

**Interim evaluation 2008**

**Water Sector Reform Program, Zambia**

Brief Report

**gtz**

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## Tabular overview

### The evaluation mission

Evaluation period	July – October 2008
Evaluating institute / consulting firm	Center for Evaluation
Evaluation team	Nicolà Reade & Jonathan Kampata  Peter Maats & Munkoni Kambaila (Survey Implementation)

### The development measure

Title according to the offer	Water Sector Reform Program Zambia (WSRP)
Number	2003.2104.2 2005.2125.2.
Overall term broken down by phases	9 years (01/04 – 12/12) Phase 1: 01/04 – 09/05 (1,75 years) Phase 2: 10/05 – 12/09 (4,25 years) Phase 3: 01/10 – 12/12 (3 years)
Total costs	Total costs: 17.000.000 € Partner contribution approx. 200.000 €
Overall objective as per the offer, for ongoing development measures also the objective for the current phase	Overall objective: The poor population's access to safe drinking water and sanitary facilities is improved and integrated water resources management is introduced. (2005.2125.2)  Component objectives:  (1) The National Water and Sanitation Council (NWASCO) competently conducts its task in sector inspections and regulation. (2) The <i>Devolution Trust Fund</i> (DTF) handles projects for the sustainable improvement of the supply situation of the poor in the Zambian urban areas and secondary centers in a competent manner. (3) The efficiency of the supported WSSC in the north-western (NWWSC) and southern province (SWSC) has improved and the WSC in the eastern province is expanded. (4) Sector coordination and planning in the Zambian water sector have improved. (5) The legal and institutional basic conditions for Integrated Water Resources Management (IWRM) in Zambia have improved.

Lead executing agency	Ministry of Energy and Water Development – MEWD
Implementing organizations (in the partner country)	<ul style="list-style-type: none"> <li>▪ National Water Supply and Sanitation Council (NWASCO) and its Water Watch Groups (WWG)</li> <li>▪ Devolution Trust Fund (DTF)</li> <li>▪ Southern Water and Sewerage Company (SWSSC), Northwestern Water and Sewerage Company (NWWSSC), Eastern Water and Sewerage Company (EWSSC)</li> <li>▪ Department of Water Affairs (DWA) and Water Board at MEWD</li> <li>▪ Ministry of Local Government and Housing (MLGH)</li> </ul>
Other participating development organizations	German Development Bank (KfW), German Development Service (DED) and German Federal Institute for Geosciences and Natural Resources (BGR)
Target groups as per the offer	The poor and very poor population living in under-serviced peri-urban regions as well as the rural population under IWRM (component 5).

### The rating

Overall rating <i>On a scale of 1 (very good, significantly better than expected) to 6 (the project/program is useless, or the situation has deteriorated on balance)</i>	2 “good rating, fully in line with expectations, no significant defects”
Individual rating	Relevance: 2; Effectiveness:2; Impact:3; Efficiency: 2; Sustainability: 3

\* see attachment

Object of the evaluation is the ongoing development measure “Water Sector Reform Program, Zambia” (WSRP). It is implemented in three phases with an overall duration of nine years, running from 2004 till 2012 and currently in its second phase. The program is designed as a cooperation measure between technical (TC) and financial cooperation (FC). Technical cooperation is provided by GTZ and financial cooperation by the German Development Bank (KfW). Additional cooperative measures are implemented with the German Development Service (DED) and with the German Federal Institute for Geosciences and Natural Resources (BGR). Part of program implementation is assisted by RODECO Consulting GmbH.

Lead executing agency is the Ministry of Energy and Water Development (MEWD). Implementing organizations are the National Water Supply and Sanitation Council (NWASCO) and its Water Watch Groups (WWG), the Devolution Trust Fund (DTF), the Southern Water Supply and Sewerage Company (SWSSC), the Northwestern Water Supply and Sewerage Company (NWWSSC), the Eastern Water Supply and Sewerage Company (EWSSC), the Department of Water Affairs (DWA) and Water Board at MEWD and the Ministry of Local Government and Housing (MLGH). The program’s target group is the poor and very poor population living in under-serviced peri-urban regions as well as the rural population under IWRM (component 5).

