Corporate Unit Evaluation Central Project Evaluation

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Central Project Evaluation

Climate-friendly sanitation services in peri-urban areas of Lusaka, Zambia (PN 2015.2230.9)

Evaluation Report

On behalf of GIZ by *Dr Mathias Polak (Comit Berlin)* and *Ngoni Nsana (Comit Berlin)*

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Abbreviations

BMZ	*Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung* German Federal Ministry for Economic Cooperation and Development
CFS	Climate-Friendly Sanitation Services in peri-urban areas of Lusaka (GIZ project)
CU	Commercial utility
DDCC	District Development Coordinating Committee
DKTI	*Deutsche Klima- und Technologieinitiative* German Climate and Technology Initiative
ECAM	Energy Performance and Carbon Emissions Monitoring (tool)
FSM	Faecal sludge management
GHG	Greenhouse gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
GRZ	Government of the Republic of Zambia
LCC	Lusaka City Council
LD WASH PHC	Lusaka District Water, Sanitation and Hygiene Public Health Committee
LNOB	Leave No One Behind
LSP	Lusaka Sanitation Programme
LWSC	Lusaka Water and Sanitation Company
M&E	Monitoring and evaluation
MWDSEP	Ministry for Water Development, Sanitation and Environmental Protection
NGO	Non-governmental organisation
NWASCO	National Water and Sanitation Council
OECD/DAC	Development Assistance Committee of the Organization for Economic Co-operation and Development
OSS	On-site sanitation
RWS	Reform of the Water Sector project
SMART	Specific, measurable, achievable, realistic and timebound
SOP	Standard operating procedure
TC	Technical cooperation
TWG	Technical working group
WaCCLiM	Waste and Water Companies for Climate Mitigation project
WASH	Water, sanitation and hygiene
ZAS	*Zeitaufschrieb* Timesheet
ZEMA	Zambia Environmental Management Authority

The project at a glance

Zambia: Climate-friendly sanitation services in peri-urban areas of Lusaka

Project number	2015.2230.9
Creditor reporting system codes	14032 (80%), 14081 (20%)
Project objective	In the peri-urban areas of Lusaka, the prerequisites for the implementation of climate-friendly sanitation services and faecal sludge management that reduce greenhouse gas emissions have been established
Project term	1 December 2016 to 31 December 2019
Project value	EUR 5,000,000
Commissioning party	German Federal Ministry for Economic Cooperation and Development (BMZ)
Lead executing agency	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
Implementing organisations (in the partner country)	Ministry of Water Development, Sanitation and Environmental Protection (MWDSEP) – political partner; Lusaka City Council (LCC) and Lusaka Water and Sanitation Company (LWSC) – implementation partners
Other development organisations involved	Water trusts operating in Lusaka, National Water and Sanitation Council (NWASCO), Zambia Environmental Management Agency (ZEMA)
Target group(s)	Population of Lusaka (2.3 million people), particularly the inhabitants of low-income areas (1.5 million people)

1 Evaluation objectives and questions

This chapter aims to describe the purpose of the evaluation, the standard evaluation criteria, and additional stakeholders' knowledge interests and evaluation questions.

1.1 Evaluation objectives

As a result of the requirements of the Agenda 2030 for Sustainable Development and the Joint Procedural Reform with the German Federal Ministry for Economic Cooperation and Development (*Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung*, BMZ), the German Agency for International Cooperation (*Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH*, GIZ) introduced a new central project evaluation for the BMZ business system in 2017. Some 30–50% of all GIZ projects with a commission value of over EUR 3,000,000 are being evaluated. The present evaluation is part of a regionally stratified random sample which was drawn from all GIZ projects with the respective commission value to achieving the envisaged cover rate. The evaluation fulfils three basic functions:

- to support evidence-based decisions,
- to promote transparency and accountability, and
- to foster organisational learning within the scope of contributing to effective knowledge management (GIZ 2018: 7).

Central project evaluations are carried out independently, that is by external evaluators on behalf of the GIZ Evaluation Unit. This is the final evaluation, which commenced with an inception phase in December 2019 and the main evaluation phase shortly after the closure of the project in May 2020. As the project is financed from the German Climate and Technology Initiative (DKTI), a follow-on project is not possible due to the formalities of this line of funding. However, the GIZ project Reform of the Water Sector (RWS) Phase 2 received additional funds and was amended to include a component on sanitation in Lusaka. The component will include certain fields of activities (namely, climate-friendly sanitation – CFS) that build upon work undertaken by the project. This new component officially commenced in the first quarter of 2020. However, due to the Covid-19 pandemic, activities were on hold at the time this evaluation was undertaken.

Against this background, the specific objectives of the evaluation are:

- to evaluate the project's success based on the criteria of the Organization for Economic Co-operation and Development/Development Assistance Committee (OECD/DAC),
- to draw conclusions and formulate recommendations for the RWS component's further orientation, planning and implementation, and thereby contribute to its development effectiveness, and
- to support knowledge management and learning in the sector and within involved organisations.

1.2 Evaluation questions

The project is assessed on the basis of standardised evaluation criteria and questions to ensure comparability by GIZ. This is based on the OECD/DAC criteria for the evaluation of development cooperation and the evaluation criteria for German bilateral cooperation (in German): **relevance, efficiency, effectiveness, impact and sustainability**. Aspects regarding coherence, complementarity and coordination are included in the other criteria.

Specific assessment dimensions and analytical questions have been derived from this framework. These form the basis for all central project evaluations in GIZ and can be found in the **evaluation matrix (annex 1**). In addition, contributions to the 2030 Agenda for Sustainable Development and its principles are taken into account as well as cross-cutting issues such as gender, the environment, conflict sensitivity and human rights. Also, aspects regarding the quality of implementation are included in all OECD/DAC criteria.

No additional evaluation questions were developed for this evaluation.

2 Object of the evaluation

This chapter aims to define the evaluation object including the theory of change and results hypothesis.

2.1 Definition of the evaluation object

The object of the evaluation is the project, Climate-friendly Sanitation Services in Peri-Urban Areas of Lusaka, Zambia (PN 2015.2230.9), which is referred to as 'the project' in this report. The project is financed through the German Climate and Technology Initiative (*Deutsche Klima- und Technologieinitiative* – DKTI) of BMZ. The project aims to facilitate the development of climate-friendly sanitation services in the most impoverished parts of Zambia's capital city Lusaka. It has a duration of 3 years and 1 month (12/2016 to 12/2019). Although originally planned for 3 years (September 2016 to August 2019), the project was commissioned on 1 December 2016 thus having a duration of 2 years and 9 months from December 2016 to August 2019. Due to delays in implementing project activities, a 4-month contract value-neutral extension was agreed upon with BMZ, which gave it a duration of 3 years and 1 month. The German contribution is EUR 5,000,000.

As DKTI projects are standalone, there is no direct **predecessor or follow-on project**. However, the project built on various earlier activities carried out under the bilateral water programme, RWS, especially regarding the political framework (e.g. extension of service areas of commercial utilities to peri-urban areas). For the continuation of GIZ's support to the sanitation sector, a change offer for RWS has been submitted to BMZ to build upon some of the key activities of CFS.

The **geographical focus** of the project is on the 'peri-urban areas' of Lusaka, which comprise recently urbanised low-income zones. Lusaka had officially 2.2 million inhabitants in 2010[1] of which two-thirds (1.5 million) live in 33 of these peri-urban areas. They are characterised by poor housing conditions and a lack of public service delivery, including sanitation services (GIZ, 2020: 12). The project focuses particularly on four of these areas: George, Chawama, Kanyama and Chazanga, which are also given priority by the LSP. These four areas are pilots for a number of activities, such as the sanitation mapping (Output A) and the SaniPath Assessment (Output C). They are among Lusaka's peri-urban areas with the highest prevalence of cholera.

Sanitation: Zambia, with 42 per cent of the population residing in urban areas, is one of the most urbanised countries in sub-Saharan Africa. The overall annual population growth rate is estimated at 2.8% per annum and the population is projected to increase from its current 16.4 million to 27 million by 2035. Peri-urban areas absorb the bulk of Zambia's urban population growth, which is amplified by the effects of rural to urban migration (The Zambia Country Brief, 2019: 1).

Sanitation is of particular relevance for the well-being of Lusaka's inhabitants as the groundwater table is very shallow in large parts of the city. While this enables inhabitants to dig shallow wells, facilitating the population's widespread use of the water supply in low-income areas, it is unsafe because of contamination. Lusaka has a sewerage system with about 600 km of main sewers and 98 km of interceptors. This covers only around 15% of the city leaving 85% with on-site systems in the form of septic tanks and pit latrines (WSUP, 2019a: 5). Especially in the peri-urban areas, the majority of households have adopted percolating pit latrines for their sanitation solution. The wastewater that infiltrates into the ground from the pit has direct effects on the groundwater quality and immediate effects on the public health (Muchelengánga, 2011). In the rainy season 2017/2018, 5,414 official cases of cholera were registered in Lusaka District (Sinyange et al., 2018: 556–9). Previous studies of cholera outbreaks in Zambia confirmed that incidents of cholera in Lusaka's peri-urban areas are associated with low coverage of latrines, unsafe disposal of faecal sludge, unsafe water sources,

[1] The estimation for 2019 is 3.3 million (source: https://www.citypopulation.de/en/zambia/cities/; accessed on 01.October 2020).

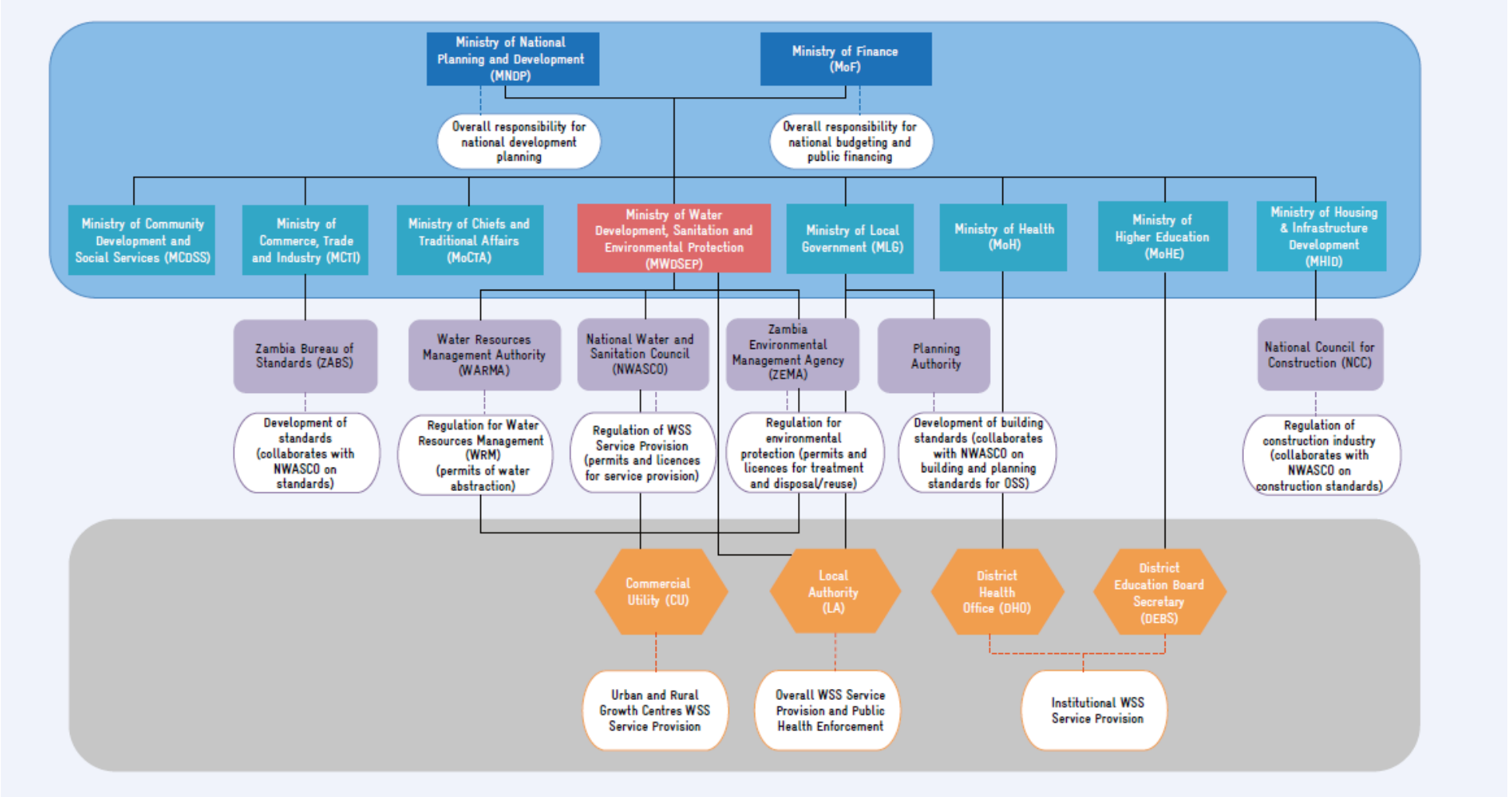
non-functional drainage systems, and a lack of water supply for personal hygiene practices (Sasaki et al., 2009). A rapid assessment conducted by LWSC at the start of the LSP (LSP, 2017) found that on average:

- 16 people share a toilet,
- only 55.3% toilets were clean at the time of the assessment,
- only 12% of the toilets had soap, and
- only 27% had water.

This underpins the difficulties regarding sanitation services and hygiene practices in Lusaka.

Institutional landscape: Zambia's sanitation sector underwent significant institutional changes over the past years. Figure 1 illustrates the current institutional framework for water and sanitation as it is since the latest reforms in 2016.

Figure 1: Institutional arrangements for water and sanitation in Zambia

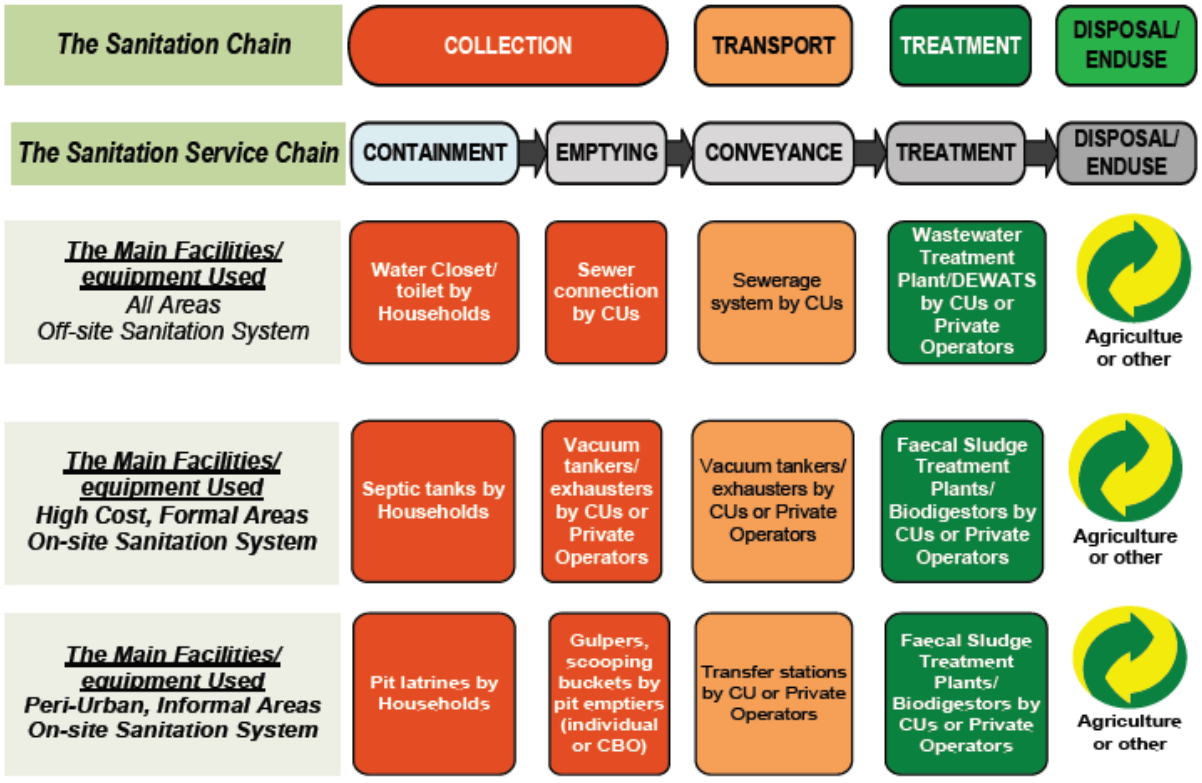


Source: GIZ 2020: 17

The Ministry for Water Development, Sanitation and Environmental Protection (MWDSEP) is the lead agency for sanitation at the national level and is responsible for sector oversight and policy development. MWDSEP also develops policies and coordinates the water and sanitation sector. Another key national-level institution is the National Water Supply and Sanitation Council (NWASCO), which is an independent regulator. NWASCO's primary responsibilities are the regulation of sanitation services providers in both urban and rural contexts (mainly commercial utilities – CUs) through the implementation of regulatory tools such as licensing, performance management and inspections. NWASCO's responsibilities also include developing guidelines for various aspects of sanitation, including tariff setting (GIZ, 2020: 14pp). Another countrywide regulator is the Zambia Environmental Management Agency (ZEMA), which is agency responsible for regulating effluent discharge. ZEMA also issues waste management licences to all sanitation service providers (including local authorities) to 'reclaim, reuse, recover or recycle waste; collect or dispose of waste; transport waste to a disposal site; own, construct or operate a waste disposal site or transit, trade in or export waste' (GRZ, 2011: 135). The third regulatory authority for the water sector is the Water Resources Management Authority, which regulates the abstraction of water from the environment with the aim to protect water resources and balance the use of this scarce resource between sectors.

The CUs and local authorities are the implementers for water supply and sanitation services. Through a 2018 regulatory framework on on-site sanitation (OSS) and faecal sludge management (FSM), NWASCO clarified the institutional responsibilities for OSS/FSM and included major responsibilities for this topic in the duties of CUs. This is also reflected by the renaming of Zambia's CUs from a 'water and sewerage company' into a 'water and sanitation company' (e.g. Lusaka Water and Sanitation Company – LWSC). Figure 2 outlines the institutional responsibilities for sanitation in Zambia (the last line is for OSS/FSM in peri-urban areas).

Figure 2: Institutional responsibilities along the sanitation chain



Source: NWASCO 2018: 37

Partner structure: The project has two key implementation partners at the meso-level within the Zambian government: LWSC and LCC (as the local authority responsible for Lusaka). This emphasises the project's clear focus on tangible results at the implementation level. In addition, the project works closely with MWDSEP, NWASCO and – to a lesser extent – Zambia Environment Management Agency as the partner at macro-level

to influence political and regulatory decisions that shape the sector.

The project's **indirect target group** is the population of Lusaka (2.3 million people), particularly the poorer two-thirds (1.5 million) that live in peri-urban areas and which rely completely on OSS. As previously stated, during the implementation of the project, a particular focus was put on four of the 33 peri-urban areas of the city (George, Chawama, Kanyama and Chazanga) with a total of about 650,000 inhabitants. It can be assumed that at least 21,500 people will be reached directly by the project through a pilot LSP intervention as the design of 3,500 household toilets was developed by the CFS project (Int_Partner_6, 7, 10, each household toilet will be used by six people on average).

Cross-cutting issues: Gender is a key cross-cutting topic on which the evaluation focuses. This is because of the huge relevance of sanitation for women's lives. Women suffer most from a lack of adequate sanitation facilities as they, more than men, undergo the indignity of being forced to practice open defecation. In the absence of sanitary facilities, women often have to wait until dark to go to the toilet. This increases their exposure to assault and potential rape. Women form the majority of those using public defecation areas, where hygienic conditions are poor and disease is close. That is why women often drink less, which causes health problems. People may also attempt to modify their diets, by not eating certain fibrous foods such as pulses or leafy vegetables. An unbalanced diet may result in negative long-term health consequences (Wendland et al., 2017).

Therefore, any sanitation project must have a strong focus on women as beneficiaries.

2.2 Results model including hypotheses

The project outcome (module objective) reads: 'In the peri-urban areas of Lusaka, the prerequisites for the implementation of climate-friendly sanitation services and faecal sludge management that reduce greenhouse gas (GHG) emissions, have been established.' Outcome achievement is measured by five outcome indicators:

- **Outcome indicator 1:** Three adapted procedures for climate-friendly OSS and FSM in peri-urban areas of Lusaka, that reduce GHG emissions (flood resistant decentralised sanitation facilities, emptying of settling tanks and transport, and treatment of faecal sludge by using the methane gas) are being applied by LWSC within the implementation of the Lusaka Sanitation Programme (LSP).
- **Outcome indicator 2:** Two-thirds of approximately 10 key stakeholders of the On-Site Sanitation Working Group (OSS WG) (with representation from MWDSEP, LWSC, LCC, other ministries, development partners, non-governmental organisations (NGOs), representatives of private sector and communities) confirm that the activities concerning OSS within the LSP are conducted in a coordinated manner.
- **Outcome indicator 3:** When coordinating measures, the OSS WG applies an agreed-upon – by OSS WG's key stakeholders – list of gender-sensitive criteria that covers adequate gender-specific requirements of sanitation facilities.
- **Outcome indicator 4**: Annual reports on the implementation of regulations for sanitation (compulsory sewer connection, health and safety standards for desludging inclusive of procedures for transport and reuse of faecal sludge and solid waste) for three of the town districts, which have been prepared by LCC, are presented to the regulatory authority NWASCO.
- **Outcome indicator 5:** Six of 12 training modules of the adopted training plan for operation and maintenance of climate-friendly wastewater systems through public and private service providers have been conducted by certified professional training personnel.

