 trillion (approximately US\$3 million at that time).
- ⁸ African Development Bank. An Assessment of the Rural and Urban Water Supply and Sanitation Sector: Meeting the Millennium Development Goals, 2007.
- ⁹ Current public investment for water is US\$93 million and household contributions US\$85 million.
- ¹⁰ Due to rounding, component figures may not sum to totals.
- ¹¹ The CSO2 scorecard methodology and conceptual framework are discussed in detail in the synthesis report.
- ¹² World Bank Atlas Method.
- ¹³ Indicators relating to the Institutional framework section are as follows: All subsectors: targets in national development plans/PRSP; subsector policy agreed and approved (gazetted as part of national policy or as standalone policy); RWS/ UWS: institutional roles defined; RSH/USH: institutional lead appointed.
- ¹⁴ ZINWA retains management for 538 growth centers, towns and service centers.
- ¹⁵ Indicators relating to the section on financing and its implementation are as follows: All subsectors: programmatic Sector-Wide Approach; investment program based on MDG needs assessment; sufficient finance to meet MDG (subsidy policy for sanitation); percent of official donor commitments utilized; percent of domestic commitments utilized.
- ¹⁶ Indicators relating to the M&E section are as follows: All subsectors: annual review setting new undertakings; subsector spend identifiable in budget (UWS: inc. recurrent subsidies); budget comprehensively covers domestic/donor finance; RWS, RSH, and USH: domestic/donor expenditure reported; UWS: audited accounts and balance sheets from utilities; RWS, RSH, and USH: periodic analysis of equity criteria by CSOs and government; UWS: pro-poor plans developed and implemented by utilities; RWS/UWS: nationally consolidated reporting of output; RSH/USH: monitoring of quantity and quality of uptake relative to promotion and subsidy efforts; all subsectors: questions and choice options in household surveys consistent with MDG definitions.
- ¹⁷ The 2004 WASH inventory estimated that 75 percent of the 47,000 handpumps in the country were not functioning.
- ¹⁸ The latest household survey estimates open defecation at 48 percent (2009 Central Statistical Office/UNICEF Multiple Indicator Monitoring Survey).
- ¹⁹ The CSO2 investment requirement estimates do not include the cost of hygiene promotion and other 'software' activities, relative to the targets, due to the difficulty of estimating such costs on a per capita basis.





For enquiries, contact:
Water and Sanitation Program–Africa Region
The World Bank, Upper Hill Road
P.O. Box 30577, 00100, Nairobi, Kenya
Tel: +(254) 20 322 6300
E-mail: wspaf@worldbank.org
Web site: www.wsp.org