The overall objective is: “The poor population's access to safe drinking water and sanitary facilities is improved and integrated water resources management is introduced”. To achieve this objective, the program uses a multi-level approach which is highlighted in the five program components and their indicators<sup>1</sup>: (1) Policy advice, regulation and monitoring assisting NWASCO measured by (a) cases of failed WSSC adherence solved/sanctioned, (b) founded WWG, (c) solved customer complaints, (d) submitted investment plans by Water Supply and Sewerage Companies (WSSC) and (e) experience exchange of regional water regulators. (2) Advice on establishing the pro-poor DTF measured by (a) pilot tested concepts for sanitation, (b) donor and investor satisfaction with DTF transactions and (c) consistency of DTF funded projects with rules and standards. (3) Operational advice for NWWSSC, SWSSC and EWSSC measured by (a) WSSC cost recovery rates, (b) WSSC approved investment plans and (c) founding of EWSSC. (4) Sector coordination and planning assisting MEWD and MLGH measured by (a) launched National Urban Water Supply and Sanitation Program (NUWSSP), (b) Implementation of NUWSSP, (c) satisfaction with work of the “Lead” donors and (d) sector goals oriented budget planning by MLGH and MEWD. (5) Policy advice on integrated water resource management (IWRM) measured by (a) Water Resources Management Authority and Catchment Council operative and (b) investment fund for water resources management and development established.

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<sup>1</sup> Please refer to the Indicator Performance Assessment in Annex 11 for detailed phrasing of components and indicators.

To measure the achievement of the overall objective five further indicators were phrased: (1) percentage increase of population in peri-urban areas with access to safe drinking water, (2) total count of population increase in peri-urban areas with access to improved sanitary facilities, (3) usage of funds for urban water supply and sanitation, (4) implementation of IWRM and (5) improvement of female living conditions.

Based on the objective and component outline, the program's results chain is phrased as follows: Promotion components comprise of technical, organizational and in-process advice by international, regional, local experts and inputs of material and equipment summing up to a total of 17.000.000 €. Further local subsidies/financial contributions add up to the amount of 200.000 € provided for pilot WSS and IWRM projects.

Advice is given to NWASCO (component 1), DTF (component 2), three WSSCs in NWP, SP and EP (component 3), MEWD and MLGH (component 4) and (component 5). Through the advice, the following outputs are supposed to materialize: (1) NWASCO guidelines and concept papers on WSS, a National Information System (NIS) on water and sanitation, yearly sector reports and water watch groups (WWG) taking care of consumer needs. (2) Concepts for financing, monitoring and reporting on pro poor DTF WSS projects. (3) Plans on investment and for improving efficiency at the three supported WSSCs. (4) Sector plans, joint sector approaches and joint sector programs. (5) IWRM policy papers, guidelines, concept papers, financial measures and draft IWRM legal frameworks.

These outputs are intended to be used by the various stakeholders to create intermediate outcomes as follows: (1) The supported WSSCs work according to the rules and regulations set up by NWASCO as NWASCO monitors WSSCs compliance and performance and WWG take care of consumer needs. (2) The DTF realizes WSS projects based on funding rules and regulations. (3) The supported WSSCs improve their service provision through improved efficiency and investment planning. (4) Water sector planning is improved as donor coordination and harmonization improves. (5) IWRM legal frameworks are adopted and institutions as well as an IWRM investment fund are set up.

These intermediate outcomes should directly result in the improved access of the poor population to safe drinking water and sanitary facilities and to the establishment of IWRM. In the long run the impact is intended to sum up to: (1) The populations improved hygienic and health situation measured through reduced frequency of water induced sicknesses. (2) The improved access (especially for females and children) to safe water which results in improved living conditions and living standards. (3) The sustainable use of water resources, minimized occurrences of water pollution and equitable water allocation. On the aggregated impact level (MDGs) the program is thus meant to contribute to MDG 7C (improved access to safe water and sanitation), MDG 7A (environmental sustainability), MDG 7D (living

conditions), MDG 4A (child mortality), MDG 5A (maternal mortality), MDG 1A and 1C (poverty reduction) and MDG 3A (girl school attendance), MDG 2A (education).

The interim evaluation was conducted between July – October 2008 by an international team consisting of: Nicolà Reade (international consultant on behalf of the Center for Evaluation CEval); Jonathan Kampata (national consultant); Survey team (Peter Maats - international consultant CEval, Munkoni Kambaila - national consultant, 9 enumerators). The evaluation methodology included: (a) Hypothesis based cause-effect analysis, (b) quasi-experimental research design, (c) multi-method approach and (d) quantitative as well as qualitative data analysis methods. Evaluation objective was to assess the development progress of the program according to the TOR and the guidelines on evaluating the success of projects/programs (March 2007), basing the judgment of the evaluation on the five OECD-DAC (Development Assistance Committee of the Organization for Economic Cooperation and Development) criteria relevance, effectiveness, impact, efficiency and sustainability. While sustainability is rated on a 4-point-scale (from 1 = very good sustainability to 4 = inadequate sustainability) the other criteria are rated on a six-point scale (from 1 = very good rating, significantly better than expect to 6 = the program is useless, or the situation has deteriorated on balance). Furthermore, the program is assessed according to its contribution to poverty reduction and the Millennium Development Goals, promotion of gender equality, sustainable development and sector related questions.