The project was commissioned to provide technical assistance in the field of OSS/FSM as major infrastructure investments are ongoing in this field (through LSP). Therefore, the project is closely linked to the multi-donor investment programme implemented by LWSC. Major risks for the project arise from delays or any other problems in the implementation of the LSP (see box 'risks' in Figure 3 Results model). To achieve the outcome, the project focuses on four output areas:

- **Output A:** Adapted procedures have been developed for the introduction of climate-friendly on-site

sanitation with faecal sludge management that reduce GHG emissions.

- **Output B:** The prerequisites have been established for the coordination of measures for on-site sanitation with climate-friendly faecal sludge management for peri-urban areas of Lusaka.
- **Output C:** The prerequisites are improved for the monitoring of compliance with climate-relevant regulations in sanitation (incl. FSM and solid waste management).
- **Output D:** The prerequisites are established for the improvement of qualifications of public and private service providers of climate-friendly wastewater management.

In the establishing outcome and outputs, the term 'prerequisites' is very dominant. This conservative formulation underlines the nature of the CFS as a technical assistance project that does not directly result in improved service delivery. These results are meant to be produced by the LSP, which is even more pronounced in the (official) German version of the outcome. The project's outcome focuses on four prerequisites for the implementation of climate-friendly sanitation services (technology, coordination of stakeholders, enforcement of regulations, and capacity of individuals in the sector), which are covered by the four outputs.

The theory of change was developed during the appraisal mission in 2016 and visualised in the project's results model (figure 3), on which a capacity development strategy was based. The results model was reviewed and slightly adjusted during this evaluation's inception mission workshop. A few additional results were included (among others) that were deemed necessary for understanding of the results strains. Furthermore, some additional (potential) impacts were included that were not foreseen in the beginning of the project. No activities needed to be changed during project implementation: all services agreed in the impact matrix of the offer were implemented. Amendments were required only at the level of sub-activities.

The theory of change focuses on the core result hypotheses that are most important for answering the evaluation questions. These hypotheses can best be described starting from the activities and results hypotheses within and between results and outputs; and concluding hypotheses from output to outcome level. The project uses a number of digital solutions to create results, which are highlighted in the following description of the project's theory of change, particularly in Outputs A and C.

Output A: Adapted procedures have been developed for the introduction of climate-friendly OSS with FSM that reduce GHG emissions.

The project identifies procedures for OSS/FSM such as designs of toilets, emptying technologies and management approaches. It introduced these procedures to the partners, for instance through regional exchange with relevant institutions in Kampala, Uganda and Dar es Salaam, Tanzania (**result A.1**). As the emptying of faecal sludge from pit latrines constitutes a particular challenge in the densely populated areas where the project is active, a number of the technologies (which were identified in the region under result A.1) are field tested in Lusaka (**result A.2**) to build capacity in the commercial utility and to identify the most suitable one. The selection of these technologies is informed by a mapping exercise in which detailed data on sanitation infrastructure, user behaviour and economic aspects of sanitation is gathered (**result A.3**) to increase service provider's and stakeholder's knowledge about the local sanitation situation. This mapping provides input into an OSS database at LWSC (digital solution, **result A.4**), which is then transformed into an integrated information management system on OSS that can also be accessed by LCC (digital solution, **result A.5,** strong interlinkage with Output C).

In another strain of results, the project adapts the Energy Performance and Carbon Emissions Monitoring (ECAM) tool to allow the use of LWSC's data by the tool (digital solution, **result A.6**). Then the GHG emissions of LWSC are comprehensively analysed and a baseline for future reduction of emissions is established (**result A.7**). The different adapted procedures developed under **Output A** are a crucial part of the prerequisites for the implementation of climate-friendly sanitation services and FSM (**outcome**).

Instruments: The project was technically led by one international advisor who contributed 25% of his work time to **Output A**. In addition, the output area was implemented by two national advisors, of which one was

seconded for 80% of the worktime to the LSP Project Management Unit within LWSC for a period of 2 years. Furthermore, the project used the experiences of another GIZ project through the secondment of an international expert (*Arbeitsauftrag).* A pool of local consultants was used for short-term technical support and technical items (such as desludging machines) were procured (*Sachbeschaffungen*).

Output B: The prerequisites have been established for the coordination of measures for OSS with climate-friendly FSM for peri-urban areas of Lusaka.

To establish the prerequisites for coordination in the sector, the project aims to support the establishment of a multi-stakeholder coordination body that brings together all relevant institutions that have a say in the notoriously diverse field of sanitation. Therefore, CFS develops Terms of Reference for such a forum (**result B.1**) and elaborates with the key stakeholders the exact institutional structure. It is decided to establish the Lusaka District Water, Sanitation and Hygiene Public Health Committee (LD WASH PHC) and to institutionalise it in the Zambian sector framework and regulations as a sub-structure under the District Development Coordination Committee (DDCC). The LD WASH PHC is established with four technical working groups, one of them being responsible for OSS (**result B.2**). A key priority for the project is the mainstreaming of gender in the field of sanitation. Therefore, the project develops a gender checklist, which allows to mainstream gender sensitivity in the measures coordinated by the LD WASH PHC (**result B.3**) to ensure gender sensitivity in the implementation of sanitation projects. The functional LD WASH PHC that mainstreams gender (**Output B**) in its work is one of the prerequisites for the implementation of climate-friendly sanitation services and FSM (**outcome**).

Instruments: The project was technically led by one international advisor who contributed 20% of his work time to **Output B**. In addition, the output area was implemented through one full-time and three part-time national advisors. Furthermore, a pool of local consultants was involved and procurements were made to complement the advisory services of the project.

Output C: The prerequisites are improved for the monitoring of compliance with climate-relevant regulations in sanitation (incl. FSM and solid waste management).

LCC is the key partner organisation in this output area responsible for public health. LCC is supported in updating the Standard Operation Procedures (SOPs) for Public Health Inspectors (**result C.1**), which improves the quality of LCC's monitoring work. A further gain in effectiveness and efficiency is reached by digitising the monitoring procedures of LCC's Public Health Department (digital solution, **result C.2**). Another basis for improving the quality of monitoring is the development of a toilet catalogue, which provides LCC with a guideline on infrastructure solutions that are safe from a public health perspective (**result C.3**). The toilet catalogue unveils the regulatory grey zone with regard to OSS: there is a general regulation in form of several laws, but no detailed regulatory framework for the implementation on the ground. This leads to the development of a by-law for Lusaka, which prescribes the allowed technical solutions for OSS (**result C.4**). Result C.5 has a strong link to **Output B**, as the need for a by-law is discussed in the coordinating body supported by the project in Output area B. Another activity under Action Area C is of a risk-profiling exercise in four low-income areas in Lusaka: the SaniPath Assessment (**result C.5**). SaniPath informs the rapid response of LCC to cholera outbreaks (**Impact**, see section 4.4).

The establishment of a regulatory framework for OSS under **Output C** is a key prerequisite for the implementation of climate-friendly sanitation services and FSM (**outcome**).

Instruments: The project was technically led by one international advisor who contributed 20% of his work time to Output B. In addition, the output area was implemented through one development advisor, who was working at LCC, and two national advisors (one full-time, one part-time). One national advisor was seconded to LCC for 60% of their working time for a period of 2 years. Furthermore, a pool of local consultants was used and procurements were made to complement the advisory services of the project.

Output D: The prerequisites are established for the improvement of qualifications of public and private service providers of climate-friendly wastewater management.

To improve the prerequisites for capacity development in the sector, the project first undertakes an assessment of training needs for OSS/FSM in LWSC and LCC (**result D.1**). Based on this assessment, CFS then develops training modules (**result D.2**) for a number of trades or specialisations required to implement a sustainable FSM chain (six modules including pit emptier, tank operator and FSM treatment operator). These training modules are certified by the responsible Zambian authorities (Technical Education, Vocational and Entrepreneurship Training Authority) (**result D.3**). This allows colleges like the Lusaka Business and Technical Training Centre to train a number of trainers on the modules so that they can provide the courses (**result D.4**). The availability of trained trainers makes it possible to build the capacity of staff from LWSC, LCC and the private sector (pit emptiers) (**result D.5**). Result D.5 actually goes beyond the output. However, training a limited amount of people (20) is understood as a test run of the modules and therefore part of the establishment of prerequisites for the improvement of qualifications of public and private service providers of climate-friendly wastewater management (**Output D**).

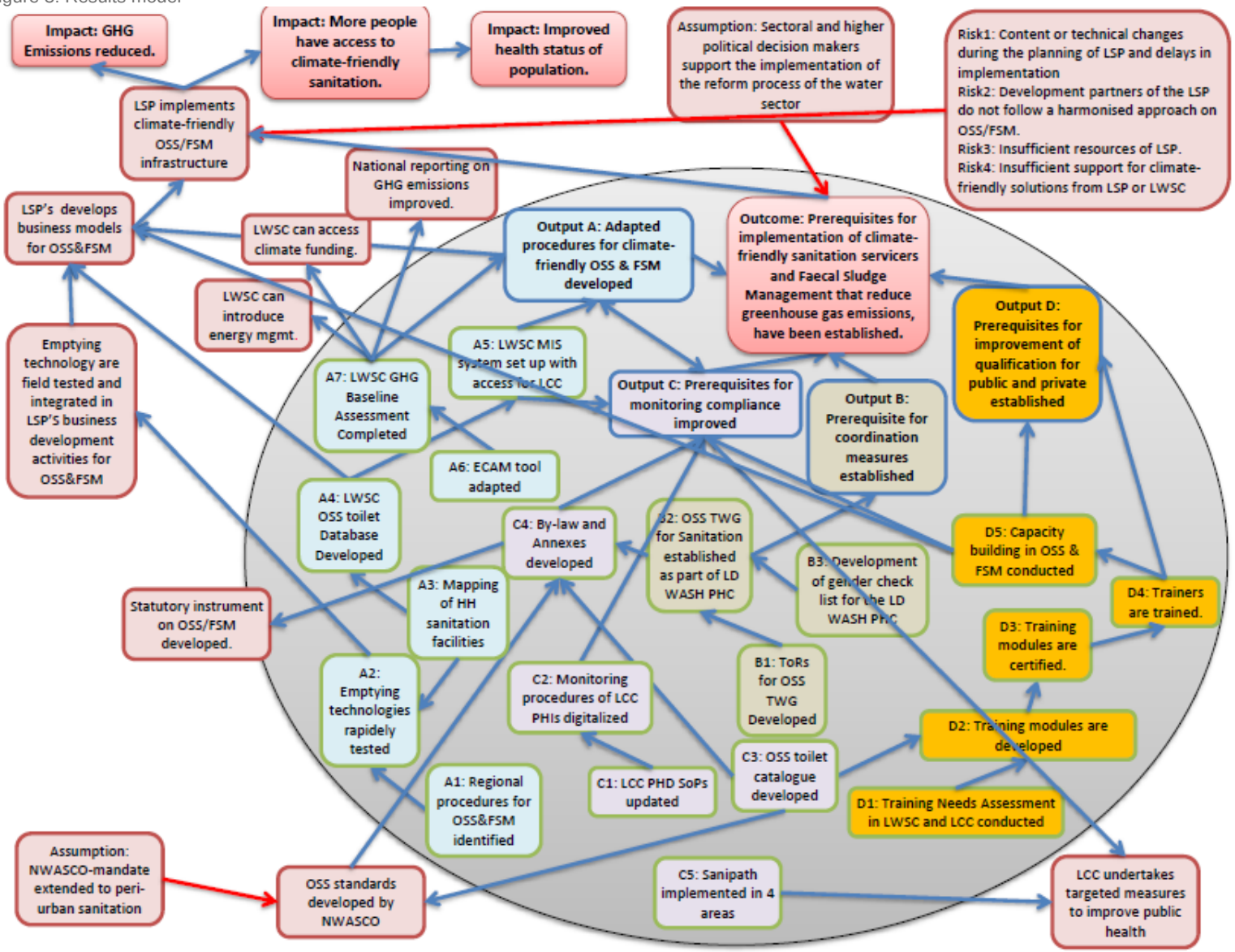
Instruments: The project was technically led by one international advisor who contributed 15% of his work time to **Output D**. Apart from that, the output area was implemented by a consulting company that deployed a team of both international and national long-term and short-term experts.

The project's methodological approach integrates **capacity development** at all levels: It develops knowledge and capacities of sanitation sector staff (human capacity development **Output D** and through the regional knowledge exchange in **Output A**). Organisational capacity is enhanced through the development of SOPs in LCC's Public Health Department (**Output C**) and the set-up of a new data management system in LWSC (**Output A**). Sectoral-level coordination is improved through the formation of the LD WASH PHC (**Output B**).

Impact: Project impact is expected to be achieved through the outcome and its impact to the implementation of the LSP. The infrastructure programme will increase access to sanitation, which is one indicator of the German development cooperation programme in the water and sanitation sector in Zambia. Therefore, the project contributes indirectly to the programme objective ('The integrated management of water resources, taking into account the effects of climate change, as well as the access of the mostly poor rural and urban population of Zambia to safe drinking water and adapted sanitation facilities, is improved.') as it facilitates the implementation and increases the quality of the LSP. The improved access to sanitation is a key impact of the project and is in line with Sustainable Development Goal (SDG) 6.2 (access to adequate and equitable sanitation and hygiene for all…). The second major field of impact for CFS is the reduction of GHG emissions. As a DKTI-funded project, CFS contributes directly to SDG 13. Further impacts that derive from improved access include improved health (e.g. a reduction of the frequent cholera cases in Lusaka) and improved protection of groundwater resources.

The project's **sphere of responsibility (system boundary)** is defined by inputs, activities, results and plausible hypotheses. Comprehensive assumptions and risks are formulated. Contributions to impact beyond the project's sphere of responsibility too are outlined with plausible hypotheses (see figure 1 and section 4.4 Impact). The object can be evaluated based on the theory of change.

Figure 3: Results model



3 Evaluability and evaluation process

This chapter aims to clarify the availability and quality of data and the process of the evaluation.

3.1 Evaluability: data availability and quality

Availability of essential documents

Table 1: List of basic documents

Basic document	Is available *(Yes/No)*	Estimation of actuality and quality	Relevant for OECD/ DAC criterion:
Projects proposal	yes	Available (2016)	Defining evaluation basis all DAC criteria
Programme proposal 'Reform of the Water Sector 2016–2021'	yes	Current version	Impact, effectiveness
Modification offers where appropriate	N/A	*No modification offers submitted to BMZ*	
Contextual analyses, political-economic analyses or capacity assessments to illuminate the social context	no	*None of those documents have been developed by/for the project*	
Gender analyses (2016)	yes	*Up to date*	Defining evaluation basis for relevance, effectiveness, impact, sustainability
Progress Report I 12/2016–03/2018 Progress Report II 04/2018–03/2019 Progress Report III 04–12/2019	yes	Available	All OECD/DAC criteria
Final Report	yes	Available	All OECD/DAC criteria
Evaluation reports	N/A	No previous decentral or central evaluation of the project	
Country strategy BMZ (2016–2021)	yes	Available (draft of 2016)	Relevance
GRZ (2015). National Water Supply and Sanitation Capacity Development Strategy (2015–2020). MLGH. Lusaka GRZ (2019). Ministry of Water Development, Sanitation and Environmental Protection: 2018–2021 Strategic Plan. MWDSEP. Lusaka GRZ (2011). Water Supply Investment Master Plan Strategy Report Summary. USACE Europe District/Millennium Challenge Corporation. Lusaka. GRZ (2017). Seventh National Development Plan 2017–2021. Volume I. Ministry of National Development Planning. Lusaka GRZ (2007). The National Policy on	yes	Available	Relevance

Environment. Ministry of Tourism, Environment and Natural Resources. Lusaka GRZ (2010). National Water Policy. Ministry of Energy and Water Development. Lusaka NWASCO (2016). Strategic Plan 2016–2020. National Water Supply and Sanitation Council. Lusaka Water Supply and Sanitation Act, No. 28 0f 1997			
ADB Group (2015). Environmental and Social Management Framework Summary. JICA. The Study on Comprehensive Urban Development Plan Final Report for the City of Lusaka. JICA. Lusaka Zambia Environmental and Climate Change Policy Brief	yes	Available	Relevance
Results matrix	yes	As part of the offer	Effectiveness, Efficiency
Results model 2016	yes	Updated during inception mission	Effectiveness, impact, efficiency, sustainability
Data of the results-based monitoring system (WoM)[2]	yes	Available, up to date (web-monitor, monitoring formats, implementation reports)	All OECD/DAC criteria
Map of actors[2]	yes	Available (from 2016), verified during inception mission	Defining evaluation basis for all OECD/DAC criteria
Capacity development strategy[2]	yes	Capacity development strategy from 2016	Identification of evaluation participants, Relevance Dim. 2
Steering structure[2]	no	Not available	
Plan of operations[2]	yes	Available 2016-2019	Effectiveness, impact
Cost-commitment report	yes	Available (Version 03.12.2019)	Efficiency
Excel sheet assigning working-months of staff to outputs	yes	Developed before inception mission by project leader	Efficiency
Documents regarding predecessor project(s) (please specify if applicable)	N/A	No predecessor project	Predecessor(s)
Documents regarding follow-on project: Change offer and results matrix of the project 'Reform of the Water Sector II' (No direct follow-on project planned, but the RWS II incorporates elements of CFS)	yes	Available	Follow-on project

The project offer, operational plans and project progress reports as well as the final report were all made available to the evaluation team (see list in annex 2). Strategic documents were available to outline the project

[2] The 'map of actors', 'capacity development strategy', 'steering structure' and 'plan of operations' are mandatory for all projects based on 'Quality Assurance in Line (Qsil)'.

design and its approach, including a gender analysis and a capacity development strategy from 2016. The project developed a map of actors and a comprehensive results model, which were both updated during the inception mission of the evaluation and used to construct the 'theory of change' (section 2.2) and to identify evaluation stakeholders.

Monitoring and baseline data including partner data

Three of the five outcome indicators as well as all output indicators meet the SMART (specific, measurable, achievable, realistic and timebound) criteria, and baselines have been established for all indicators. However, one of the three indicators did not measure the outcome but was measuring achievements at output level. The indicator had to be reformulated. For the two indicators that did not meet the SMART criteria, adaptations have been done to make them measurable and specific (details see table 2 in 4.3 Effectiveness). No changes to outcome or output indicators were done by the project over the course of implementation.

The project proposal and the theory of change outline risks and assumptions. Project staff could explain the development of risks and their assumptions throughout the duration of the project; however, no formal monitoring of risks and assumptions was carried out.

KOMPASS (qualitative assessment of the perceptions of different stakeholders) or other observation tools were not used in the course of the project.

Monitoring responsibilities are assigned to a monitoring and evaluation (M&E) officer within the project team and responsible staff members forward the data to the M&E officer on a quarterly basis (updating of activities, change of project indicators). The data is entered directly into the GIZ Web Results Monitor and is used for project steering as well as for regular reporting to BMZ. Most of the indicators are either qualitative or include a quantification of processes that are qualitative by nature. The monitoring of those indicators does not rely on partner data in the strict sense, but on documents generated by the partners (outcome indicators 1, 3, 4, 5 and output indicators B.1, B.3, C.1, C.2, D.1, D.2). Those documents are collected by the different team members as soon as they are available and then saved by the M&E officer. Some indicators require additional surveys (outcome indicator 2 and B.2), which are conducted by the project in the last month of its term. During the duration of the project, progress on those indicators was measured qualitatively. Project impact is defined, yet not measured. The monitoring system is conclusive, very well defined and functioning. The applied instruments are suitable for verifying indicator progress.

Secondary data

Secondary data was available and of good quality and quantity; for example, in terms of sector as well as overarching strategies by the Government of the Republic of Zambia (GRZ), the German Government and other development partners. All secondary sources used during this evaluation are included in table 1 'basic documents' or the list of resources (annex 2).

The available data is of sufficient quality, allowing for an evaluation of the project based on it.

3.2 Evaluation process

The **evaluation team** consisted of an international evaluator, who was responsible for the overall evaluation process and deliverables to GIZ, and one local evaluator. The local evaluator took part in all central tasks of the evaluation including development of evaluation design, data collection, data analyses and drafting of deliverables. Specific tasks of the local evaluator included research on local framework conditions, the partner structure and target groups. In addition, the local evaluator supported in analysing how the project fits into the strategic frameworks (relevance) and whether changes on impact level occurred. Due to the Covid-19 pandemic, the evaluation had to be conducted remotely. All data was collected electronically (internet calls or telephone). This major methodological shift affected the role of the local evaluator, who took over the task of

organising the evaluation schedule (i.e. making appointments and following up with interviewees) and conducted some of the interviews, which had to be done by telephone. In addition, he conducted all three surveys, which were carried out with beneficiaries, pit emptiers and NGO workers (see 'Methodological approach' below for details) using the standardised questionnaires that were developed jointly by the two evaluators.

Methodological approach: The evaluation was implemented from December 2019 to May 2020. The one-week on-site inception phase at the beginning of December 2019 went ahead without any obstacles. Based on the results of the inception mission, a 2-week on-site evaluation mission was envisaged for April 2020. Shortly before the evaluation mission, restrictions on international travel made it clear that an on-site evaluation as foreseen in the inception report would be impossible. At first it was decided between the evaluators, GIZ's evaluation unit and the (previous) project team to postpone the evaluation by 2 weeks and to apply a semi-remote approach. In this approach, the local evaluator would have been physically present with the interviewees and the international evaluator would have joined the discussion online or over the telephone. However, in the second half of March, further restrictions on movement and social contact were implemented in Zambia. Consequently, it became necessary to switch to a complete remote approach for the interviews. Based on the experiences of previous (semi-)remote central project evaluations (e.g. in Zimbabwe) the evaluators paid additional attention to the preparation and documentation of data collection (see Chatiza and Pres, 2019). Hence further efforts were put into developing interview guidelines for the different groups of stakeholders. Documentation was facilitated by the fact that both evaluators were in front of their computers during the interviews. Hence summarised minutes of meetings were compiled and discussed afterwards.

Stakeholder organisations for the evaluation were identified based on the map of actors, the results model and the results hypotheses, which were selected for assessing project effectiveness and impact. This identification was already discussed with the CFS team during the inception mission and reaffirmed during the preparation for the main evaluation mission. When the remote approach became necessary, a prioritisation of interview partners was done by the evaluators. This seemed necessary as in the original planning, several meetings were set up as group meetings. For the remote interviews, it was decided that meetings should only involve one interview partner. Hence the number of people to be interviewed was reduced (from envisaged approximately 30 people to 20). From the previous list of interview partners, evaluation stakeholders have been selected from those who could provide the most substantial and reliable data, facts, arguments and explanations for change (see table 2). Ultimately, however, the identified participants were able to provide substantive information on the performance of the project. The evaluators are therefore content with the quality of the methodology applied and the evaluation findings.

Another change to the evaluation's design was required regarding the planned focus group discussion with pit emptiers and the planned interviews with households that had received new toilets from the LSP. Neither were feasible under a remote approach. Hence a survey was designed by the evaluators to gather the perceptions of those groups.

For the survey of households (i.e. the indirect target group), certain methodological problems arose: random sampling was not possible as the contacts had to be made through phone and only a limited number of phone numbers were provided by LSP; and representativity could also not be achieved due to the sheer number of households – by May 2020, about 700 toilets were financed by the LSP. With a margin of error of 5%, 250 households would have to be interviewed to reach representativity.[3] This was beyond the capacities of the evaluation, let alone the challenges with random sampling. Hence it was decided that 10 households would be interviewed to collect a glimpse of the perspective of the target group. In addition, NGO representatives involved in toilet marketing (i.e. mobilising households to pay for new toilets, providing loans for part payments, etc.) in Lusaka's peri-urban areas were included in the evaluation. Employees of four NGOs (see table 2) were interviewed following a standardised questionnaire. The hypothesis was that the NGO workers interact with large numbers of community members on a daily basis and can hence serve as intermediaries. The

[3] https://www.surveymonkey.com/mp/sample-size-calculator/?ut_source=help_center

questionnaires were particularly designed to investigate the perspectives of the target group through the NGO workers. A similar approach was applied with pit emptiers. Apart from undergoing training by the project, the pit emptiers were also considered intermediaries between LSP and the households, as they interact with households on a daily basis. There were therefore two-part questionnaires for the pit emptiers to cover the two aspects (effects of CFS training and perspective of the indirect target group).

All three questionnaires were reviewed by GIZ before application. They contained closed and open questions. For items with interval scale (5-point scale) descriptive statistics of averages and frequencies of answering options were counted. Content analysis was applied for open questions. The survey allowed for triangulation of sources and data for key evaluation questions and combined the collection of qualitative with quantitative data.

In total, 22 stakeholders (10 women) from GIZ, partners, civil society and donor agencies provided qualitative data in interviews; four NGO workers, six pit emptiers and 10 community members participated in a survey (four of the participants were women, all of them among the community members). The community members were randomly sampled out of a list of 40 households that had received new toilets through the LSP. The six pit emptiers were randomly sampled out of the 21 emptiers that have been trained by the CFS project. The four NGOs were identified by the local evaluator based on their association with the LSP.

All stakeholders were committed to the evaluation and open-minded to answer the evaluation questions.

Table 2: List of evaluation stakeholders and selected participants

Organisation/company/target group	Overall no. of persons involved in evaluation (incl. gender disaggregation)	No. of interview participants	No. of focus group participants	No. of workshop participants	No. of survey participants
Donors	3 (2f–1m)	3			
BMZ					
KfW					
GIZ	6 (3f–3m)	5			
GIZ project team/ GIZ partner country staff					
GIZ headquarters Germany					
Partner organisations (direct)	10 (3f–7m)	10			
Lusaka Water and Sanitation Company					
Lusaka City Council					
Lusaka Sanitation Programme					
National Water and Sanitation Council					
Technical Education, Vocational and Entrepreneurship Training Authority					
Other stakeholders (public actors, other development projects, etc.)	0				
Civil society and private actors	8 (2f–6m)	3			5
Water Trust Kanyama					
Oxford Policy Management					
WaterAid					
Vision Network Regional Network					
People's Process on Housing and Poverty in Zambia					
Water and Sanitation for the Urban Poor (WSUP)					
Bremen Overseas Development Association (BORDA)					
NGO WASH Forum					
Universities and think tanks	0				
Final beneficiaries (indirect target groups)					
LWSC customers that received new toilet with support from LSP	10 (4f–6m)				10
Pit emptiers that have been trained by the project	6 (0f–6m)				6

All data gathered through the interviews was transcribed and transferred into an analysis system, structured according to the evaluation dimensions and questions (see evaluation matrix, annex 1). The system allowed for systematic cross-reference between sources and data. Any personal data included in the evaluation was processed pursuant to the Regulation (EU) 2016/679 of the European Parliament and of the Council on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation). Interview data has been coded with Int_ to ensure the anonymity of interviewees; the list of participating stakeholders is not attached to this report but was forwarded to the GIZ Evaluation Unit to ensure confidentiality.

The evaluators ensured triangulation of data and sources for assessing all OECD/DAC criteria, combining quantitative data (survey, monitoring and secondary data) and qualitative data from interviews. Triangulation of researchers was ensured through joint data collection, analyses and reflections. Data analyses took place simultaneously with data collection to continuously refine hypotheses and conclusions, and to ensure that first findings were ready to be presented at the end of data collection phase. This debriefing, which is a standard part of on-site evaluations, was, however, cancelled in favour of a final debriefing to be held once the final results are ready. This decision was taken after discussions with the GIZ Evaluation Unit and the project.

The evaluation report has been reviewed by GIZ in Zambia, including follow-on project staff, and the GIZ Evaluation Unit in Germany. All feedback was used to substantiate findings and conclusions, and to make the evaluation report more thorough. Further knowledge transfer to Zambian stakeholders and relevant GIZ units will be ensured by GIZ. The report will be shared with BMZ and published on the German Development Cooperation transparency portal. BMZ can use the findings for continued policy dialogue, steering and strategy development in the sanitation sector and in Zambia. Experts and the general interested public can access the report on the transparency portal and use the results for shaping projects and reforms.

Potential limitations:

- Some stakeholders that would have been included during an on-site mission could not be included in the remote data collection:
  - MWDSEP had to be left out as a remote interview was deemed unsuitable for this high-level counterpart,
  - the interview with Zambia Environment Management Agency did not take place due to their many other obligations (after postponing the interview five times it had to be cancelled), and
  - other donors were not interviewed as the (organisation of) remote interviews took much more time than those on-site due to frequent delays and postponing of interviews. Hence it was decided to focus on the Zambian stakeholders.
- The number of interviewees of LWSC had to be limited. During an on-site mission, group meetings would have allowed for short interactions with more people thus providing the evaluation team with more diverse views on the different topics.
- CFS supported the partners with the development of a couple of IT solutions. During the remote evaluation, those technologies could not have been demonstrated to the evaluation team and hence their functionality could not be verified.
- Interviews with the indirect target group took place through telephone. The evaluation team did not have the chance to visit the households to get a first-hand impression of the new toilet structures.

It was not possible to use rigorous random sampling of households for a survey because access to the households had to take place through a list of phone numbers provided by LSP.

Overall, the evaluation design, data collection and analyses methods and processes were adequate to answer the evaluation questions. The discussed limitations did not have a significant influence on the findings.

4 Assessment of the project according to OECD/DAC criteria

In this chapter, the evaluation bases, designs and methods for assessing the OECD/DAC criteria are defined in line with the Guide for Central Project Evaluations (GIZ, 2018).

4.1 Impact and sustainability of predecessor project(s)

There was no predecessor CFS project as a DKTI financed individual development measure.

4.2 Relevance

Evaluation basis and design for assessing relevance

Evaluation basis

Relevance dimension 1: The project fits into the relevant strategic reference frameworks.

The evaluation team verified whether the project is in line with the overarching strategic directives both of the funding agency and the Zambian government. Water and sanitation is outlined in BMZ's country strategy Zambia (2016–2021) as one of the two pillars of German support (BMZ, 2016). The project is part of the development cooperation programme, Water Management and Sanitation Services. The evaluation verified how far the project contributed to the achievement of the programme objective. Further relevant German development cooperation documents that were analysed for the evaluation include BMZ's water sector strategy, Mashall Plan with Africa, as well as the GIZ position paper on scaling-up access to water supply and sanitation (GIZ, 2017).

With regard to the Marshall Zambian framework for the sanitation sector, the evaluation analysed the following documents:

- GRZ (2019). Ministry of Water Development, Sanitation and Environmental Protection: 2018–2021 Strategic Plan. MWDSEP. Lusaka.
- GRZ (2017). Seventh National Development Plan 2017–2021. Volume I. Ministry of National Development Planning. Lusaka.
- GRZ (2010). National Water Policy. Ministry of Energy and Water Development. Lusaka.
- GRZ (2015). National Water Supply and Sanitation Capacity Development Strategy (2015–2020). MLGH. Lusaka.
- NWASCO (2016). Strategic Plan 2016–2020. National Water Supply and Sanitation Council. Lusaka.

Other key documents that were analysed during the evaluation include sector strategies and policies and are listed in table 2.

Relevance dimension 2: Suitability of the project design to match core problems/needs of the target group(s).

During the inception mission it became clear that the key to understanding project relevance is the very close linkage between CFS and the LSP. The project aims to provide high-quality soft support (i.e. technical advice) that should be complementary to the hard support (i.e. infrastructure development) of the LSP. This close integration of a GIZ project into a multi-donor investment programme is rare and has great potential for the project to reach the target group. The basis for assessing this dimension was the analysis of secondary data

from documents (e.g. the situation analysis done by the LSP in 2017) as well as the analyses of project documents and data collected during the mission, i.e. interviews with partners and the surveys among the target group.

Relevance dimension 3: The design of the project is adequately adapted to the chosen project objective

Relevance dimension 4: The conceptual design of the project was adapted to changes in line with requirements and readapted where applicable.

The project design encompasses the project objective and the results model (as theory of change) with outputs, activities, instruments, results hypotheses and the implementation strategy. The evaluation team followed up on the strategic elements outlined in the different project documents and used qualitative and quantitative data collected during the evaluation to verify the strategic considerations of the project.

Evaluation design

The evaluation follows the evaluation questions. No specific evaluation design was applied.

Empirical methods

The analysis of dimension 1 was primarily based on content analysis of strategy and policy documents. The analysis of dimension 2 was based on data collected by the evaluation team and survey data gathered during the evaluation. The assessment of dimensions 3 and 4 largely relied on project documents and the 'theory of change'. Qualitative data was gathered for the analyses of all four dimensions in interviews with GIZ, partners, donors, civil society and final beneficiaries. Stakeholders were selected based on the map of actors (institutions) and their levels of knowledge. The approach combined quantitative and qualitative data, which was captured by the evaluation team. Data strength was medium; the triangulation of sources and researchers was possible.

Analysis and assessment regarding relevance

Relevance dimension 1: The project concept is in line with the relevant strategic reference frameworks.

Sanitation plays a key role in the Zambian strategies for the country's development. The most overarching document outlining the government's strategy is the **Vision 2030**. By 2030, Zambia should become a 'prosperous middle-income nation' (GRZ, 2017). The objectives of the Vision 2030 are set out in a national development plan. For the current legislative period this is the **7th National Development Plan** (GRZ, 2017), whose Development outcome 3 highlights water and sanitation as key for Zambia's economic and social development. One of the objectives ('development outcomes') in this plan is 'Improved access to water supply and sanitation' (p.102), which is substantiated by a strategy to 'Enhance the provision of adequate safe water and sanitation' to the population. Hence the project (and the whole German development cooperation in the WASH sector) directly contributes to the implementation of Zambia's high-level development planning.

With regard to implementing this strategy, the National Development Plan outlines an institutional structure that puts district-level coordination at the centre. The Lusaka DDCC brings together all relevant stakeholders to develop a District Development Plan (based on the general guidelines from the National Development Plan). The project has managed to attach the LD WASH PHC at the secretariat of the Lusaka DDCC, hence tying it to GRZ's formal coordination structures (Int_GIZ_3).

The key reference for the WASH sector is the **Strategic Plan of MWDSEP** (MWDSEP, 2019). In this most high-level strategic document for the sector, Strategic objective 3 gears towards 'Improve provision of water supply and sanitation services' with the particular objective: '40% of urban population with access to safely

managed drinking water by December 2021' (p.7).

The project is part of the German development cooperation programme, **Water Management and Sanitation Services**. The programme has the following objective:

> *The efficient, effective and non-discriminatory access, particularly of the poor and malnourished population of Zambia, to clean drinking water and adapted sanitation services is improved. Zambia's water resources are increasingly managed in an integrated manner taking into consideration the effects of climate change (*BMZ, 2017).

The project contributes to Indicator 1 of the programme: The number of poor people in urban project areas with access to improved sanitation services is increased by 0.5 million. Though the project does not increase the number of people with improved access to sanitation directly, it develops the preconditions for increasing this number. Due to the close linkage and the direct contribution to the LSP, CFS has the leverage to influence that these preconditions are actually used in infrastructure development, which then leads to improving access. Thus, the project contributes substantially to the achievement of the objective of the German development cooperation programme.

The project strategy is aligned with the **BMZ Water Strategy** (2017), especially the objectives to create access to sanitation and drinking water and to ensure hygiene. For the design of projects, BMZ 'focuses particularly on poor and marginalised groups including people with disabilities', ('*Das BMZ konzentriert sich dabei besonders auf arme und marginalisierte Bevölkerungsgruppen einschließlich Menschen mit Behinderungen*.' p.7). CFS targets exclusively peri-urban areas of Lusaka, being the poorest areas of the city. Hence the project design can be seen as a direct translation of the strategic directions of the Water Strategy into reality.

The **BMZ strategy on gender equality** (BMZ, 2014) and the latest gender action plan (BMZ, 2016) adopt a three-pronged approach of gender mainstreaming, empowerment and development policy dialogue. The project is aligned with the basic principles of the policy and contributes to the action plan objectives in the area of water and sanitation (gender identifier G-1). Before the start of the project, GIZ conducted a gender analysis of the sector, considering the needs of user groups (women, children, elderly, disabled), for instance during the development of technical designs for toilets (Int_Partner_10); and it is mindful about equal representation of men and women, for example, in training (Int_GIZ_3; Int_GIZ_5; Int_GIZ_6).

The project clearly contributes directly to SDG 6.2 (Access to sanitation for all). Indirectly, through the positive multiple effects of improved sanitation, CFS also contributes to SDG 2 (Nutrition – reduction of water-borne diseases leads to improved nutrition) SDG 3 (Health – reduction of water-borne diseases), SDG 4 (Education – improved sanitation as key for school attendance of girls), SDG 5 (Gender equality – sanitation as key element to improve women's lives), SDG 8 (Economy and employment) and to SDG 11 (Urban development).

A key element of the project concept is the output on improvement of qualifications of public and private stakeholders in the sanitation sector (Output D). The strong focus that CFS puts on this topic – Output D is the output that absorbs the most financial resources – can be seen as a contribution to BMZ's Marshall Plan with Africa, which emphasises job creation as a key priority of German development cooperation. The project improves the employability of people and contributes to the formalisation of previously informal jobs.

Subsidiarity and complementarity

An outstanding feature of the project concept is the close linkage to the LSP. The LSP, is a huge multi-donor programme with an overall budget of EUR 265 million that combines the efforts of the major funding partners of the Zambian WASH sector under the strategic leadership of the Zambian Government.[4] CFS is aligned to this programme in that it is considered to provide 'soft support' as complementary to the 'hardware' provided through the investment programme (Int_Partner_6, 7, 10). Although GIZ was not officially part of LSP (for instance CFS was not included in the steering structure), the project had two advisors seconded to the LSP

[4] Contributors to the LSP are: KfW (EUR 33 million), European Investment Bank (EUR 102.5 million and grant of EUR 4.5 million for implementation consultant), World Bank (EUR 58.5 million), African Development Bank (EUR 55 million); own contribution Government of Zambia (EUR 21.7 million) (Int_Stakeholder_1).

management unit that were working closely with LSP staff (Int_Partner_7). Therefore, the project fully adhered to the principles of subsidiarity and complementarity in the sanitation sector.

Relevance dimension 1: The project concept is clearly in line with the relevant strategic reference frameworks at the level of the Zambian political and sector strategies, at the level of BMZ policies as well as at the international level. Therefore, the dimension is rated with 30 out of 30 points.

Relevance dimension 2: The project design matches the needs of the target group(s).

The **direct target group** of the project are the public and private stakeholders along the sanitation chain in Lusaka, particularly LCC and LWSC. The project pursues an integrated approach towards sanitation that addresses four key preconditions through its four outputs (technical/managerial procedures; coordination; enforcement; training). The project's key partners confirm that this design matches their needs to a very large extent (Int_Partner_3, 4, 6, 8, 10). Especially the engagement of CFS in the often-neglected topics of enforcement and coordination is highly praised. Both topics tend to be overlooked by development partners as they do not promise quick wins in terms of visible impacts and high numbers of beneficiaries. However, the response from LCC (Int_Parnter_3, 4) but also from independent stakeholders (Int_Stakeholder_3, 4) indicate that the CFS clearly met the needs of the direct target group. A key aspect here is the role of LCC. Enforcement has been the Achilles' heel of the sanitation sector (Int_Stakeholder_3) and LCC is the key institution to enforce regulations in the sanitation sector as they are responsible for monitoring public health risks. However, LCC was previously not part of the discussion on sanitation. The introduction of new tools and processes by CFS increased LCC's visibility and standing in the sector, particularly vis-à-vis LWSC (Int_Partner_3; Int_GIZ_2; 4).

The project does not interact directly with the final beneficiaries (i.e. the inhabitants of Lusaka's peri-urban areas), who are thus the **indirect target group**. However, through the LSP, CFS results are quite quickly translated into interventions at the level of the indirect target group. Improved sanitation as a human right is clearly a need in areas where only 35% of population have access to improved sanitation (GRZ, 2017: 20). The project strategy works on the whole sanitation chain (except treatment), thus developing an integrated approach that promises to be ecologically, economically and socially sustainable.

The ecological and social dimension are closely linked in Lusaka with its high groundwater table. Pit latrines pollute the groundwater which is a key water source for the poor population in peri-urban areas – some of whom use shallow, hand-dug wells. This is one of the causes of the regular outbreaks of cholera. The economic dimension is addressed by CFS's contributions into the business model for OSS/FSM promoted by LSP.

The project addresses the needs of women as they suffer particularly from poor sanitation. Especially in Output B, capacity development to mainstream gender aspects among the sanitation stakeholders, plays a key role (Int_GIZ_6). But gender aspects were also considered alongside technical aspects (e.g. the toilet designs), for instance by including bathing facilities. Furthermore, the project design aims to Leave No One Behind (LNOB), for instance by developing designs that suit the needs of wheelchair users. The project's geographical focus on Lusaka's peri-urban areas is also a reflection of the LNOB principle as these parts of the city are home to the poorest members of the population. As mentioned under dimension 1, the project translated the LNOB guidelines of BMZ, particularly its Water Strategy, into practice.

Relevance dimension 2: The project design clearly matches the needs of both the direct and indirect target group. Gender aspects and LNOB are considered. Therefore, the dimension is rated with 28 out of 30 points.

Relevance dimension 3: The project is adequately designed to achieve the chosen project objective.

The module objective (outcome) of the project reads:

> *In the peri-urban areas of Lusaka, the prerequisites for the implementation of climate-friendly sanitation services and FSM that reduce GHG emissions, have been established.*

In the German (official) version of the module objective, the link to the LSP is made more explicit … 'In the context of the Lusaka Sanitation Programme…'.[5] This link is the key feature of the project strategy and transcends the its design, i.e. the four outputs. The project design follows a multi-dimensional approach towards sanitation that builds on previous experience with (failed) sanitation projects. In the GIZ upscaling concept for water and sanitation, six elements of successful scaling-up of access to the urban poor are identified. Table 3 provides an overview in how far CFS's project design corresponds with the upscaling concept.

Table 3: Elements of successful upscaling of access to sanitation for the urban poor

Elements for successful upscaling	**Corresponding element in CFS's project design**
Enabling environment	Output B: Improved sector coordination Output C • development of by-law • improvement of capacities for enforcement of regulations
Capacities of service provider	Output A: Support to LWSC to mainstream OSS/FSM in their operations Output D: Capacity development of sector professionals
Baseline data on the target group	Output A: Baseline mapping of sanitation infrastructure in four peri-urban areas Output C: SaniPath Assessment of exposure paths of faecal contamination
Financial resources and institutional mechanism to target and spend the resources	Addressed by LSP
Technical solutions	Output A: • toilet designs • emptying technologies

Source: GIZ, 2017: 3

The overview in table 3 shows that CFS addresses all elements (i.e. prerequisites) necessary for improving the urban poor's access to sanitation. The project's design is therefore considered adequate for reaching the module objective.

Digital solutions

At the level of activities, digital solutions play a major role for implementation. CFS introduces digital solutions in partner institutions to leapfrog capacity constraints. This is particularly the case for LCC, where the digitalisation of SOPs aims to increase the transparency and effectiveness of monitoring activities. Another cross-cutting objective of digital solutions is to enhance communication and exchange among institutions. LWSC and LCC are supported in blending the different information they have in a joint management system (e.g. base data on property rights and structural features of buildings from LCC with data on sanitation infrastructure from LWSC, Int_Partner_4). This would result in gains in effectiveness for both institutions.

The key question regarding this approach is for the realism. Especially the support to LCC ignites profound institutional change processes (e.g. increasing the transparency of monitoring work). Such processes usually require long-term support to be sustainable. As CFS has only a 3-year duration with no option of prolongation, the project strategy seems to rely on the assumption that other (GIZ) projects will be there in the future to continue with the inevitably unfinished support processes that CFS has started.