The evaluation team finds that capacity building in all institutions supported by WSRP is taking place, although many interview partners emphasized the general high capacity deficit in the entire water sector, especially among the WSSCs, which negatively influences water sector performance. Capacity building in MEWD and MLGH leads to improved efficiency and impacts in the sector by aligning sector activities to sector strategies and priorities. At DWA (MEWD) capacities built support drafting and implementing a new Water Resources Management Act (WRMA), introducing IWRM and sustainable water use in Zambia. NWASCO capacity building improves and assures its steering and regulating functions of WSSC. Capacities built at DTF materialize in professional and transparent implementation of tendering processes as well as monitoring and evaluation of poverty-focused investment measures. Capacities in all three program supported WSSC in NWP, SP and EP lead to increased efficiency and customer satisfaction.

WSRP's overall success is assessed by the evaluators **as good (rate 2)**. The ratings of the single criteria relevance, effectiveness, impact, efficiency and sustainability are as follows:

Relevance examines the “extent to which the aims of the program correspond with the needs of the target groups, the policies of the partner country and of the partner institutions, global development goals, and with the fundamental development policy orientation of the German government.” The evaluators find that WSRP's concept is adequate to solve key Zambian

development issues and needs of the target group, focusing on improving access to safe water and sanitation, IWRM and in the long run improved living conditions and poverty reduction. Furthermore, it is in line with major national and international sector policies and strategies as well as international themes and standards (PRSP, Vision 2030, FNDP, CSP, SSP, MDGs, Action Plan 2015 and Agenda 21). Cross cutting issues as gender equality, good governance and environmental protection are considered. Overall WSRP thus complies to GTZ's basic development-policy orientation. Finally, high priority is assigned to WSRP by responsible institutions and the target group, demonstrated by government budget increase in the water sector and the targets groups' increased willingness to pay for improved access to water and sanitation. WSRP is rated as **good (rate 2)**, being fully in line with expectations and having no significant defects.

**Effectiveness** refers to the "extent to which the direct results (program objectives) of the program are achieved (target-performance comparison)." The so far reached direct results based on the component objectives can be summarized as follows: (1) Nwaso functions as sector inspector and regulates the WSP in a competent manner. (2) The provision of funds through DTF for the operation of projects in the peri-urban areas is well functioning. (3) The efficiency of the supported WSSCs in the Northwestern and Southern province is improving, leading to improved services in the water sector. The Eastern WSC is being formed. (4) Sector coordination and planning have improved, basket funds for rural and urban water supply and sanitation will be in place starting in 2009 (DTF, NRWSSP, NUWSSP). (5) Legal and institutional frame conditions for IWRM have not yet improved as a draft IWRM Bill is waiting for approval by the Zambian cabinet and subsequently by Parliament. Through these component achievements, the access of the peri-urban population to safe drinking water at socially acceptable rates, emphasized in the overall objective of WSRP, is steadily improving. So far additional 230.000 people in peri-urban areas have improved access to safe drinking water. Improved access to sanitary facilities could not yet be realized, but in 2008 sanitation projects will be launched which will improve the access of approx. 45.000 people. Based on these findings, the evaluators conclude that by program end in 2012 achievement of objectives is quite likely for improved access to drinking water, likely for improved access to sanitary facilities and endangered for the introduction of IWRM. Considering the program component achievements, the evaluators rate effectiveness as **good (rate 2)**.

**Impact** refers to the "extent to which the program contributes to the achievement of the targeted overarching impacts, and to the occurrence of other indirect effects." The impact of the program is summarized as follows: Health and hygiene conditions have improved and the improved access to water and sanitation has enhanced the quality of life. Special contributions are made to following MDGs: MDG 7C (improved access to safe water and



sanitation), MDG 7A (environmental sustainability), MDG 7D (living conditions), MDG 4A (child mortality), MDG 5A (maternal mortality), MDG 1A and 1C (poverty reduction) and MDG 3A (girl school attendance), MDG 2A (education). Benefiting most are the urban poor population and among these especially females and children, as they are responsible for household matters and thus for fetching water. The extent of the achieved impacts though is limited by factors such as the need to ration water due to power shortages or inadequate supply and the still prevalent use of unsafe water sources. Falling short of expectations are impacts on sustainable use of water resources and improved environment (also being negatively affected by low improvements in sanitation coverage). Based on this assessment, WSRP is rated as **satisfactory (rate 3)**.