Another remarkable feature for a DKTI project is the low profile of climate change aspects in the project design. Though the term 'climate-friendly' is always used together with sanitation, the overview in table 3 shows that CFS is a 'classical' sanitation project. The only activity directly addressing climate change is the ECAM tool in

[5] *Im Rahmen des Lusaka Sanitärprojekts ist in peri-urbanen Gebieten die Umsetzung einer klimaverträglichen Basissanitärversorgung mit Treibhausgas reduzierendem Fäkalschlammmanagement in die Wege geleitet.*

Output A. This is a very successful activity (see section 4.4) as such; in addition, it provided the opportunity for CFS to highlight the relevance of FSM for climate change (GHG emissions). Hence it clearly contributed to the module objective. However, overall, the project strategy could be well justified from a public health standpoint without even referring to climate change. Therefore, it should be stated that there would have been limited additional value towards climate change.

Relevance dimension 3 The project is adequately designed to achieve the chosen project objective is rated with 15 out of 20 points.

Relevance dimension 4: The project concept was adapted to changes in line with requirements and readapted where applicable.

The project design was not changed or amended during the extent of its 3 years. Changes occurred only at the level of activities. The most notable example includes the SaniPath Assessment, which became much more relevant during the cholera outbreak of 2017/2018 and turned out to be a key result from the perspective of LCC as it helped LCC to better target their response to the epidemic (Int_Partner 3, 4; see also section 4.4).

Relevance dimension 4: No changes to the project design became necessary. The dimension is therefore rated with 20 out of 20 points.

Table 4: Rating of OECD/DAC criterion: relevance

Criterion	Assessment dimension	Score and rating
Relevance	The project design is in line with the relevant strategic reference frameworks.	30 out of 30 points
	The project design matches the needs of the target group(s).	28 out of 30 points
	The project is adequately designed to achieve the chosen objective.	15 out of 20 points
	The project design was adapted to changes in line with requirements and readapted where applicable.	20 out of 20 points
Overall score and rating		Score: **93 out of 100 points** Rating: Level 1: highly successful

4.3 Effectiveness

Evaluation basis and design for assessing effectiveness

Evaluation basis:

Effectiveness dimension 1: The project achieved the objective (outcome) on time in accordance with the project objective indicators.

The analysis is based on five outcome indicators agreed with BMZ (for SMART criteria see table 5).

Table 5: SMART-assessment of outcome indicators

Project objective indicator according to the offer / original indicator	***Assessment according to SMART criteria/assessment***	***Adapted project objective indicator***
Outcome indicator 1: 3 adapted procedures for climate-friendly OSS and FSM in peri-urban areas of Lusaka, that reduce GHG emissions (flood resistant decentralised sanitation facilities, emptying of settling tanks and transport, and treatment of faecal sludge with use of the methane gas) are being applied by Lusaka Water and Sewerage Company (LWSC) within the implementation of the Lusaka Sanitation Programme (LSP). Base value: 0 (No application of trialled procedures) Target value: 3 adapted procedures are being applied Source: Documentation of LWSC on the implementation of procedures in the context of LSP.	***All indicators are timebound as they refer to the duration of the project.*** The indicator meets the SMART criteria. **Specific**: The indicator is specific enough as the possible procedures are listed in parenthesis.	No adaptation required.
Outcome indicator 2: 2/3 of approx. 10 key stakeholders of the workgroup for OSS WG with representation from Ministry of Water Development, Sanitation and Environmental Protection (MWDSEP), LWSC, LCC, other ministries, development partners, NGOs, representatives of private sector and communities) confirm that the activities concerning OSS within the LSP are conducted in a coordinated manner. Base value: 0 (OSS WG does not exist) Target value: Confirmation from 2/3 of key stakeholders Source: Survey of the key stakeholders of the OSS WG (key stakeholders will be defined after establishment of the OSS WG).	It turned out from the discussions with the CFS team, that the LD WASH PHC as an umbrella for the OSS TWG would be relevant to include in this indicator than the OSS TWG. Therefore, the LD WASH PHC and all of its four working groups are used in the adapted indicator after discussing with the project team. **Specific:** The term key 'stakeholders' is not specific. What is meant is 'members'. **Measurable:** 'approximately 10 members' is not measurable. The exact number of members must be put.	**Adapted indicator:** 2/3 of the 48 members of the LD WASH PHC and its four TWG with representation from MWDSEP, LWSC, LCC, other ministries, development partners, NGOs, representatives of private sector and communities, confirm that the activities concerning OSS within the LSP are conducted in a coordinated manner. Target value: 32 Source: Survey among the members of the LD WASH PHC and its four technical working groups.
Outcome indicator 3: When coordinating measures the OSS WG key stakeholders apply an agreed-upon, gender-sensitive criteria catalogue that covers adequate gender-specific requirements of sanitation facilities. Base value: No list of criteria catalogue. Target value: Agreed-upon criteria catalogue is being applied. Source: Documentation of the consensus building process of the Gender-sensitive criteria catalogue and analysis of meeting minutes on the	The focus was enlarged from the OSS TWG to the whole LD WASH PHC (see indicator 2). **Measurable:** The lack of specificity of the indicator makes measuring impossible.	**Adapted indicator:** 2/3 of the members of the LD WASH PHC and its four working groups confirm that they apply an agreed-upon gender-sensitive criteria catalogue that covers adequate gender-specific requirements of sanitation facilities. Base value: No criteria catalogue Target value: 32 Source: Survey among the members of the LD WASH PHC and its four technical working groups.

coordination of measures with regard to gender-specific considerations.		
Outcome indicator 4: Annual reports on the implementation of regulations for sanitation (compulsory sewer connection, Health and safety standards for desludging inclusive of procedure for transport and reuse of faecal sludge and solid waste) for three of the town districts, which have been prepared by LCC, are presented to the regulatory authority NWASCO. Base value: 0 (no reports) Target value: For three town districts (Kanyama, Chawama, George) reports are presented Source: Review of the annual reports presented by LCC and the agreement process with NWASCO.	The indicator meets the SMART criteria.	No adaptation required.
Outcome indicator 5: 6 of 12 training modules of the adopted training plan for operation and maintenance of climate-friendly wastewater systems through public and private service providers have been conducted by certified professional training personnel. Base value: No training measures Target value: 6 of 12 modules are conducted by professional training personnel Source: Documentation of the modules of the training plans conducted by certified professional training personnel.	The indicator does not measure the objective, it measures a result at lower level (implementation of trainings). The result at outcome level would be that capacities of participants have improved. Therefore, the indicator was adapted together with the project team.	**Adapted indicator**: 80% of the participants of six training modules of the adopted training plan for operation and maintenance of climate-friendly wastewater systems through public and private service providers, rate the relevance of the training for their job as good. Base value: 0 (no training measures) Target value: 8 of 10 participants Source: Degree of Satisfaction Survey (assessment on a scale of 1 to 4 with 1 being excellent, 2 good, 3 reasonable and 4 poor).

Effectiveness dimension 2: The activities and outputs of the project contributed substantially to the project objective achievement (outcome).

Three contribution stories were devised and two alternative hypotheses were validated, that is, the contributions of partners and international agencies. The respective result hypotheses were selected based on the results model (section 2.2) and knowledge interests of evaluation stakeholders. They cover three of four outputs (A, B and C) as outlined in figure 4 on page 37 (copied and formatted from figure 3).

Effectiveness dimension 3: The occurrence of additional (not formally agreed) positive results has been monitored and additional opportunities for further positive results have been seized. No project-related negative results have occurred, and if any negative results did occur, the project responded adequately.

The evaluation team followed up on the unintended results and risks identified in project reporting documents and the project monitoring system. Unintended results have been discussed in the inception phase as well as during the interviews in the evaluation phase.

Evaluation design

The analysis follows the evaluation questions. The assessment of dimension 1 is based on project monitoring

data and was verified during interviews. The analyses of dimensions 2 and 3 are based on the contribution analysis. Contribution stories were devised based on data gathered during the inception phase. Therefore, two alternative hypotheses were verified. The contribution stories were presented in the interviews and additional evidence was gathered through feedback loops and used to strengthen the contribution stories.

For evaluating dimension 3 ('unintended results') an explorative design was applied by interviewing key stakeholders during the inception phase and verifying and complementing (unintended) results hypotheses during the evaluation phase. This method was chosen because experimental and quasi-experimental designs with control groups were not feasible under the limitations of a remote evaluation.

Empirical methods

To assess dimension 1, the evaluators relied on project documentation and interview data. The analyses of dimensions 2 and 3 were based on qualitative data collected in interviews with GIZ, partners, civil society and donors. Interview partners were selected based on the map of actors (institutions) and their level of knowledge. The counterfactual situation was created qualitatively and retrospectively based on the observations of the interviewees, for example, by asking what would have happened without the project. Content analysis of statements was applied to answer the evaluation questions. Data strength is strong or medium; sources, data and evaluators have been triangulated. The applied methods allow answering the evaluation questions.

Analysis and assessment regarding effectiveness

Effectiveness dimension 1: The project achieved the objective (outcome) on time in accordance with the project objective indicators.

The outcome of the project reads:

> *In the peri-urban areas of Lusaka, the prerequisites for the implementation of climate-friendly sanitation services and faecal sludge management that reduce greenhouse gas emissions have been established.*

To achieve this objective, the project aims for four outputs. The results of Output A (adapted procedures) are reflected in outcome indicator 1. The results of Output B (coordination) are captured in outcome indicator 2 and 3, with indicator 3 being a gender indicator as required by the BMZ standards for projects with a development marker for gender (G-1). The results of Output C (enforcement) are reflected in outcome indicator 4 and the results of outcome D (qualification) are captured in outcome indicator 5.

Table 6: Achievement of outcome indicators

Indicator	Achievement
Outcome indicator 1: *Three adapted procedures for climate-friendly OSS/FSM in peri-urban areas of Lusaka, that reduce GHG emissions (flood resistant decentralised sanitation facilities, emptying of settling tanks and transport, and treatment of faecal sludge with use of the Methane gas) are being applied by LWSC within the implementation of the LSP.* *Base value: 0 (No application of trialled procedures)* *Target value: 3 adapted procedures are being applied*	In this indicator, 'procedures' is a catch-all term for any technical or managerial solutions that the project was developing under Action Area A. The focus here was to support LSP in developing 'soft components' to complement LSP's investments in OSS/FSM. CFS developed the following procedures to achieve the indicator: • **Household toilet designs**: Technical assistance and support was provided to the LSP throughout the OSS/FSM household facilities design and the pilot construction process. LSP consultants came up with technical drawings for the toilet designs, which were then commented on and further developed by the project. Relevant inputs provided by the project concern the question of percolation. While LSP assumed that percolating toilets may be acceptable as technical standard in parts of Lusaka, CFS was able to convince LSP that due to the vulnerability of the groundwater, this would pose a threat to the public health (Int_Partner_10; Int_GIZ_7). Another example for CFS' input is the development of designs suited for disabled users (see section 4.2 on Relevance). • **Baseline mapping data**: CFS undertook a household baseline mapping of sanitation infrastructure, which provided valuable input into the planning of LSP's investments (Int_Partner_7). • **Business models**: CFS organised a number of knowledge exchange visits of Lusaka stakeholders to Kampala and Dar es Salaam. Through those visits, the stakeholders learnt about different regionally relevant business models in OSS and FSM. This experience fed into the development of the final business model applied by LSP. Also, the baseline mapping provided input into the zoning of peri-urban areas, which is a key element of the application of LSP's business model (Int_Partner_10). There are additional procedures that could be outlined here. For instance, the field testing of emptying technologies. **The indicator was achieved**.
(Adapted) Outcome indicator 2: *2/3 of the 48 members of the LD WASH PHC and its four TWGs with representation from MWDSEP, LWSC, LCC, other ministries, development partners, NGOs, representatives of private sector and communities, confirm that the activities concerning OSS within the LSP are conducted in a coordinated manner.* *Baseline value: 0* *Target value: 32*	In order to verify the achievement of the indicator, an independent consultant conducted a quantitative survey among the members. Among the 48 members, 19 took part in the survey. Of those 19 respondents, 16 confirmed that activities concerning OSS are conducted in a coordinated manner (GIZ 2020:15).[6] This is less than the target value of 32, however, it is seen as a methodological challenge, not one relating to the content of the indicator. The turnout rate of 19 of 48 members (40%) is acceptable. **Hence the indicator is assessed as achieved.**
(Adapted) Outcome indicator 3: *2/3 of the members of the LD WASH PHC and its four working groups confirm that they apply an agreed-upon gender-sensitive criteria catalogue that covers adequate*	As for indicator 2, this indicator had to be adapted to cover the whole LD WASH PHC and not only the OSS TWG. Also, it was made measurable by adding a quantitative target value that can be assessed through a survey. 15 of 19 respondents among the 48 members agree with the statement that the LD WASH PHC and its TWGs apply gender criteria in the coordination

[6] Agreement means that they agreed or strongly agreed to the statement: 'LD WASH PHC effectively coordinated the functionality of the LD WASH PHC TWGs.' Participants in the survey answered this question using a five-step scale with the steps being strongly agree – agree – neutral – disagree – strongly disagree.

Indicator	Achievement
gender-specific requirements of sanitation facilities. *Base value: No criteria catalogue* *Target value: 32*	of OSS facilities and services (GIZ, 2020: 17). **Hence the indicator is assessed as achieved.**
Outcome indicator 4: *Annual reports on the implementation of regulations for sanitation (compulsory sewer connection, Health and safety standards for desludging inclusive of procedure for transport and reuse of faecal sludge and solid waste) for three of the town districts, which have been prepared by LCC, are presented to the regulatory authority NWASCO.* *Base value: 0 (no reports)* *Target value: For three town districts (Kanyama, Chawama, George) reports are presented*	None of those annual reports have been presented to NWASCO, the reason being delays in the decentralisation process of LCC (Int_Partner_3, 4; Int_GIZ_2). **Hence the indicator is not achieved.**
(Adapted) Outcome indicator 5: 80% of the participants of six training modules of the adopted training plan for operation and maintenance of climate-friendly wastewater systems through public and private service providers, rate the relevance of the training for their job as good. Base value: 0 (no training measures) Target value: 8 of 10 participants	All 10 participants of the train-the-trainer phase rate the relevance as either good or excellent (GIZ, 2019: 1). This was confirmed by the survey done by the evaluation team among the pit emptiers, who were part of the first round of trainees. Six pit emptiers out of 20 were interviewed and five rated the usefulness of the training for their job with 5 (on a scale from 1 to 5, with 5 being the highest). One interviewee rated it with 4. **Hence the indicator is achieved.**

Effectiveness dimension 1 'The project achieved the objective (outcome) on time in accordance with the project objective indicators' is rated with 32 out of 40 points – 20% of the points were deducted because one of the five indicators was not achieved.

Effectiveness dimension 2: The activities and outputs of the project contributed substantially to the project objective achievement (outcome).

The project implemented four outputs, namely:

- Adapted procedures for the introduction of climate-friendly on-site sanitation with faecal sludge management that reduce greenhouse gas emissions, have been developed.
- The prerequisites for the coordination of measures for on-site sanitation with climate-friendly faecal sludge management have been established for peri-urban areas of Lusaka.
- The prerequisites for the monitoring of compliance with climate-relevant regulations in sanitation (incl. FSM and solid waste management) are improved.
- The prerequisites for the improvement of qualifications of public and private service providers of climate-friendly wastewater management are established.

The output indicators for **Output A** were achieved partially (A.1, two adapted procedures were developed and recommended to LSP, target value was three) and fully (A.2, three technical solutions for OSS/FSM were tested and recommended to LSP).

The two output indicators for **Output B** on stakeholder coordination (B.1 'Roles and responsibilities of OSS TWG defined' and B.2 'Stakeholders are better informed about OSS/FSM') were fully achieved. Only indicator B.3 ('Sanitation strategy updated' was not achieved. The Millennium Challenge Account (MCA) had already updated this strategy so CFS saw no need to continue working on it. Therefore, as the indicator was not changed, it is counted as not achieved.

For **Output C**, indicator achievement is 50% for indicator C.1 (digitalisation of SOPs). The SOPs were updated and digitalised. However, the digital tools are not yet working, hence LCC is still using the paper version (Int_Partner_4). Indicator C.2 was fully achieved because the by-law for OSS was developed and approved by LCC. The decentralisation process within LCC was delayed (see section 4.3).

For **Output D**, indicator D.1 was partially achieved. While a training plan for public and private service providers in OSS/FSM was developed, it was not agreed between LCC and LWSC. Discussions between the two are still ongoing. Indicator D.2 was fully achieved (12 certified vocational training teachers).

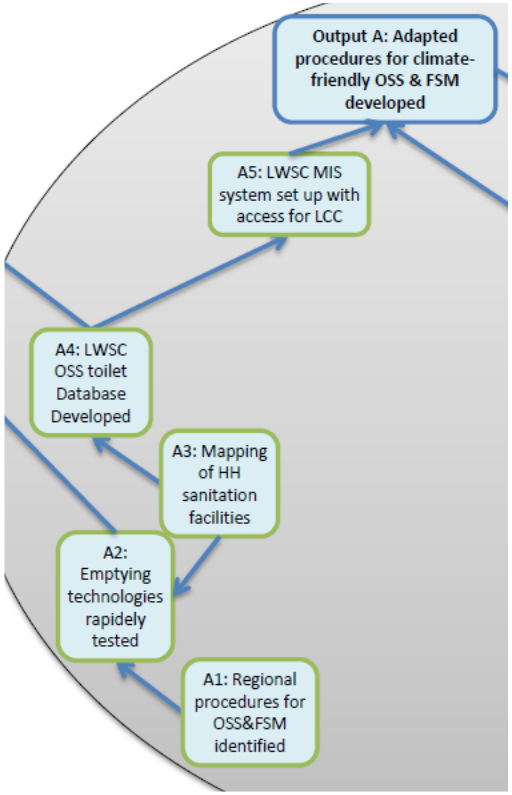
All four outputs clearly contribute to the project outcome.

Out of the four outputs, three hypotheses were devised from the project's results model (see Figure 4). The underlaying hypotheses are as follows:

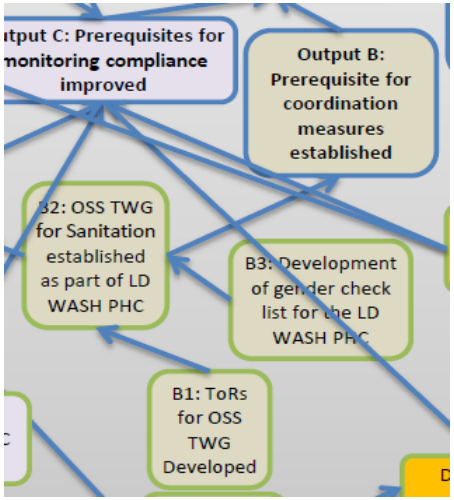
- The project supports the mapping of sanitation facilities in selected low-income areas of Lusaka (result A.3). This allows LWSC to integrate data on OSS into their data management system (A.4) and into an integrated information management system of the LSP that can also be accessed by LCC (A.5). This leads to the development of procedures for OSS/FSM (Output A) that can then be applied by LWSC.
- The project supports the setting up of the OSS TWG group under LD WASH PHC (B.1 and B.2), which improves coordination between stakeholders in the sanitation sector in Lusaka (Output B).
- The toilet catalogue developed for the LCC (C.4) forms the basis for a local by-law on OSS (C.5). This by-law is discussed and agreed upon between all relevant stakeholders in the sector in the OSS TWG and the LD WASH PHC (B.3). This regulation forms an important prerequisite to improve the monitoring of compliance with national guidelines of sanitation infrastructure (Output C).

Figure 4: Hypothesis analysed for effectiveness

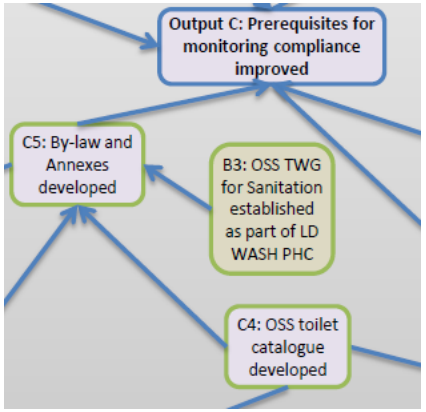
Hypothesis 1: Baseline mapping of sanitation facilities



Hypothesis 2: Sector coordination through the LD WASH PHC and its OSS TWG



Hypothesis 3: Toilet catalogue and by-law



Hypothesis 1: *The project supports the mapping of sanitation facilities in selected low-income areas of Lusaka. This allows LWSC to integrate data on OSS into an integrated Information management system that can also be accessed by LCC.*

Comprehensive baseline studies focused on low-income households are essential to develop an accurate understanding of current contexts in order to facilitate targeted interventions, especially for disadvantaged and vulnerable people. They are a key element in GIZ's strategy for upscaling water supply and sanitation services to the urban poor (GIZ, 2017). Hence, a database of all prospective customers and existing infrastructure as a reference for future monitoring of FSM services was considered an important first step towards formalising OSS and FSM as part of 'normal' LWSC services. Detailed spatial mapping surveys of all OSS facilities and users were commissioned by CFS Lusaka for four peri-urban areas that had been identified as priority intervention areas for the LSP: Kanyama was mapped in early 2017, followed by Chawama, Chazanga and George a year later covering an overall total population of approximately 650,000 people.

The mapping covered pit latrines, septic tanks and toilet facilities; it referenced water points (kiosk, shallow well, yard tap, borehole, water tank) and solid waste disposal sites as other sanitation-relevant features to generate a more complete thematic map of the sanitation situation in the area. This information was combined with an additional descriptive layer of information on plot type, ownership, structural characteristics, access restrictions and emptying history. Furthermore, the census of facilities was complemented by a household survey to gauge the local residents' knowledge, attitudes and practices on sanitation and hygiene (GIZ, 2020: 26pp).

The evaluation clearly confirmed that this exercise added value to the operations of LWSC. It is key to understand LWSC's transition from a sewerage company to a sanitation company (Int_Partner_1). This shift was demanded by the politicians and the regulator. Development partners, such as GIZ supported the technical dimension of this shift. The baseline survey helped LWSC to understand key characteristics of their (potential) customers, thus enabling them to develop the business of FSM, that is, to design the right services for those customers. LWSC would have neither the resources nor the know-how to implement this survey on their own (Int_Partner_2). LWSC being involved in these exercises has had the beneficial effect of integrating other departments (beyond the newly created FSM unit) in OSS, particularly the Geographic Information System department (GIS), which manages the database (Int_Partner_1). LWSC actively lobbied for additional international support to scale up this survey to the rest of Lusaka. This support has now been secured from the Bill and Melinda Gates Foundation (Int_Partner_2).

Another aspect that indicates the relevance of this activity for the LSP (and hence LWSC) is the additional component of the survey, which was added by the World Bank. As the Bank was interested in users' willingness to pay for OSS services, they added this component and financed the data gathering (Int_GIZ_7). This provides LWSC with valuable data on the economic perspective of the potential customers on OSS.

Another added value brought in by CFS is the linkage between LWSC and LCC. Though the technical side of a shared database is still a challenge (Int_Partner_1) and LSP's information management system is delayed, the combination of baseline data (from LCC) and sanitation-specific data (from LWSC) is a big step in improving the collaboration of the two institutions (Int_Partner_4). Challenges remain regarding the operationality of the database and the regular updating, which is required to run the system sustainably.

Hypothesis 2: *The project supports the setting up of the LD WASH PHC, which improves coordination between stakeholders in the sanitation sector in Lusaka.*

The hypothesis is that the CFS played a key role in setting up the coordination structure and that this structure fulfilled the expectation and enabled stakeholders to better coordinate their interventions in the sanitation sector. The LD WASH PHC built on previous experiences of informal attempts of stakeholder coordination under the auspice of LWSC (supported by Unicef) (Int_Stakeholder_3). The concept of formalising coordination under the leadership of the LCC ensured that the committee was put in the right institutional place according to

the Zambian framework.

The starting point was an invitation to all relevant WASH and public health stakeholders to join a formal partnership. Out of this partnership, the Lusaka District WASH Public Health Committee (LD WASH PHC) was founded in June 2017 to coordinate activities, share resources and generally support each other under the leadership of the LCC. CFS's key role in this process was confirmed in all the interviews conducted with members of the LD WASH PHC (Int_Partner_3, 4, 8; 'GIZ was framing the idea' Int_Stakeholder_3). The project provided support to develop the Terms of Reference and supported the operation of the committee (especially the secretariat function) throughout the duration of the project (Int_GIZ_3). In the survey among members, which the CFS project financed in 2020, all respondents confirmed that the GIZ CFS project effectively coordinated the formation and functionality of the LD WASH PHC (Skala, 2020: 14).

In this survey, respondents were asked to indicate the extent to which the LD WASH PHC effectively coordinated stakeholders' engagement and consultation processes. The results show that the majority (14 of 19 respondents) affirmed the sentiment, with four strongly agreeing, and 10 agreeing, while four neither agreed nor disagreed, and one disagreed that the LD WASH PHC effectively coordinated stakeholders' engagement and consultation processes. An example of this effective coordination is the response to the recent flooding in Kanyama (January to February 2020): members of the LD WASH PHC (especially LCC, LWSC and NGOs) went together to the field and coordinated their response. This led to a more effective and efficient response as duplication was avoided (Int_Stakeholder_3). Other examples are LCC's focus on information dissemination, LWSC on the emergency supply of water by tankers, and NGOs on the distribution of chlorine (Int_Partner_8).

Another effect of the establishment of the LD WASH PHC was the strengthening of LCC. Its visibility in the sanitation sector increased tremendously and it became clear to other stakeholders, particularly LWSC, that LCC has to play a key role for improving sanitation in Lusaka (Int_Partner_3, 4). This effect goes beyond the envisaged effects as outlined in the results model and can be seen as a cross-cutting/underlying objective of CFS, to which Output B clearly contributed.

Hypothesis 3: *The toilet catalogue developed for the LCC forms the basis for a local by-law on OSS. This by-law is discussed and agreed upon between all relevant stakeholders in the sector in the OSS TWG and the LD WASH PHC. This regulation forms an important prerequisite to improve the monitoring of compliance.*

CFS wanted to improve the regulatory framework as a basis for enforcement in Lusaka. Compiling a compendium of available OSS technologies was identified as a useful first move to address the particular situation in high-density peri-urban areas of the city. The 'toilet catalogue' was developed in 2017 and introduced the concept of a complete service chain, comprising all intermediate steps from the user interface through to final sludge disposal or reuse. A review of all existing legal provisions regarding sanitation showed that the notion of a service chain simply did not exist in the law, which primarily focused on toilets (structural conditions) and sewerage services. With this guidance in hand, a by-law was drafted to create a basis for effective enforcement on the part of LCC. The draft of the by-law was put out for public consultation and different stakeholders provided their feedback. The survey among the members of LD WASH PHC indicates that the committee played a key role for the stakeholders to discuss the by-law: 17 of 19 respondents agree that LD WASH PHC has strengthened the collaboration with regard to enforcement (two respondents expressed a neutral stance; Skala, 2020: 17).

The current status is that LCC has approved the by-law, but the Ministry of Local Government still needs to approve it. This process is said to be delayed due to the Covid-19 pandemic (Int_Partner_3). According to the key stakeholders responsible, the by-law provides a sound basis for enforcement (Int_Partner_4; 'by-law is ammunition enough' Int_Partner_3).

Apart from its importance as a basis for enforcement in Lusaka, the by-law also led to results that were not envisaged in the results matrix. MWDSEP used the draft by-law as a starting point for the development of a Statutory Instrument, that is, a national legal provision for on-site sanitation. This additional result of the project is discussed further in the following section under Effectiveness dimension 3.

Effectiveness dimension 2: The activities and outputs of the project contributed substantially to the project objective achievement (outcome) is rated with 30 out of 30 points as the described results can be attributed to a substantial degree to the activities of the project.

Effectiveness dimension 3: The occurrence of additional (not formally agreed) positive results has been monitored and additional opportunities for further positive results have been seized. No project-related negative results have occurred, and if any negative results did occur, the project responded adequately.

The following positive formally not agreed results were identified:

- Development of a countrywide Statutory Instrument for the Regulation of On-site Supervision (Int_Partner_3).
- Improved response of LCC to cholera outbreak thanks to data from the SaniPath Assessment (Int_Partner_4). This result is further discussed in section 4.3 (Impact).
- Scaling-up of results of CFS by other development partners:
  - Baseline mapping scaled up to the whole of Lusaka by the Bill and Melinda Gates Foundation (BMGF) (Int_Partner_1)
  - Emptying technologies scaled up by SNV (Netherlands Development Organisation) to other cities in Zambia (Int_Stakeholder_6)
- The ECAM tool was introduced into LWSC to quantify the GHG emissions of FSM. However, for LWSC, it is also very much a tool for cost-saving as it provides a basis for energy management.
- The application of the ECAM tool has proven to be successful in LWSC. It is therefore going to be upscaled in six other commercial utilities in Zambia by RWS II.

No project-related (unintended) negative results were identified during the evaluation.

Effectiveness dimension 3: The project realised a number of relevant additional results and no negative results can be reported. The project managed to counteract most of the risks identified in the project design (except for the delays in implementation of the LSP, which was beyond the influence of CFS). This dimension is therefore rated with 30 out of 30 points.

Table 7: Rating of OECD/DAC criterion: effectiveness

Criterion	Assessment dimension	Score and rating
Effectiveness	The project achieved the objective (outcome) on time in accordance with the project objective indicators.[7]	32 out of 40 points
	The project activities and outputs contributed substantially to the project's objective (outcome).[8]	30 out of 30 points
	No project-related (unintended) negative results occurred – and if any negative results did occur, the project responded adequately. The occurrence of additional (not formally agreed) positive results was monitored and additional opportunities for further positive results were seized.	30 out of 30 points
Overall score and rating		Score: **92 out of 100 points** Rating: Level 1: highly successful

4.4 Impact

Evaluation basis and design for assessing impact

Evaluation basis:

Impact dimension 1: The intended overarching development results have occurred or are foreseen.

Impact dimension 3: No project-related (unintended) negative results at impact level have occurred – and if any negative results occurred the project responded adequately.

The occurrence of additional (not formally agreed) positive results at impact level has been monitored and additional opportunities for further positive results have been seized.

As the project is part of a development cooperation programme, the main envisaged impact according to the project design is a multi-dimensional contribution to the objective of the programme, which reads:

> *The efficient, effective and non-discriminatory access particularly of the poor and malnourished population of Zambia to clean drinking water and adapted sanitation services is improved. Zambia's water resources are increasingly managed in an integrated manner taking into consideration the effects of climate change.*

CFS works in Lusaka only. Hence the indirect target group of the project according to its strategy are the inhabitants of Lusaka (2.3 million people), especially the inhabitants of the peri-urban areas, which make up two-thirds of the city's total population (1.5 million). The prerequisites for climate-friendly sanitation, which the

[7] The first and the second evaluation dimensions are interrelated: if the contribution of the project to the objective achievement is low (2nd evaluation dimension) this must be considered for the assessment of the first evaluation dimension also.
[8] ibid.

CFS project established, are a key step towards reducing the number of Zambians who suffer from a lack of improved sanitation. In this sense, the project is directed towards achieving programme indicator 1 (Number of poor people in urban project areas with access to improved sanitation services is increased by 0.5 million). This indicator is a direct contribution to SDG 6.2 (Access to improved sanitation for all).

The main basis for evaluating these two impact dimensions are the quantitative and qualitative data collected during the evaluation.

Impact dimension 2: The project objective (outcome) of the project contributed to the occurred or foreseen overarching development results (impact).

Three contribution stories were devised. Three impact hypotheses were selected for analyses based on the results model (section 2.2). The selected hypotheses are outlined in Figure 5 (copied and formatted from figure 3).

Evaluation design

The analysis follows the evaluation questions. The analysis of dimension 2 was based on the contribution analysis (see also 4.3 Effectiveness). For assessing dimension 3 ('unintended results') an explorative design was applied by consulting key stakeholders already present during the inception phase. This design was used for verifying and complementing (unintended) results hypotheses during the mission phase.

Empirical methods

The assessment was based on data from interviews with GIZ, partners, donors, civil society and final beneficiaries. Interview partners were selected based on the map of actors (institutions) and their level of knowledge. Content analysis of statements was applied to answer the evaluation questions. The assessment was substantiated by project surveys, an evaluation team survey as well as secondary data (e.g. reports from other development partners). This approach combines quantitative and qualitative methods and sources together with data collected by the evaluation team, the project and external sources. Data strength is strong or medium; data, sources and evaluators have been triangulated. The applied methods facilitate answering the evaluation questions.

Analysis and assessment regarding impact

Impact dimension 1: The intended overarching development results have occurred or are foreseen
The project intends to realise overarching development results in the sense of Indicator 1 of the German development cooperation programme (Number of people with access to improved sanitation increased) by contributing to the LSP. The project itself cannot improve the sanitation situation directly, but it creates the preconditions for improvement. The evaluation looked for plausible reasons that those preconditions have indeed had an impact on the LSP. The LSP component on OSS/FSM is in its implementation phase right now. About 700 out of 3,500 envisaged household toilets have been built (Int_Partner_7). The project has contributed to the LSP in various ways: particularly in Action Area A, a number of technical and managerial procedures, such as baseline data, toilet designs, toilet emptying technologies and inputs into the business model. Furthermore, the project seconded two staff members into the LSP management unit ensuring a very close daily cooperation between CFS and LSP. This particularly close collaboration was part of the CFS project from the very beginning and turned out to be very successful (Int_Partner_6, 7, 10).

For the 3,500 households directly reached by the LSP, there has already been a positive impact of improved sanitation. The limited data collection that this remote evaluation could undertake from the final beneficiaries indicates that the users of the new toilets are very happy with them. Table 8 shows the assessment of 10 users regarding different aspects of the new technology on a scale from 1 to 5 (5 being highest/best).

Table 8: Overview on user assessment of new toilets

Scale	1	2	3	4	5
User friendliness	0	0	1	5	4
Cleanliness	0	0	0	3	7
Affordability	0	0	0	8	2

The impact of this improvement on the families' health situation cannot yet be assessed as the infrastructure is still too recent. However, due to the general positive relation between improved sanitation and health one can assume that the health situation will also improve. Reduced cases of diarrhoeal diseases are a possible indicator that needs further investigation.

For households that do not have a new toilet (yet), the evaluation team asked NGO workers that do sanitation marketing in peri-urban areas of Lusaka about their assessment of the interest of potential users. All four NGO's interviewed confirmed that people's interest in the new technology is big or very big.

In summary and even though the data basis is limited, we believe it is fair to say that the sanitation solutions implemented by LSP are received very positively by the target group. There is considerable interest in an upgrade of the individual sanitation situation, which indicates a likely bigger impact in the future. This is a crucial point as even the LSP can only reach a fraction of the population of Lusaka's peri-urban areas (3,500 toilets could improve access for about 21,000 people). The strategy of both the LSP and CFS is to enable the national partners to scale up access to sanitation by using the processes and methods established by the development partners. There is plausible reason to assume that LWSC will be able to do so. The company underwent a shift from a sewerage company to a sanitation company (Int_Partner_1). OSS became one of the company's priorities and CFS was key in stimulating this paradigm shift (Int_Partner_2). Furthermore, the project influenced the regulatory framework of the sector by developing the OSS/FSM by-law for Lusaka and working with NWASCO towards the integration of OSS/FSM into the key performance indicators for commercial utilities (CUs) (Int_Partner_5). These changes in the enabling environment are a major factor indicating that the 'prerequisites for improved access' developed by CFS will indeed lead to impact on the ground.

On the other hand, the household economics of improving access to sanitation remain a challenge for upscaling. NGO workers active in sanitation marketing identify the subsidies paid by LSP to lower the household's required monetary contribution as the key reason why people are interested in the new toilets (users pay 2,400 Kwacha; the rest is subsidised by LSP). The cost of a new toilet on the free market is estimated at 10,000 Kwacha, which excludes large parts of the poor population. However, there is a strategy at LWSC on how to address this challenge in the post-LSP era. A sanitation levy on water is going to be collected and used to build up a capital stock for future investments in OSS/FSM (Int_Partner_2). The exact details of this strategy are not known to the evaluation team. But the fact that LWSC together with its partners are developing such a strategy is positive. The weak point may be the much-needed enforcement of the existing regulations by LCC. Currently, it remains a challenge for LCC to apply the procedures developed together with CFS. Neither the digital SOPs nor the database are operational. Though RWS II continues to support LCC, the very close support provided by CFS will no longer be there. Hence there are doubts whether LCC will be able to fulfil its role as enforcer of sanitation regulations in the future.

Another overarching development goal of the project is the reduction of GHG emissions. The project developed prerequisites for this by introducing the ECAM tool to LWSC. The company better understands is energy consumption and its GHG footprint and is likely to better manage its energy use in the future as it results in economic savings for the company (Int_GIZ_7). In addition, the new module on FSM, which was developed by CFS and integrated into the tool, increases the potential use of ECAM by utilities around the world.

Impact dimension 1: The project has clearly contributed to overarching development results, both directly through the LSP and indirectly through evolving the enabling framework. However, questions remain if the national partners, particularly LCC, will be able to scale up the results of CFS and LSP after the end of LSP. Therefore, this dimension is rated with 35 out of 40 points.

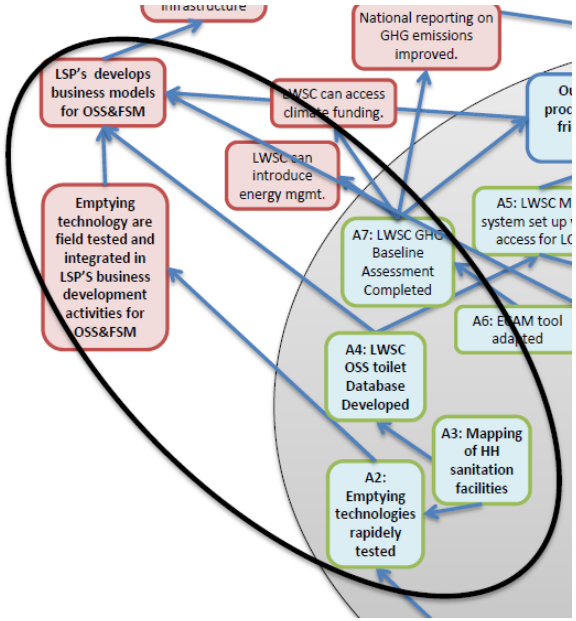
Impact dimension 2: The project objective (outcome) contributed to the occurred or foreseen overarching development results (impact).

Three hypotheses regarding the impact of the project were devised from the project's results model (see figure 3) and visualised in the following figure 5. The underlaying hypotheses are as follows:

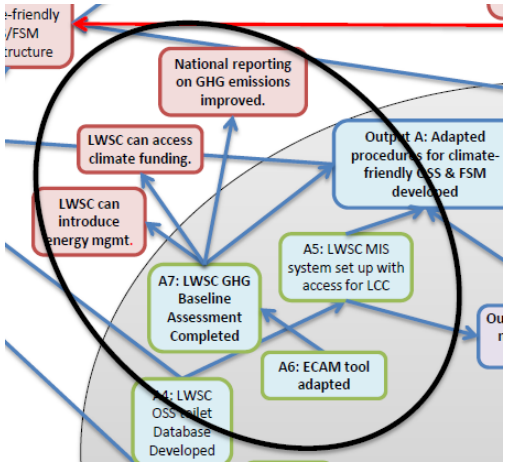
- **Hypothesis 1:** In Action Area A, the project realised a number of relevant results (baseline mapping, making OSS part of LWSC's database, toilet design, emptying technologies), which clearly contribute to the outcome (prerequisites for improving access of sanitation are established). The contribution analysis asks for the linkage between this outcome and LSP's strategy as well as the quality of LSP's intervention, in how far has the project really influenced LSP and contributed to an improvement of its quality (impact).
- **Hypothesis 2:** The project has adapted the ECAM tool for use in LWSC (result A.6). Based on this, a GHG baseline assessment for LWSC was completed. This allows the water and sanitation services provider for the first time to introduce energy management and access new sources of funding out of international budget lines dedicated to fight climate change. Furthermore, the advisory process related to the introduction of the ECAM tool contributed to the institutional development of LWSC and its transition from a sewerage-focused CU to a sanitation company (impact).
- **Hypothesis 3:** The project implemented the SaniPath exercise together with LCC (result C.1). The data generated in this assessment on exposure paths and risk profiles regarding transmission of cholera enable LCC to better target their immediate response when the disease broke out (impact).

Figure 5: Hypothesis tested for impact

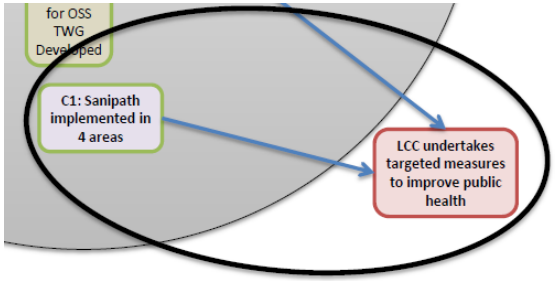
Hypothesis 1: CFS influencing the quality of LSP (and increasing impact)



Hypothesis 2: Introduction of ECAM tool introduces energy management at LWSC and contributes to the CU's institutional development



Hypothesis 3: SaniPath improves cholera response of LCC



Hypothesis 1: The project influences LSP's implementation activities and contributes to a higher quality, i.e. a bigger impact.

As stated before, the close collaboration with LSP is a key feature of CFS, which sets the project apart from most other technical cooperation (TC) projects. The evaluation aims to analyse what influence a complementary TC project with a budget of EUR 5 million really can have on a multi-donor investment programme with a budget of EUR 265 million.

The baseline data that CFS gathered in four peri-urban areas and its value for LWSC was discussed in section 4.3. The data from the mapping was also very valuable for the planning of investments in OSS/FSM by the LSP. On request of (and financed by) the World Bank, questions were included that probed willingness to pay and other stated household preferences. This helped LSP to assess the viability of business models. Even if CFS had not provided the baseline data, LSP would still have gone into implementation, but on the basis of a lot of assumptions, 'some of which may be true, some of which may not' (Int_Partner_6). The availability of good baseline data allowed LSP to develop the approach of 'scheduled emptying' of pits, which will be introduced in Lusaka in the remaining duration of LSP (Int_Partner_7). Hence the quality of the LSP activities can be attributed directly to the technical advice provided by CFS.

Another key input CFS provided into the LSP was the technical advice on the design of household toilets. LSP consultants developed first drafts of technical designs, which were commented on by all stakeholders, including CFS. LSP planning envisaged that 12,500 toilets should be built. To reach that number, it was planned to have a mixture of toilet models: those having a closed container, and those where liquids percolate into the ground. The latter are cheaper, but should only be built in areas where they do not create the risk of groundwater contamination. However, as previously stated, many parts of Lusaka are characterised by a very shallow groundwater table; hence the groundwater is vulnerable to pollution. CFS argued that only ecologically safe technologies should be implemented (Int_Partner_10). LSP's intention was to reach as many people as possible, which resulted in an exchange of arguments on social vs ecological impacts. CFS expressed its opinion as technical advice, but was not a member of LSP's official steering structure. However, as one of the national members of LSP, LCC did have an official say in the matter. Through the technical advice CFS provided to LCC, the Public Health Department of LCC was able to substantiate its opinion (Int_GIZ_7). With reference to the regulatory framework, particularly the by-law, LCC was able to convince other LSP stakeholders that percolating toilets would not be acceptable for Lusaka both from an ecological and from a public health standpoint. Consequently, LSP agreed to build only toilets that do not pollute the groundwater, incurring higher construction costs, thus decreasing the number of toilets to be built. On the one hand this reduces the direct impact of the programme as fewer people are reached, but on the other, it lowers the quantity of faecal contamination entering the environment in its implementation. Overall, it increases the quality of the programme, which is key when it comes to scaling up.