Efficiency is a “measure of the suitability of the resources employed for a program relative to the results that it achieves (outputs and impacts).” WSRP’s efficiency in achieving the increase of people’s access to safe water supply is especially demonstrated when taking a look at the amount of money spent to improve the access to water supply in peri-urban areas: DTF finances water kiosks which only need an investment of 8 € per Person (GTZ 2007). Furthermore, the program’s structure and high level of cooperation (with the German and the international donor community) is appropriate to achieve the outputs and results in a cost-effective manner. Efficiency is rated as **good (rate 2)**, showing no significant defects.

Sustainability is a “measure of the probability that the positive results and impacts of the program remain beyond the end of the support period.” The evaluators found that although WSRP tries to lay the foundation for maintaining the achieved direct and indirect results by reforming legal frameworks, settings and institutions, many doubts remain if the results can actually be maintained. Positive predictions are made for the independent and competent functioning of NWASCO as a regulator and the improved sector coordination. More fears exist on the sustainability of results depending on continuous funding and finances, for example the WSSC. They will need continuous support to assure their operation as they will not reach full cost coverage to maintain their own machinery or even build reserves for investments in infrastructure for peri-urban areas by the time WSRP ends. Key risks for sustainability are: (1) Serious capacity gaps both in terms of numbers, qualifications and skills at the district level and especially in the WSSC; (2) Grossly inadequate preventative maintenance of WSSC equipment and machinery; (3) Increasing erratic power supply which negatively affects water production; (4) High urbanization combined with deficits in town planning constraining the extension of service lines; (5) Prevailing bad paying moral of especially government institutions; (6) Persisting prevalent use of other unsafe water sources; (7) The slow process in passing the IWRM Bill. Positive impulses for sustainability are the improved government funding and planning for the sector and basket-funds in the pipeline for NRWSP and NUWSP. The evaluators assess sustainability as being

**satisfactory (rate 3)**, with the overall success of WSRP probably decreasing after program end but remaining positive with a high degree of probability.

Considering gender equality the evaluators find that both men and women benefit from the improved water service delivery. As traditionally in Zambia fetching water for household use is the role of women, the burden on women to obtain safe water is reduced. Furthermore, the kiosk approach diffused by the program deliberately seeks to have more women involved in operating the water kiosks. Poverty orientation is given by the special focus of the program on the peri-urban poor population and the improvement of their water and sanitation services. The MDGs contributing to are MDG 7A, 7C, 7D), MDG 4A, MDG 5A, MDG 1A, 1C, MDG 3A and MDG 2A (see in detail under impact). The emphasis on sustainable development is demonstrated by the holistic, process based and value based approach the program follows.

Based on the assessment of WSRP, the following main program related conclusions and recommendations are drawn:

- I. To assure NIS data quality, timeliness and validity, NWASCO should re-educate WSSC staff on how to measure the required NIS data and how to use the reported data for own management purposes.
- II. To improve WSSC cost-coverage, performance improvements of WSSCs especially on unaccounted for water (UFW), collection efficiency and preventative maintenance are required. Therefore, 100% metering policy and no toleration policy for outstanding bills should be consequently followed. Further tariff adjustments in the future are required. Costs for full O+M should also be considered in calculations.
- III. Since full cost recovery of all WSSCs is a long term goal, the government of Zambia should enhance its support of grants to WSSCs. That way WSSCs will be able to cover full O+M costs. Currently, the costs calculated are restricted to the available cash flow, compromising on the desired quality of service and affecting preventive maintenance and expansion. Thus compromising on the sustainability of the infrastructure systems and causing constant rehabilitation measures.
- IV. WSSCs should discuss with local authorities the option to include water connection charges in the price for selling land/plots and to pay the money directly to the WSSC. This could improve the speed of water service line extensions.
- V. As WSSCs are all facing similar problems and struggling for sustainability, a network should be established enabling WSSCs to cooperate and find solutions to their problems.
- VI. Common agreements with the power supplier Zesco should be reached on load shedding and shutting off of water production plants. Water pump stations and water

intakes should be exempted as much as possible from shut down/load shedding to be able to supply the population with water.