Even 12,500 toilets are a 'drop in the ocean' given Lusaka's sanitation challenges (Int_Partner_4). The real added value of the LSP is to start getting investments in OSS/FSM. Therefore, the quality of implementation is crucial as it sets an example for (hopefully) future investments. This increased quality of implementation can also be attributed to the inputs of CFS. This results in considerable (potential) impact of CFS as the new toilets prevent contamination of the groundwater. As many inhabitants of Lusaka use shallow wells for their water supply, contaminated groundwater is a major source of cholera infections. Hence the project is very likely to have a future (positive) impact on the health situation of Lusaka's population, especially in peri-urban areas.

Hypothesis 2: The project introduces the ECAM tool at LWSC and contributes to development of energy management at LWSC and the CU's transition towards a broader view on sanitation.

The ECAM tool was developed by a GIZ global project (Water and Wastewater Companies for Climate Mitigation, WaCCLiM) together with the International Water Association. It is an open source web-based evaluation system used to assess potential energy and GHG savings. This tool makes it possible to quantify and evaluate GHG emissions within the urban water cycle using available utility data. It produces graphics to

pinpoint opportunities for reducing energy consumption and the overall carbon footprint. As ECAM previously only assessed conventional water and wastewater operations of utilities without analysing OSS systems and FSM, CFS Lusaka worked with WaCCLiM to develop and integrate this third dimension into the tool.

The first step in applying the tool in LWSC was to analyse its energy use. This analysis led to the discovery of multiple data gaps (Int_GIZ_7). Hence, there was resistance with LWSC against this exercise. Trusting, working relationships needed to be built; with consultation and support from the executive level of LWSC, the process took about 9 months to get all the management levels onboard. As a result of this process, transparency within LWSC was increased. In June 2019, CFS conducted a training course on the ECAM tool with the real LWSC data, which led to the assessment of the CU's energy consumption and GHG emissions.

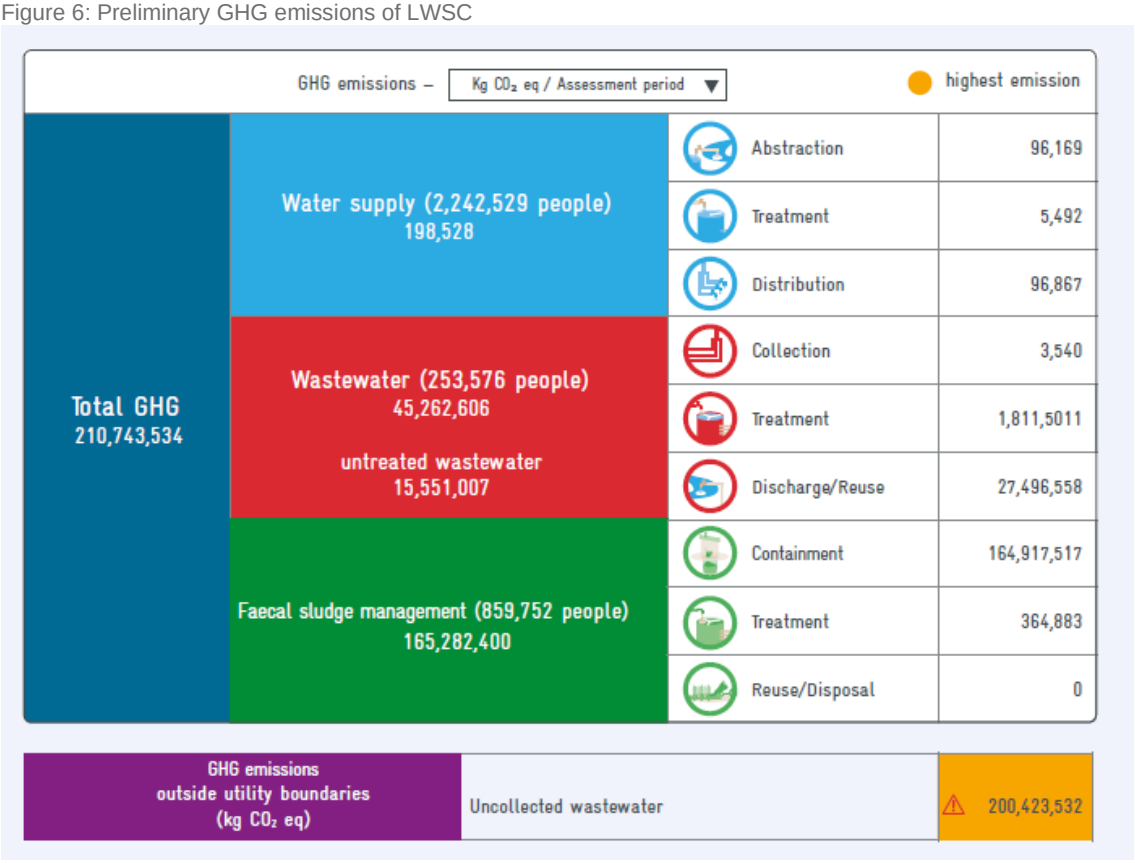
For LWSC, the results of this process are highly relevant for two reasons: (a) the assessment allows the introduction of energy management, i.e. to develop strategies to use energy more efficiently and hence save costs. And (b) the company has a reliable baseline assessment to hand, which can be presented internationally. CFS supported LWSC's participation at the Stockholm World Water Week in 2019 where the CU received very positive feedback from potential international partners (Int_GIZ_7). LWSC's hope is to access new sources of funding under the umbrella of climate change mitigation. Due to these potential benefits, it can be assumed that LWSC will continue working and updating the results of the ECAM assessment to realise the possible impacts.

Another reason why this is likely is the role of the regulator NWASCO. CFS managed to make energy consumption a topic of discussion between the regulator and the CUs. NWASCO – the support from GIZ's RWS II project – is in the process of improving the existing key performance indicators on energy efficiency (Int_Partner_5). This will put additional pressure on the CU to improve its energy management. RWS II is also supporting the role out of the ECAM tool in six other CUs in Zambia.

The results of the ECAM assessment also played a key role in demonstrating the relevance of sanitation to the stakeholders and particularly the decision-makers in LWSC. The preliminary assessment of the CU's GHG emissions show that FSM is the biggest emitter of GHG for LWSC (compared to water supply and wastewater management) and that the emissions from uncollected wastewater are nearly as big as the total emissions of all of LWSC's current operations. These messages helped CFS to convince decision-makers that OSS/FSM is a crucial task also from a climate change perspective; hence it contributed to the mind change within LWSC towards a broader view on sanitation.

There are therefore considerable potential impacts (and plausible reason to assume that these impacts will be realised), which can be attributed to the results of the project.

Figure 6: Preliminary GHG emissions of LWSC



Source: GIZ 2020: 44

Hypothesis 3: The project conducted the SaniPath Assessment together with LCC. The results from the assessment allowed LCC to improve its response to cholera outbreaks.

In October 2017, the Zambian Ministry of Health officially declared an outbreak of cholera in Lusaka. Kanyama, one of the four pilot areas of the project, was one of the two hardest-hit areas of the city. Due to the high relevance of sanitation for the spread of the disease, the project supported LCC in an assessment to better understand the pathways of exposure. Therefore, CFS introduced the SaniPath Exposure Assessment Tool[9] to Lusaka. A SaniPath pilot study of Kanyama compound was supported by GIZ in 2018 to demonstrate the relationship between exposure to diarrhoeal disease risks arising from poor sanitation and their relative impact on overall public health. Consultant researchers from Emory University in the United States investigated suspected faecal contamination pathways. Environmental samples were collected to check for the presence of E.coli. The assessment revealed that water from shallow wells is the main exposure pathway for adults, followed by fresh produce (GIZ, 2020: 20pp). For children, playing in flood water and open drains are the dominant pathways of exposure. These results helped LCC to target the scarce resources and to base public health monitoring on real risks. Furthermore, it strengthened LCC's position as experts for public health matters and helped the Public Health Department to gain access to important national discussions (Int_Partner_3, 4).

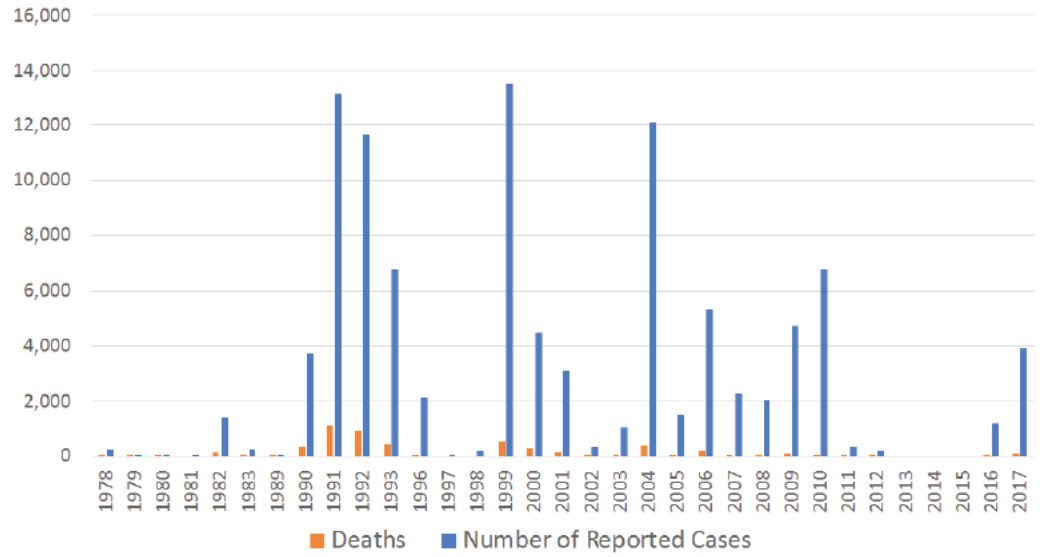
During the inception phase, the hypothesis was developed that the information from SaniPath also helped to respond to the cholera outbreak of 2017/2018. LCC indicated that their lobbying – which was based on the scientific figures from SaniPath – helped them to receive emergency response funds from the GRZ, which were crucial to control the disease (Int_Partner_4). LCC's key strategies in response were the burying of shallow wells, and closing markets to avoid spread of the disease through fresh produce (Int_Partner_3).

Unfortunately, this enthusiastic assessment of SaniPath's impacts could not be substantiated during the evaluation. World Health Organization figures for past cholera epidemics in Zambia do not indicate that the

[9] SaniPath was developed by the Center for Global Safe Water at Emory University, Atlanta, USA, with funding from the Bill and Melinda Gates Foundation. For more information see www.sanipath.org.

outbreak was controlled particularly quickly. It was the fourth biggest outbreak since 2000 with 5,414 official cases in Lusaka in May 2018 (figure 7 is from March 2018 and does not show the cases of April/May 2018).

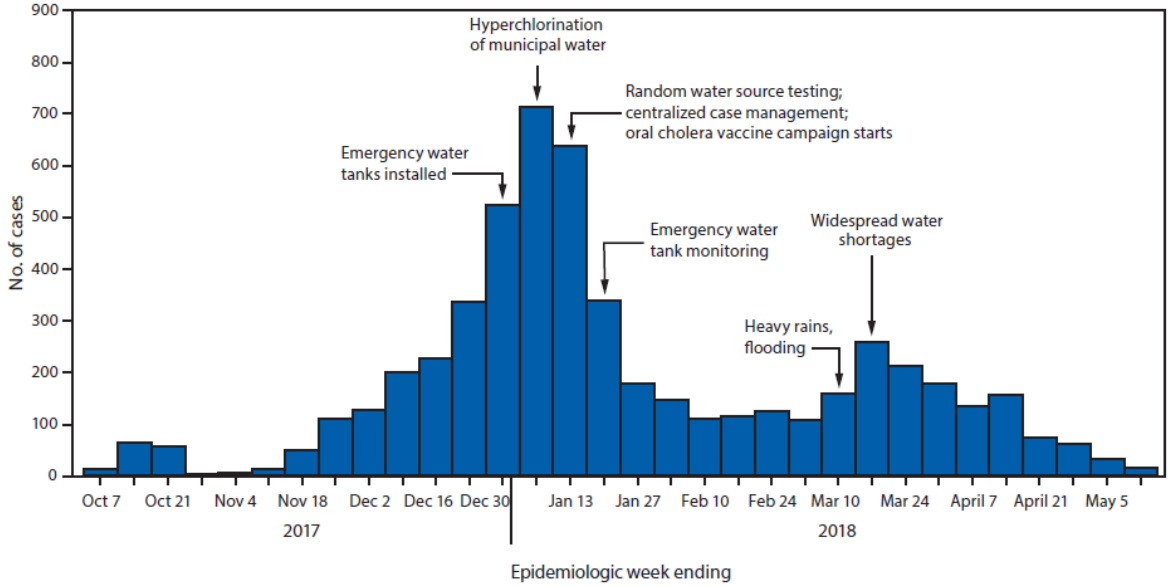
Figure 7: Reported cholera incidence and death 1978–2018



Source: World Health Organization quoted in Sladoje, 2018: 4

Data collection for SaniPath took place in March/April 2018 with preliminary results shared by the consultant on 18 April 2018 (Cerovski, 2018: 2). By this time, other institutions, particularly the Zambia National Public Health Institute, which is under the Ministry of Health, had already implemented a multi-sector response strategy, which included the provision of safe water from tanks (in collaboration with LWSC), distribution of water treatment tablets to households, and oral vaccination of 80% of the population in the two most affected peri-urban areas. Before the implementation of those measures, data gathering was carried out, which revealed comparable results to SaniPath, just earlier. In January 2018, tests for E.coli were undertaken among the main water sources of the city. Of all shallow wells tested, 91% were contaminated with E.coli (Sinyange et al., 2018: 556–9). Figure 8 provides an overview on the development of the epidemic and the response steps.

Figure 8: Number of reported cholera cases and related events, by week — Lusaka, Zambia, October 2017 to May 2018



Source: Sinyange et al., 2018: 557

Therefore, the evaluation team concludes that SaniPath has helped LCC to develop its capacities for cholera

response and to strengthen its position within the institutional landscape. However, a direct impact of CFS on the response to the last big cholera epidemic in Lusaka cannot be justified.

Impact dimension 2: The first two impact strains that were selected for a contribution analysis showed a clear contribution of CFS to (likely future) overarching development impacts. However, the third impact strain could not be verified. Therefore, this dimension is rated with 20 out of 30 points.

Impact dimension 3: No project-related (unintended) negative results at impact level have occurred – and if any negative results occurred the project responded adequately. The occurrence of additional (not formally agreed) positive results at impact level has been monitored and additional opportunities for further positive results have been seized.

No project-related (unintended) negative results at impact level were identified by the evaluation.

A number of additional (not formally agreed) positive results at impact level can be described. Most of them are a geographical upscaling of the results, CFS produced in Lusaka.

- The Lusaka by-law, developed by LCC and CFS was used by the MWDSEP to draft the content of a national regulation (Statutory Instrument) on OSS. Once this is finally approved, the enabling framework in Zambia with regard to sanitation will be a step further forward and local authorities all over the country will have a legal model to improve the sanitation situation in their cities (Int_Partner_3).
- The ECAM tool was successfully piloted in LWSC (see above). There is now a scaling-up process, which is mainly driven by NWASCO. The regulator has refined its reporting on energy efficiency, which puts pressure on all Zambian CUs to improve their reporting on energy use. GIZ is supporting this scaling-up through the RWS II project (Int_Partner_5).
- The experiences CFS gathered in the field testing of different emptying technologies for pit latrines is now scaled up by SNV in a project in five other cities in Zambia (Int_Stakeholder_6).
- The training modules CFS developed are now offered nationwide. Several local authorities have expressed interest in these training courses. This is still a potential impact, but the aforementioned legal and regulatory developments make it likely that there will be a need for trained professionals in other Zambian cities (Int_Stakeholder_5).
- A cross-cutting strategy of CFS was to strengthen the position of LCC vis-à-vis other stakeholders in the sector, particularly LWSC. This has materialised and is a key precondition for further developments in the sector as it is the basis of improved enforcement of regulations (Int_Partner_3, 4).
- The Zambian sanitation sector underwent a significant paradigm shift over the past 5 years. This development, which can be described as a shift of focus from sewerage to OSS/FSM, was already ongoing when CFS started. This created a very enabling environment for the project. CFS built on the ongoing sector development and contributed further to this mindset change, for instance through its exposure visits to Uganda and Tanzania. The project became an important driver of the sector's development and hence contributed to the positive perspectives for sanitation in Zambia (Int_Stakeholder_3).

Impact dimension 3: The project realised a number of additional overarching development results. This is particularly impressive given that there was no direct predecessor project. Hence those impacts have been reached within the comparatively short period of 3 years. In addition, no negative results can be reported. Therefore, this dimension is rated with 30 out of 30 points.

Table 9: Rating of OECD/DAC criterion: impact

Criterion	Assessment dimension	Score and rating
Impact	The intended overarching development results have occurred or are foreseen (plausible reasons).[10]	35 out of 40 points
	The outcome of the project contributed to the occurred or foreseen overarching development results.[11]	20 out of 30 points
	No project-related (unintended) negative results at impact level have occurred – and if any negative results did occur, the project responded adequately. The occurrence of additional (not formally agreed) positive results at impact level has been monitored and additional opportunities for further positive results have been seized.	30 out of 30 points
Overall score and rating		Score: **85 out of 100 points** Rating:Level 2: successful

4.5 Efficiency

Evaluation basis and design for assessing efficiency

Evaluation basis:

Efficiency dimension 1: The project's use of resources is appropriate regarding the outputs achieved (production efficiency).

The project is financed through a particular climate change budget line, the German Technology and Climate Initiative (DKTI) of BMZ. The analysis of production efficiency is based on cost-output data and a follow-the-money approach. BMZ-financed projects only started to assign costs to outputs as part of their project planning and implementation in 2018. The cost-output data is estimated retrospectively for the evaluation, using the GIZ Efficiency Tool which was developed for this purpose. Cost data is extracted from the cost-commitment statement of the project. This statement was developed during the inception phase of this evaluation, hence when the project was in the last month of its duration. It therefore provides a nearly complete picture of the project's spending. The project assigned staff to outputs. Based on this overview, staff costs per output will be calculated from the respective cost-commitment statement lines. While this approach protects salary data, it comes with the inaccuracy of neglecting differences between salaries within one statement line. Output achievement will be assessed based on output indicator measurement.

[10] The first and the second evaluation dimensions are interrelated: if the contribution of the project outcome to the impact is low or not plausible (2nd evaluation dimension) this must be considered for the assessment of the first evaluation dimension also.
[11] ibid.

Efficiency dimension 2: The project's use of resources is appropriate with regard to achieving the project's objective (outcome) (allocation efficiency).

The analysis was partly based on cost-outcome data and reflects overarching questions like the influences of partner structure, instruments, cooperation and partner contributions on project efficiency. Initial information was available in the three project progress reports that cover the full duration of the project. Outcome achievement was assessed based on outcome indicator measurement.

Evaluation design

The analysis of both dimensions follows the analytical questions in the evaluation matrix and the follow-the-money approach (level 1 method), which is also called 'expenditure tracking'. For dimension 1, it entails the description, analyses and assessment of all costs and results of a project and tracing of expenditures for results with the aim to identify improvement potentials. No comparative data is required. For dimension 2, the evaluation questions are broader than the questions for production efficiency; they also incorporate questions regarding implementation efficiency (cooperation) as well as allocation efficiency.

Empirical methods

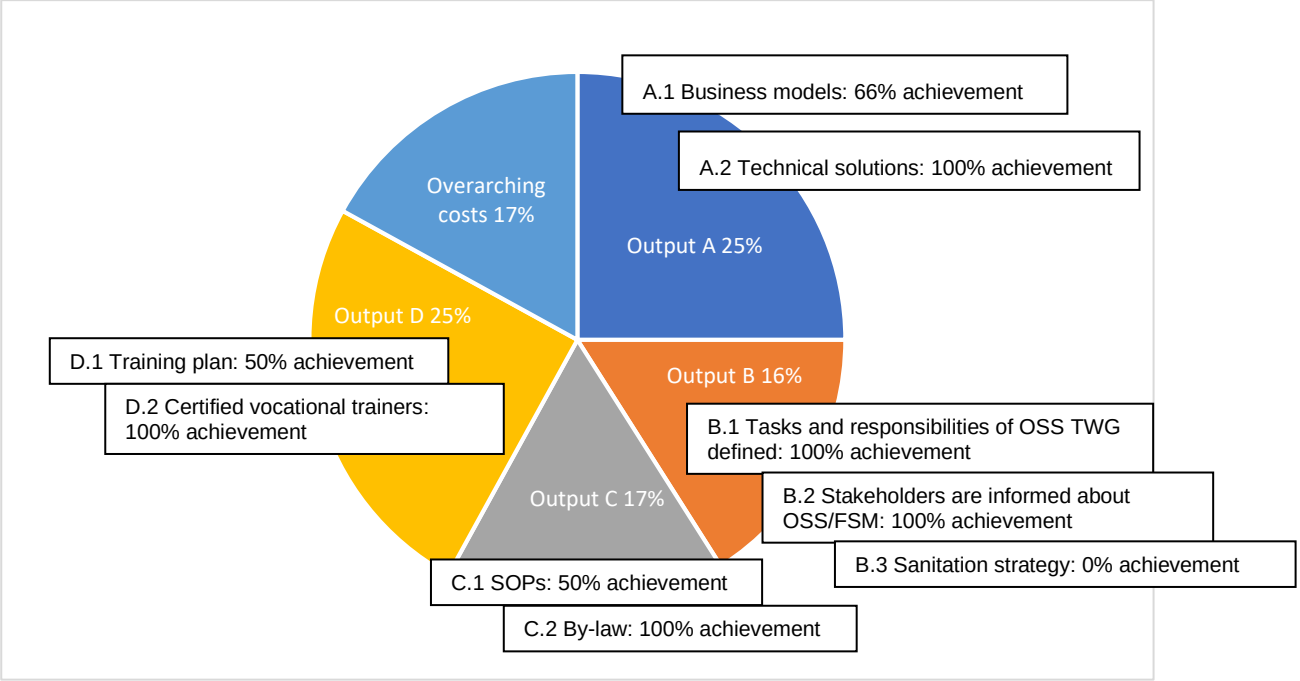
Cost and indicator data were transferred into the GIZ Efficiency Tool specifically designed for the analysis. Qualitative data was gathered in a workshop and from interviews with GIZ, donors, partners and civil society. While GIZ was expected to be knowledgeable about all evaluation questions, the focus of donor, partner and civil society interviews was on the partner structure and contributions, intervention levels, coordination and synergies. Data strength was good; triangulation of sources and evaluators was possible. The data collection possibilities allowed the application of the evaluation design.