- VII. To support the sustainability of the WSSCs, capacity development measures should be continued, enforced and institutionalized (cooperation with training centers are an option).
- VIII. To support the sustainability of the water kiosks, entrepreneurship training should be included in Kiosk Vendor training and vendors should be encouraged to and supported in selling additional items.
- IX. The prompt passing of the revised National Water Policy and IWRM Bill should be a point of dialogue with government for the future continuation of WSRP, especially for continuing component five. So far no big achievements could be made and program success for this component is endangered.

## Annex 11: Indicator Performance Assessment

**Overall objective:**

<p><b>Overall Indicator 1:</b></p> <p>The percentage of the population in peri-urban areas</p> <p>Status: </p>	<p><b>Overall Indicator 2:</b></p> <p>400.000 people in peri-urban area have additional access to</p> <p>Status: </p>	<p><b>Overall Indicator 3:</b></p> <p>The usage of funds from associated funding for urban</p> <p>Status: </p>	<p><b>Overall Indicator 4:</b></p> <p>The WRMA and the Catchment Councils (CC)</p> <p>Status: </p>	<p><b>Overall Indicator 5:</b></p> <p>In the German supported areas at least 60% of the</p> <p>Status: </p>
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**Component objective 1:**  
The National Water and Sanitation Council (NWASCO) administers its functions as sector inspection and regulation in a competent manner.

**Component objective 2:**  
The DTF operates investment projects through WSP in the settlement areas of the peri-urban poor population.

**Component objective 3:**  
The efficiency of the supported CU in the Northwestern (NWWSC) and Southern province (SWSC) has improved and the WSC in the Eastern province is expanded.

**Component objective 4:**  
Sector coordination and planning in the Zambian water sector have improved.

**Component objective 5:**  
The legal and institutional frame conditions for Integrated Water Resources Management (IWRM) in Zambia have improved.

**Indicator 1:**  
95% of the cases of failed adherence to NWASCO-standards by the commercialized water providers (Commercial Utilities (CU)) were either resolved within the set period of time or NWASCO applied sanctions.  
Status:

**Indicator 2:**  
At least eight further Water Watch Groups (WWG) are founded.  
Status:

**Indicator 3:**  
The WWG resolve 90% of the incoming complaints within two weeks.  
Status:

**Indicator 4:**  
75% of the CU submitted investment plans that correspond to NWASCO criteria of priority (poverty orientation) and guidelines (planning horizon, service quality).  
Status:

**Indicator 5:**  
With at least three water regulators in the region (including Kenya, Tanzania) common activities (symposia, exchange of instruments and methods) in terms of the consolidation of exchange of experience are being enforced.  
Status:

**Indicator 1:**  
A concept and standards for the realisation of sanitation investment projects are developed and successfully tested in three pilot areas until 12/09.  
Status:

**Indicator 2:**  
Donors and external investigators are satisfied with the DTF's transactions of approx. 2.500.000 Euros per year.  
Status:

**Indicator 3:**  
12 out of 17 projects funded by DTF from the first two tenders (04/07 and 10/07) are still consistent with DTF-rules and standards two years after the establishment.  
Status:

**Indicator 1:**  
Cost recovery of NWWSC and SWSC achieves at the least 100% / 150% until the end of the TA.  
Status:

**Indicator 2:**  
The investment plans of NWWSC and SWSC are approved by NWASCO until 12/08.  
Status:

**Indicator 3:**  
Four cities are consolidated with the Chipata Water and Sanitation Company (CWSC) in the Eastern WSC, concerning establishment, finance management and administration.  
Status:

**Indicator 1:**  
The National Urban Water Supply and Sanitation Programme (NUWSSP), including waste disposal, is launched until 12/08.  
Status:

**Indicator 2:**  
Implementation of the NUWSSP and common donor funding functioning according to plan.  
Status:

**Indicator 3:**  
At least 70% of the partners and donors are content with the work of the "Leads".  
Status:

**Indicator 4:**  
MLGH and MEWD orient their annual budget planning and budget transfer to the sector goals of the fifth National Development Plan.  
Status:

**Indicator 1:**  
The newly founded authority for the cultivation of water resources (Water Resources Management Authority – WRMA) and at least one Catchment Council (CC) operate until 12/09.  
Status:

**Indicator 2:**  
An investment fund for water resources management and – development is established until 12/09.  
Status:

**Red: Not yet commenced**

**Yellow: Work in progress**

**Green: Completed tasks**

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