Analysis and assessment regarding efficiency

Efficiency dimension 1: The project's use of resources is appropriate regarding the outputs achieved (production efficiency).

The outputs are formulated at an adequately ambitious level; and the output indicators largely meet the SMART criteria and are considered appropriate measurements of output achievement. Of the nine output indicators, five have been fully achieved, three have been partially (but to a large extent) achieved and only one has not been achieved. The project has a total budget of EUR 4,819,926.53 (incl. EUR 470,000 partner contributions). The funds, excluding general expenses of GIZ, were invested as follows (see figure 9).

Figure 9: Cost-output relations



The key cost items of the project are GIZ personnel and consulting, grants and ZAS. Procurement played only a marginal role for the project and is therefore left out in the following analysis.

In Output A, about 25% of the total costs of the project occurred (EUR 1,182,858.58 incl. EUR 164,500 partner contributions). The action area was implemented by two national advisors, of which one was seconded for 80% of his time to the LSP Project Management Unit within LWSC; 32% of CFS's expenses for national personnel occurred in this action area. The secondment of an advisor to the LSP is considered a highly efficient mode of cooperation as it allows for very close collaboration between CFS and LSP, which is one of the key success factors of the project.

The project leader contributed with technical inputs to this Output; 20% of his personnel costs can be attributed to Output A. Additionally, the one development advisor of the project contributed to Output A with 10% of his time. Local consultants also played a significant role in the implementation. EUR 294,795.31 or 55% of CFS's total expenses for national consultants were spent in Output A. The ECAM tool was developed in close collaboration with another GIZ project, WaCCLiM.[12] CFS generated a work order to cover for WaCCLiM's personnel time for developing an FSM module for ECAM (one international expert of WaCCLiM was in Zambia for 3 months). A large number of stakeholder meetings ensured that FSM was understood at the local level and then translated into the ECAM tool in line with the IPCC standards. This ensured that the FSM module was added to the ECAM tool and could be used globally by other utilities already using the tool, as well as new utilities that will adopt it in future. At EUR 67,599 (68% of the ZAS-costs), the costs are relatively limited, especially given the potential impact of the tool on LWSC as well as globally. EUR 179,980.56 were spent on grants (90% of all of CFS's expenses for grants). This was mainly for Bremen Overseas Development Association (BORDA)'s contribution to knowledge exchanges and EAWAG[13] for the Faecal Sludge Quantities and Qualities study.

The output indicators were partially achieved (A.1, two business models were recommended to LSP; target value was three) and fully (A.2, three technical solutions for OSS/FSM were tested and recommended to LSP).

[12] WaCCLiM – Water and Waste Companies for Climate Mitigation – is a joint initiative between GIZ and the International Water Association.
[13] EAWAG – Eigenössische Anstalt für Wasserversorgung, Abwasserreinigung und Gewässerschutz (Swiss Federal Institute for Aquatic Science and Technology).

In summary, the Output is characterised by a diverse mix of instruments, which was used in a very efficient way. The strong focus on national personnel, embedding personnel into the LSP and the use of a secondment (instead of consulting) are factors that increased the output efficiency.

In Output B, about 16% of the total costs of the project occurred (EUR 780,177.78 incl. EUR 94,000 partner contributions). The output was implemented through one full-time national advisor and three national advisors using 50% of their time. Some 38% of CFS's expenses on national personnel occurred in Output B. The project leader contributed with technical inputs to this Output; 20% of his personnel costs can be attributed to Output B. Furthermore, a pool of local consultants was used to complement the advisory services of the GIZ personnel. EUR 133,997.87 were spent on local consultants, which makes 25% of CFS's total spending for local consultants.

The topic of sector coordination requires many continuous discussions and meetings with partners and other stakeholders. Hence the strong reliance on GIZ personnel, particularly national personnel, seems logical. The two output indicators on stakeholder coordination (B.1 'Roles and responsibilities of OSS TWG defined' and B.2 'Stakeholders are better informed about OSS/FSM') were fully achieved. Only indicator B.3 ('Sanitation strategy updated' was not achieved. The Millennium Challenge Account had already updated this strategy, so CFS saw no need to continue working on it. The resources planned for the updating were reallocated into support for a LWSC communication strategy. However, this activity did not lead to a tangible result until the end of the project. From an efficiency perspective and with the benefit of hindsight, this reallocation was not fully justified. It was LWSC that voiced the need for a communication strategy (Int_GIZ_1). However, owing to a misunderstanding about the different procurement procedures of GIZ and LWSC, the activities were delayed and could not be finished by the end of the project. As the indicator was not changed, it is assessed by the project itself and by the evaluators as not achieved.

In Output C, about 17% of the total costs of the project occurred (EUR 823,808.76 incl. EUR 164,500 partner contributions). The output was implemented through two national advisors (one full-time, one 50% of his time). One national advisor was seconded to LCC for 60% of their working time. About 22% of CFS's expenses on national personnel occurred in Output C. In addition, a development worker contributed with 90% of his time to this output (remaining 10% in Output A). He was also sitting in the partner institution LCC for most of his time (4,5 of 5 days per week). The secondment of staff and the embedded development advisor were highly appreciated by the partners (Int_Partner_3) and as for Output A, it constitutes a success factor for CFS. The project leader contributed with technical inputs to this Output; 16% of his personnel costs can be attributed to Output C. Furthermore, a pool of local consultants was used to complement the advisory services of the GIZ personnel. EUR 107,798.29 were spent on local consultants, which make 20% of CFS's total spending for local consultants.

Indicator C.1 is 50% achieved (digitalisation of SOPs). The SOPs were updated and digitalised. However, the digital tools do not work yet (as of 8 May 2020) and hence LCC is still using the paper-based version (Int_Partner_4). Indicator C.2 was fully achieved as the by-law for OSS was developed and approved by LCC. The decentralisation process within LCC was delayed (see section 4.3). This also influenced the implementation strategy of CFS. The project had planned to equip one of the new site offices with furniture and office equipment. As this was not possible, the project used the additionally available resources for other activities, particularly for a stronger inclusion of LCC personnel into the development of training modules under Output D (Int_GIZ_7). This is considered a reasonable reallocation of resources as it helps to anchor the results of Output D in the partner system.

About 25% of the budget was spent on Output D (EUR 1,203,433.91 incl. EUR 47,000 partner contributions). A large share of these resources was spent on international consulting (EUR 962,897.39). GfA Consulting Group implemented Output D on behalf of CFS. The company deployed one international long-term expert and two national long-term experts. In addition, national and international short-term experts were involved. The involvement of GIZ personnel in this output was limited to the technical inputs by the CFS project leader. Hence only 12% of the project costs for international advisors occurred in Output D (the costs for the

overarching steering and management of the whole project by the project leader is left out in this calculation for analytical purposes). National GIZ personnel were not used in this Output. Partner contributions in this output were limited to 10% of the total partner contributions (EUR 47,000). This number emphasises the differences in the approach between a consulting company and GIZ: while GIZ-led outputs were developed very closely with the partners (leading to high partner contributions in terms of staff time), the consulting company works rather independently.

This may explain the only partial achievement of indicator D.1. While a training plan for public and private service providers in OSS/FSM was developed, it was not agreed between LCC and LWSC. Discussions between the two are still ongoing. Indicator D.2 was fully achieved (12 certified vocational training teachers).

In total, the use of resources in Output D differs heavily from the other three outputs as the output was completely outsourced.

The project steered its resources in line with the available budget and reflected to what extent it can achieve its results with the given budget and the yearly cash flow demands. No major deviations between budgeted costs and expenditures occurred. The instrument mix differs considerably between the outputs, reflecting the different objectives and particularities of the partner structures. The project used a number of approaches that have proven to be highly efficient in the context of CFS's partner system:

- *Use of national personnel:* The use of international advisors (GIZ personnel) was limited to the overall project leader. National experts realised the lion's share of advisory work. This is cost effective, when there are enough national experts with the required qualifications on the market. The project managed to attract and employ such experts.
- *Embedding of GIZ personnel in partner institutions:* The very close and effective cooperation with LWSC/LSP as well as with LCC was enabled by the daily presence of GIZ advisors (national personnel and development advisor) in the institutions.
- *Use of results from other GIZ projects:* The introduction of the ECAM tool is an important result of CFS. The tool was developed by another GIZ project and was further developed and introduced to Zambia through a GIZ internal work order from CFS to WaCCLiM. This is cheaper than using a consulting company and creates upscaling of results from the other project. During the exchange visits to Uganda and Dar es Salaam, CFS could also build on results from other bilateral GIZ projects in these countries and contribute to a geographical upscaling of those results.
- *No sitting allowances at LD WASH PHC:* A financially small, but psychologically big issue is the payment of sitting allowances to members of the LD WASH PHC and its TWGs. Even though this was the usual procedure in other donor-driven committee structures, CFS did not pay the allowances, hence making the point that the committee must be owned and run by the national stakeholders (Int_GIZ_3; Int_Partner_8).

Efficiency dimension 1: The project's use of resources is considered to be appropriate with regard to the outputs achieved (production efficiency). Therefore, this dimension is rated with 65 out of 70 points.

Efficiency dimension 2: The project's use of resources is appropriate with regard to achieving the projects objective (outcome).

Each outcome indicator relates directly towards one output (Indicator 1→Output A; Indicator 2 and 3→Output B; Indicator 4→Output C; Indicator 5→Output D). Therefore, everything that was mentioned under efficiency dimension 1 is also valid for efficiency dimension 2. As for Output C, important results were achieved and partners as well as external stakeholders confirm that the enabling framework for the sector has vastly improved over the last years (Int_Partner_3; Int_Stakeholder_3). However, the outcome indicator 3, which is based on Output C has not been achieved. The reason is the delay in LCC's decentralisation process go back to LSP procedures as LSP finances the refurbishment of LCC site offices (Int_GIZ_4, 7). Such delays have been identified in the project design as a risk. The very close collaboration with LSP was the key risk mitigation measure, which was, however, not successful in this case. Apart from this element, the close coordination with LSP (and the other donors behind it) clearly resulted in synergies between the development partners. The fact

that the World Bank could add their questions on willingness to pay towards the survey for data gathering that CFS undertook (sanitation baseline mapping) and also contribute financially to the data gathering, indicates that GIZ and World Bank were working hand in hand in the LSP. Even though CFS only ran for 3 years, the project produced results. These results were scaled up by other development partners, e.g. the sanitation baseline mapping, which is extended by the Bill and Melinda Gates Foundation to the whole of Lusaka (Int_Partner_1).

The overall distribution of funds between the four outputs shows that Output D has received the most funds (slightly more than Output A, see figure 9). However, the analysis of potential impacts of CFS (section 4.4) and sustainability (section 4.6) indicates that Output D is not the output that has produced the most relevant results of the project. While the other three outputs are strongly linked and jointly contribute to the development of the sanitation sector, Output D is not necessarily a 'precondition' for climate-friendly OSS/FSM in Lusaka. The fact that the financially biggest output has the smallest amount of partner contributions also indicates that the mode of implementation in Output D differs from the three other outputs. The key partner institutions of the project (LWSC and LCC) were not part of the development of this output, but rather users of the products. The output indicator that required a more intense advisory process (D.1 'Training plan developed and agreed upon between LWSC and LCC') was not fully achieved. Overall, the evaluation concludes that the distribution of costs between the outputs was justified regarding Output A, B and C. For Output D, the evaluation finds the expenses too high if considering the results. However, the overall costs of the project are assessed as well spent considering the results of the project at outcome level.

It is understood and accepted that CFS – like all BMZ-funded projects – had to source out a share of its budget on the international consulting market. For the development of specialised and clearly defined deliverables (such as training modules), sourcing out is a highly efficient way. However, for long-term advisory processes (such as bringing forward the use of training modules in the sector), long-term GIZ personnel seem to be the more efficient instrument.

Efficiency dimension 2 The project's use of resources is appropriate with regard to achieving the projects objective (outcome). It is therefore rated with 20 out of 30 points.

Table 10: Rating of OECD/DAC criterion: efficiency

Criterion	Assessment dimension	Score and rating
Efficiency	The project's use of resources is appropriate with regard to the outputs achieved. [Production efficiency: Resources/outputs]	65 out of 70 points
	The project's use of resources is appropriate with regard to achieving the projects objective (outcome). [Allocation efficiency: Resources/outcome]	20 out of 30 points
Overall score and rating		Score: **85 out of 100 points** Rating: Level 2: successful

4.6 Sustainability

Evaluation basis and design for assessing sustainability

Evaluation basis

Sustainability dimension 1: Prerequisite for ensuring the long-term success of the project: results are anchored in (partner) structures.

The focus of the evaluation will be on the two outputs that were selected for the contribution analyses (effectiveness dimension 2 and impact dimension 2), namely Output A ('procedures for OSS/FSM') and Output C ('Preconditions for enforcement'). The other two outputs will also be analysed, but not to the same level of detail.

Sustainability dimension 2: Forecast of durability: results of the project are permanent, stable and long-term resilient.

Based on the analyses of dimension 1 and additional collected data, the evaluators describe and discuss a potential forecast on how the current situation may develop in the future, considering how results were anchored in the partner structures and factors that might influence the durability, stability and resilience of long-term results in the future (e.g. ownership of partners, financial means, human capacities).

Evaluation design

The analysis followed the evaluation questions (see annex 1); no specific design was applied.

Empirical methods

The assessment is based on document analyses, survey data and interviews with GIZ, partners, development partners, civil society and final beneficiaries. Evidence strength was medium; data, sources and evaluators were triangulated, yet any forecast (dimension 2) is based on assumptions. The data collection possibilities allow answering the evaluation questions.

Analysis and assessment regarding sustainability

Sustainability dimension 1: Prerequisite for ensuring the long-term success of the project: results are anchored in (partner) structures.

The close linkage of CFS with the LSP has been mentioned before. This linkage is mostly realised through **Output A**, which developed 'procedures for OSS/FSM' that were then fed into the LSP. The LSP is a multi-donor programme of LWSC and all processes and technologies in the field of OSS/FSM, which are piloted by the LSP, are foreseen to become the standard process of LWSC (Int_Partner_2). LSP is there to create demand, market services and increase capacities within LWSC. When the LSP ends (November 2021), all functions of LSP will be handed over to the LWSC's peri-urban department, where the recently established FSM unit (August 2019) sits (Int_Partner_2). The creation of this unit is a key step towards sustainability of FSM within LWSC as the topic is institutionalised for the first time. CFS was instrumental in the change of perceptions within LWSC that led to the creation of the unit (Int_Stakeholder_4; Int_Partner_1). All technical processes, but especially the knowledge exchange visits, contributed to this mind shift, which made the institutional developments within LWSC possible.

The topic of **Output B** (stakeholder coordination) is much more difficult to anchor in the partner system as it entails by definition process *between* stakeholders and not *within* a partner organisation. Strategies for sustainability have been discussed by LD WASH PHC from the very beginning (Int_GIZ_3; Int_Stakeholder_3).

A key success in this regard is the attachment of LD WASH PHC to the Lusaka DDCC as the committee becomes part of Zambia's committee structure for the implementation of the National Development Plan. However, this is a formal institutionalisation, which does not indicate how functional the committee will be in the future. Currently, active participation depends mainly on the individual willingness of members, which is reflected in the very different level of activities between the TWGs (Int_GIZ_3). The key step that is missing for stronger anchorage of the LD WASH PHC (incl. its TWGs) is the inclusion of participation in the job descriptions of the individual members. Currently, participation is an additional task for the members that does not bring direct benefit regarding their core job (Int_Partner_8). Though the organisation of the sector, including the executive level of LWSC and the director level of LCC), support the LD WASH PHC in general, this lack of institutionalisation in the job descriptions of individual members can easily lead to a reduction of participation.

For **Output C**, most of the results are anchored well within the partner system. The output was implemented in very close cooperation with the main partner, LCC. Key results, such as the updated and digitalised SOPs, address and improve core processes of the partner institution. It was decided that the digital solution for the new LCC data management system should be hosted at the National Data Centre (Int_GIZ_2). This may have led to delays in the process, but it is in line with GRZ requirements and hence anchors the results better in the partner system.

Another very relevant result of CFS is the by-law on OSS/FSM. As part of the legal framework, it is clearly well anchored in the partner system. The further development into a Statutory Instrument (i.e. a nationwide regulation) further increases the anchorage (Int_Partner 3, 4; Int_Stakeholder_3).

As previously stated, **Output D** was implemented by a consulting company. Important steps towards anchoring the results in the partner system were undertaken. The series of training modules, which were developed by the project, were recognised by the Technical Education, Vocational and Entrepreneurship Training Authority and hence became officially part of Zambia's vocational training system (Int_Stakeholder 5, 6).

The training modules were developed together with the Lusaka Business and Technical Training Centre, a technical training college in Lusaka. They can now offer the training courses to anyone interested. However, trainees (or their employer) need to pay a fee (between EUR 150 and EUR 200 per course) for the training. This may reduce the willingness of potential trainees (and their employers) to undergo the training (Int_Stakeholder 6). On the other hand, there is a relevant cross-link with Output C: The Statutory Instrument will require local authorities to take on service provision in the area of FSM/OSS. To do so effectively, there will need to be capacity development of the staff of local authorities and CUs. This increases the potential demand for the training courses.

Sustainability dimension 1: The project managed to anchor many key results in the partner system, particularly in Output A, C and to a lesser degree D. For Output B, which dealt with the topic of inter-institutional coordination, anchoring is more difficult. The dimension is rated with 40 of 50 points.

Sustainability dimension 2: Forecast of durability: results of the project are permanent, stable and long-term resilient.

Although the project is a DKTI measure and cannot be renewed after the original 3 year term, the project was still working on long-term change processes that usually require long-term advisory support. The prerequisites for climate-friendly sanitation, which CFS aims to establish (outcome), are broken down in the outcome indicators. Each indicator is based on one output. In order to forecast the durability of the project's outcome, an analysis of key results within each output is required.

For **Output A**, the limited duration of the project was no problem as this output was closely aligned to the LSP, which has a longer duration of 5 years and – thanks to its financial volume – a high relevance for LWSC. For the post-LSP period, an exit strategy was developed to ensure sustainability. It is recognised that the toilets built by the LSP can only be a starting point. At the same time, it was recognised that subsidising the investment costs is indispensable for upscaling of OSS in low-income parts of the city (Int_Stakeholder_7). A sanitation levy was introduced to close this financial gap, which is charged on top of the water price

(Int_Partner_2). Over a period of 2 years, the money collected through this levy is accumulated on LWSC's account to provide the seed funding for the construction of more toilets. However, there still remains a contribution of 2,400 Kwacha (ca. EUR 115) per household. This is a considerable amount for most of the households. However, it is the role of the landlord to finance the toilet and not the role of the often-poor tenant. The LSP had considered this and conducted dedicated sanitation marketing campaigns that target landlords (Int_GIZ_7).

Overall, the forecast of durability of results in Output A and hence for the outcome indicator based on Output A (adapted procedures are being applied by LWSC) depends on a number of unknowns. A key driver of sustainability must be a change of mindset about the users of sanitation. One of the key reasons for households to invest in a new toilet was the attractive design . Hence, soft factors play a role already, at least for the households that have enough money to invest in the toilets. Sector experts recognise a slow mind shift among the population of Lusaka. Reportedly, 'climbing up the sanitation ladder' has become a relevant goal for households (Int_Stakeholder_3). But external factors such as the expected crash of the economy due to the Covid-19 crisis may counteract this development. Resources among the population in the peri-urban areas are likely to dwindle, which makes non-vital investments – as sanitation is still perceived as such by many – more difficult. Furthermore, the success of upscaling access to sanitation also depends on other factors, see Output C below.

It was outlined under dimension 1 that for **Output B**, anchoring an inter-institutional coordination body in the partner system is more difficult than the work within the partner institutions. The embedding of LD WASH PHC into the Lusaka DDCC is certainly a good first step; however, messages on the forecast of durability of the LD WASH PHC were mixed. In January 2020, there were floods in Kanyama. Members of the LD WASH PHC went together to the field to inspect the damages and to coordinate the responses of the different institutions (Int_Partner_8; Int_Partner_4; Int_Stakeholder_3; Interview_GIZ_3). Such coordination activities do not require a lot of funds and hence it should be possible to continue them. However, the core weakness of the LD WASH PHC and its TWGs is that participation in the committee is not formally acknowledged by the member institutions through institutionalising it in members' job descriptions. This reduces the willingness of individuals to participate when other tasks seem to be more important. During the Covid-19 phase, online meetings were called and participation in these meetings was very limited (Int_Stakeholder 3). Another strategy of individual members to balance their core job and their work in LD WASH PHC is to send proxies that can physically participate, but not really contribute to the discussions (Int_GIZ_3). If this increases, it would also slowly reduce the committee work's effectiveness, which again contributes to a further decline in participation. Members of the committee agree that the LD WASH PHC is still in its infancy (Int_Partner_8) and would require further support by GIZ to be sustainable (Int_Stakeholder_3). This is going to happen. Support to LD WASH PHC will be part of Output 6 of the amended RWS II project. One of the objectives will be to include the participation in the committee in job descriptions.

In summary, the forecast of durability is mixed. Though the sanitation activities in Lusaka are currently implemented in a coordinated manner (outcome indicator 2) and LD WASH PHC members use a gender checklist in this coordination (outcome indicator 3), we assume that if GIZ support ended today, the forecast would be negative. But GIZ is going to build on the results of CFS and continue supporting the LD WASH PHC further and hence there is good reason to assume that the forecast will improve.

Output C developed good prerequisites for ensuring long-term success (see dimension 1), which focused on core processes of the partner institution LCC. LCC highly appreciates GIZ support, because it had been largely neglected by development partners in the past, especially compared to LWSC; the reason being that LCC was said to be ineffective, very bureaucratic and hence difficult to work with. But as enforcement is a key prerequisite for upscaling sanitation, CFS dared to invest considerable resources into the cooperation with LCC. The direct results of this cooperation have been convincing. However, the application and permanent use of most of those results are doubtful. The digital solutions for LCC are not yet operational and the support to decentralisation had to end as refurbishment of site offices was delayed. These problems were not caused by CFS, but they illustrate the difficult environment LCC poses. More GIZ support will be needed to ensure further

progress. Currently, LCC is not in the position to really enforce the legislation, which has been greatly improved through CFS support (development of the by-law). Therefore, the prospects for durability of results are rather bleak from today's perspective and the outcome indicator 4 has not been achieved (although LCC annual reports have not yet been presented to the regulatory authority NWASCO) but as support from GIZ continues, there is a perspective for future development of this assessment.

Output D has produced relevant results, particularly the training modules. However, the forecast of durability completely depends on the demand for those modules. If the courses are not in regular demand, it is unlikely that the Lusaka Business and Technical Training Centre will continue to market them. Also, the capacities of the trainers will be lost if their skills are not used regularly. It is assumed by a sector expert that a period of 2 years without relevant demand will render the modules unusable (Int_Stakeholder_6). It is difficult to imagine where regular demand will come from in the next 2 years, especially regarding the modules that have already been given to the staff of LWSC, LCC and the pit emptiers under LWSC. LSP will probably finance training courses for operators of treatment plants, but for further demand, the upscaling of OSS would first be required. Hence the forecast for sustainability for this output and the related outcome indicator 5 (Participants of training modules rate the relevance of the training for their job as good) is rather bleak as GIZ has not planned any follow-on support for this output.

Sustainability dimension 2: The 'forecast of durability' for the project's results is mixed: Output A has good prospects for sustainability due to the close linkage with LSP/LWSC. However, Output B, C and D would require further support from GIZ to increase the likeliness of durability. Therefore, the dimension is rated with 37 of 50 points.

Table 11: Rating of OECD/DAC criterion: sustainability

Criterion	Assessment dimension	Score and rating
Sustainability	Prerequisite for ensuring the long-term success of the project: results are anchored in (partner) structures.	40 out of 50 points
	Forecast of durability: results of the project are permanent, stable and long-term resilient.	37 out of 50 points
Overall score and rating		Score: **77 out of 100 points** Rating: Level 3: moderately successful

4.7 Key results and overall rating

Relevance

The project is very much aligned to the Zambian strategies and policies in the water sector. Furthermore, the project is fully in line with the relevant BMZ and international strategies for sanitation. It contributes directly to the achievement of the objective of the German development cooperation programme and the SDGs.

The project is well targeted towards the needs of the direct and indirect target group.

The project design with its multi-dimensional approach to sanitation (technical and managerial solutions,

coordination of stakeholders, enforcement of regulations, training of sector professionals) has proven to be a very adequate approach to improve sanitation in Lusaka. Especially as the project could join forces with the LSP that brought considerable investments in sanitation in general and OSS/FSM in particular. However, the project's additional focus on climate change is limited to one particular result. One may argue that sanitation in general is climate-friendly as untreated sludge is a major emitter of GHG (as CFS has proven for the case of Lusaka through the analysis with the ECAM tool). However, the CFS project – though it is a well-designed and well-implemented sanitation project that produced highly relevant results in its short duration – does not have a particular *additional* focus on climate-friendliness.

Effectiveness

Four out of five outcome indicators have been achieved. Hence the module objective can also be assessed as achieved.

The contribution analysis of **selected hypothesis** has revealed the following key results:

- The baseline mapping of sanitation infrastructure in four selected peri-urban areas was a key input into LWSC's efforts to develop FSM as a business. The information gathered was integrated into an information management system. Though LCC does not have access to this system (as envisaged), the database is a key prerequisite for LWSC to understand their customers and to design their services for OSS/FSM.
- The project was instrumental in setting up the LD WASH PHC. Members of the committee have confirmed that the committee was very effective in coordinating stakeholders in the sanitation sector. Furthermore, for CFS it was a useful forum to strengthen gender aspects in the water sector through capacity development.
- For LCC, the project developed a 'toilet catalogue', i.e. a compendium of appropriate technical solutions for households. This compendium was the basis for the development of a Lusaka by-law on OSS, which is now the backbone of the regulatory framework on OSS in Lusaka. The LD WASH PHC played a key role in bringing all relevant stakeholder together and discussing the by-law.

Impact

The project has clearly contributed to overarching development results as envisaged in the project concept. These impacts materialised directly through CFS's support to the LSP or indirectly through developments at the level of the enabling framework.

The contribution analysis of **selected** hypothesis has revealed the following key results:

- In Action Area A, the project realised a number of relevant results (baseline mapping, making OSS part of LWSC's database, toilet design, emptying technologies), which clearly contributed to the outcome (prerequisites for improving access of sanitation are established). These results influenced the quality of LSP's interventions, for instance with regard to the toilet designs. CFS was able to convince LSP that percolating toilets are not an ecologically sound technology for Lusaka.
- Also in Action Area A, the project has adapted the ECAM tool to include an FSM module and used the complete tool with LWSC. Based on this result, a GHG emissions baseline assessment for LWSC was completed for the first time. This allows the water and sanitation provider for the first time to introduce energy management and potentially to access new sources of funding from international budget lines dedicated to fighting climate change. Furthermore, the ECAM tool made the relevance of FSM from a climate-standpoint visible. Hence it contributed to the mind shift change at LWSC that OSS/FSM is a key duty for the company.
- The project implemented the SaniPath exercise together with LCC in four peri-urban areas of Lusaka. Though the results from Kanyama (the first assessment area) were ready after the last cholera outbreak, the process around SaniPath increased the capacities of LCC for rapid response to cholera. Therefore, it is not possible to state that thanks to SaniPath, the last cholera outbreak was handled better, but CFS support increased capacities of LCC and helped the City Council to become more visible in national

discussions about public health.

Efficiency

The project is characterised by a high production efficiency, i.e. use of resources is appropriate with regard to the outputs achieved. CFS used a number of approaches that have proven to be highly efficient in the context of CFS's partner system:

- Use of national personnel: The use of international advisors (GIZ personnel) was limited to the overall project leader. National experts realised the lion's share of advisory work.
- Embedding of GIZ personnel in partner institutions: The very close cooperation with LWSC/LSP as well as with LCC was a key success factor also in terms of efficiency.
- Use of results from other GIZ projects: CFS built on results of other projects, such as WaCCLiM, and scaled them up.
- No sitting allowances at LD WASH PHC: A financially small, but psychologically big issue is that the project refrained from paying sitting allowances to members of the LD WASH PHC and its TWGs.

The very close coordination with LSP (and the other donors behind it) clearly resulted in synergies between the development partners, which highly increased the effectiveness and efficiency of CFS.

Sustainability

The project managed to anchor many key results in the partner system, particularly in Outputs A, C and to a lesser degree D. For Output B, which dealt with the topic of inter-institutional coordination, anchoring is more difficult. However, the forecast of durability for the project's results is mixed: Output A has good prospects for sustainability due to the close linkage with LSP/LWSC. However, Outputs B, C and D would require further support from GIZ to increase the likeliness of durability.

Table 12: Overall rating of OECD/DAC criteria and assessment dimensions

Criterion	Score (max. 100)	Rating
Relevance	93 out of 100 points	Level 1: highly successful
Effectiveness	92 out of 100 points	Level 1: highly successful
Impact	85 out of 100 points	Level 2: successful
Efficiency	85 out of 100 points	Level 2: successful
Sustainability	77 out of 100 points	Level 3: moderately successful
Overall score and rating for all criteria	**86 out of 100 points**	**Rating: Level 2: successful**

Table 13: Rating and score scales

100-point scale (score)	6-level scale (rating)
92–100	Level 1 = highly successful
81–91	Level 2 = successful
67–80	Level 3 = moderately successful
50–66	Level 4 = moderately unsuccessful
30–49	Level 5 = unsuccessful
0-–9	Level 6 = highly unsuccessful

5 Conclusions and recommendations

5.1 Factors of success or failure

Overall managerial set-up

- The instrument mix of working with a team of mainly national experts, some of which were embedded in the partner institutions, development advisor and financing instruments was generally efficient and suitable for the context. Outsourcing of one component led to good technical results, however, their anchoring in the partner system remains a challenge and would require further support by GIZ.

Implementation of quality assurance in line management

- The project developed all mandatory quality assurance in line management products. The monitoring system was adequate with monitoring of milestones and risks. The thorough strategic and managerial design resulted in clear, transparent and effective implementation. The team functioned and performed well.

Cooperation management according to Capacity WORKS

- The close alignment of CFS to LSP, which was integrated into CFS's design from the very beginning has proven to be the most relevant success factor for the project. This close cooperation with other donors led to vast synergies and significantly increased the leverage of CFS.
- In terms of cooperation, embedding personnel in partner institutions as well as the 'development advisor' has proven to be an important factor for an effective implementation. The day-to-day interaction of national GIZ experts with their counterparts created very good personal work relationships and helped the project to reach its objectives.
- The strategy of CFS is a commendable multi-dimensional approach to sanitation. With limited resources, the project managed to address the four most relevant aspects of the complex sanitation sector and to produce very relevant results to further the development of the sector.
- Learning and innovation played a key role for the project. Regional exchange visits were conducted to introduce the partners to new approaches that have been applied elsewhere. In addition, these visits increased the communication among the participants from different institutions and increased their perspectives on the importance of sanitation. Hence the visits were important and effective approaches to further drive the sector development.

External factors

- GIZ was instrumental in further driving sanitation and increasing the importance of OSS/FSM in comparison to sewerage systems. However, the dynamic development in the sector was already there when CFS started. It can be traced back to discussions among the Zambian stakeholders about the differences in access between water and sanitation. CFS has therefore made a contribution to a further mind shift in the sector, but was capitalising on ongoing discussions in the sector.
- The cholera outbreak of 2017/2018 in Lusaka increased the importance of sanitation in the eyes of decision-makers and the population alike. It is common knowledge that poor sanitation is a driver of cholera and the assessments in Lusaka have again proven this. Apart from contributing to the response to cholera (through its SaniPath Assessment), CFS also capitalised on the public discussion on sanitation

that arose from the outbreak.

- The Covid-19 crisis is likely to lead to an economic crisis for Zambia. This will reduce the means and the willingness of households to pay for sanitation. This may set back the previous successes (and hence reduce long-term sustainability of CFS results) and impede the upscaling of access to sanitation.

5.2 Conclusions and recommendations

The following recommendations are based on the analysis and conclusions drawn in the previous sections. They relate to lessons learnt from successful project implementation as well as identified room for improvement. They are not timebound but should be considered whenever designing and implementing new projects. The CFS project was already finalised when this evaluation took place. Hence, the recommendations address mainly GIZ project planning officers and – to a lesser extent – GIZ administration and GIZ project management in general.

- Don't overburden projects with long-term change processes if the financing line does not allow for follow-on projects. CFS is in the fortunate position that RWS II can continue working on selected activities for another project cycle and complete some of the loose ends of the CFS project. However, this was not predictable when CFS was planned. CFS – even though it is a DKTI project – has the ambition of a bilateral TC project, which is to ignite long-term change processes in the partner system. However, for a bilateral TC project, a follow-on project might be taken for granted. This is not the case for DKTI projects. Therefore, a more prudent planning approach would have limited the ambition of the project to clearly defined work packages that can be finalised within the given duration.
- Continue to closely align TC projects to other donors' investment programmes. This can significantly increase the leverage of the TC project. Ensure that those projects, which should complement an investment programme, have the same duration (or at least the same closing date) to maximise complementarity.
- CFS's wide focus on all major elements relevant for improving sanitation has been proven to be a success factor. It properly reflects the complexity of the sanitation sector from technical to institutional and financial issues. Therefore, this approach should be maintained, even though a stronger focus on technical solutions may promise higher short-term numbers of direct beneficiaries.
- Exchange visits were a key element for CFS to prepare the ground for institutional and mind set changes. If this change is required and if adequate role models are available (e.g. relatable cases in the same region), exchange visits can be a powerful instrument.
- Though there is no direct follow-on project for CFS, RWS II includes some of the topics of CFS. The following messages are already included in the updated RWS II design, but the evaluation team would like to emphasise: (a) Continue support to LD WASH PHC; (b) Institutionalisation of this committee structure is far from achieved; and (c) Make sure that LWSC, LCC and other stakeholders in the sector include the participation in the committee and/or its TWGs in their employees' job descriptions.
- Create demand for training courses for OSS/FSM: Other commercial utilities in Zambia as well as other local authorities should be supported to train their staff and/or the pit emptiers in their areas. This will ensure a continuous use of the training modules developed under CFS.
- Continue to embed personnel in the partner institutions: It has been a success factor of CFS to work very closely with LSP, LWSC and LCC by having personnel sitting in those partner institutions. The close linkage facilitates day-to-day cooperation and communication.
- Monitor the economic development of the target group under the influence of a possible Covid-19-induced economic crisis. This crisis may reduce the willingness and ability to pay for improved sanitation.

List of references

BMZ 2014: Gleichberechtigung der Geschlechter in der deutschen Entwicklungspolitik. BMZ Strategiepapier 02/2014. Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (BMZ). Bonn/Berlin

BMZ 2017: EZ-Programm „Wassermanagement und Abwasserentsorgung in Sambia“. Internes Dokument. Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (BMZ). Bonn/Berlin

BMZ 2016: Länderstrategie Sambia. Internes Dokument. Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (BMZ). Bonn/Berlin

Cerovski, R. 2018: SaniPath Field Report for Partners. Lusaka, Zambia. Internal document. Emory University

Chatiza, K. and A. Pres 2019: Semi-remote CPE. Lessons-learnt. Internal document. Gesellschaft für internationale Zusammenarbeit (GIZ). Bonn/Eschborn

GIZ 2020: Towards inclusive, green city sanitation for Lusaka – achievements and way forward. Synthesis Report. Gesellschaft für internationale Zusammenarbeit (GIZ). Bonn/Eschborn

GIZ 2018: Central Project Evaluations. Implementation Guidelines. Gesellschaft für internationale Zusammenarbeit (GIZ). Bonn/Eschborn

GIZ 2017: Positionspapier “Armutsorientierte und breitenwirksame Trinkwasser- und Sanitärversorgung”. Gesellschaft für internationale Zusammenarbeit (GIZ). Bonn/Eschborn

GIZ 2015: Measuring Results – Contributing to Results. Findings and Conclusions from Monitoring and Evaluation 2012-2014. Gesellschaft für internationale Zusammenarbeit (GIZ). Bonn/Eschborn

GRZ 2017: 7th National Development Plan 2017-2021. Government of the Republic of Zambia. Lusaka

GRZ 2011: Environmental Management Act No. 12. Government of Zambia. Lusaka

Sector Ministers’ Meeting 2019: The Zambia Country Brief. San José. 04th-05th April 2019

LSP 2017: Situation Analysis Report. internal document. Lusaka Sanitation Programme. Lusaka

Muchelengánga, C. 2011: Groundwater Pollution under the very Nose of the Law: Case of Shalloow Wells in George Township Lusaka. Workshop Proceedings (Workshop: Groundwater- Resource Needing Protection Workshop. 8-10 February 2011). Federal Institute for Geosciences and Natural Resources

NWASCO 2018: Annual report. National Water and Sanitation Council. Lusaka

Sasaki, S, H Suzuki, Y Fujino, Y Kimura and M Cheelo 2009: Impact of Drainage Networks on Cholera Outbreaks in Lusaka, Zambia. American Journal of Public Health, 99(11): 1982-1987

Sinyange N, Brunkard JM, Kapata N, et al. Cholera Epidemic – Lusaka, Zambia, October 2017 to May 2018. MMWR Morb. Mortal Wkly Rep. 2018 (67): 556–9. DOI: http://dx.doi.org/10.15585/mmwr.mm6719a5

Wendland, C., Yadav M., Stock, A. and Seager, J. 2017: Gender, Women and Sanitation. In: J.B. Rose and B. Jiménez-Cisneros, (eds) Global Water Pathogen Project. Part 1. The Health Hazards of Excreta: Theory and Control. Michigan State University, E. Lansing, MI, UNESCO.

WSUP 2019a: Systems Reboot. Sanitation sector change in Maputo and Lusaka. Discussion Paper. Lusaka

WSUP 2019b: Running Dry: Tackling the myths about urban water and sanitation. Water & Sanitation for the Urban Poor. Lusaka

Annex: Evaluation matrix

OECD/DAC criterion RELEVANCE (max. 100 points)

Assessment dimensions	**Evaluation questions**	**Evaluation indicators**	**Data collection methods** (e.g. interviews, focus group discussions, documents, project/partner monitoring system, workshop, survey, etc.)	**Data sources** (list of relevant documents, interviews with specific stakeholder categories, specific monitoring data, specific workshop(s), etc.)	**Evidence strength** (moderate, good, strong)
The project concept (1) is in line with the relevant strategic reference frameworks. Max. 30 points	Which strategic reference frameworks exist for the project? (e.g. national strategies incl. national implementation strategy for 2030 Agenda, regional and international strategies, sectoral, cross-sectoral change strategies, if bilateral project especially partner strategies, internal analysis frameworks e.g. safeguards and gender (2))	Is the reference framework properly analysed in the project documents?	document analysis, cross-checking with results from interviews and workshops	GRZ (2015). National Water Supply and Sanitation Capacity Development Strategy (2015–2020). MLGH. Lusaka GRZ (2019). Ministry of Water Development, Sanitation and Environmental Protection: 2018–2021 Strategic Plan. MWDSEP. Lusaka GRZ (2011). Water Supply Investment Master Plan Strategy Report Summary. USACE Europe District/Millennium Challenge Corporation. Lusaka GRZ (2017). Seventh National Development Plan 2017–2021. Volume I. Ministry of National Development Planning. Lusaka GRZ (2007). The National Policy on Environment. Ministry of Tourism, Environment and Natural Resources. Lusaka GRZ (2010). National Water Policy. Ministry of Energy and Water Development. Lusaka NWASCO (2016). Strategic Plan 2016–2020. National Water Supply and Sanitation Council. Lusaka Water Supply and Sanitation Act, No. 28 0f 1997	good
	To what extent is the project concept in line with the relevant strategic reference frameworks?	Can the project team locate the project within the reference framework? Do partners agree that the project contributes to the implementation of the national reference framework	document analysis, cross-checking with results from interviews and workshops	Int_Stakeholder_3 Int_Partner_3, 4	good
	To what extent was the (conflict) context of the project adequately analysed and considered for the project concept (key documents: (Integrated) Peace and Conflict Assessment, Safeguard Conflict and Conflict Sensitivity documents)?	What mechanisms of coordination with other donors etc. are there? How effective are they?	document analysis, results from interviews and workshops		good
	To what extent are the interactions (synergies/trade-offs) of the intervention with other sectors reflected in the project concept – also regarding the sustainability dimensions (ecological, economic and social)?	Can the project team locate the project within the reference framework of German DC? What is the perspective of BMZ on the project and its contribution to the DC programme?	document analysis, results from interviews and workshops	Review of documents of DC programme Int_Stakeholder_1, 2	good
	To what extent is the project concept in line with the development cooperation (DC) programme (If applicable), the BMZ country strategy and BMZ sectoral concepts?	Can the project team locate the project within the reference framework of national SDG achievement? How do see partners and other stakeholders the role of the project in the sector and in relation to the national SDG strategy?	document analysis, results from interviews and workshops	project documents internet research on SDGs	good
	To what extent is the project concept in line with the (national) objectives of the 2030 Agenda? To which Sustainable Development Goals (SDG) is the project supposed to contribute?	How do see partners and other stakeholders the role of the project in the sector?	document analysis, results from interviews and workshops	Int_Partner_6, 7 Int_GIZ_7	good
	To what extent is the project concept subsidiary to partner efforts or efforts of other relevant organisations (subsidiarity and complementarity)?	Have the needs of the target group been analysed and understood by the project? Does the understanding match with the one of the partners?	document analysis, cross-checking with results from interviews and workshops	Int_Stakeholder_4, 6 survey_target group	good
The project concept (1) matches the needs of the target group(s).	To what extent is the chosen project concept geared to the core problems and needs of the target group(s)?	Is there a gender analysis? What is its quality? How did it influence the project concept?	document analysis, cross-checking with results from interviews and workshops	Int_GIZ_3, 6 survey_target group and survey NGO Int_Stakeholder_3, 6	good

Max. 30 points	How are the different perspectives, needs and concerns of women and men represented in the project concept?	Are there examples of how LNOB is put in practice?	document analysis, cross-checking with results from interviews and workshops	Int_GIZ_3, 6 survey_target group and survey NGO Int_Stakeholder_3, 6	good
	How were deescalating factors/ connectors (4) as well as escalating factors/ dividers (5) identified (e.g. see column I and II of the Peace and Conflict Assessment) and considered for the project concept (please list the factors)? (6)	Are there examples of additional participation of the partners or beneficiaries? Have these been enabled by digital solutions?		Int_GIZ_2 Int_Partner_3, 4 Int_Stakeholder_4	good
	To what extent was the project concept designed to reach particularly disadvantaged groups (LNOB principle, as foreseen in the Agenda 2030)? How were identified risks and potentials for human rights and gender aspects included into the project concept?	Was the analysis of the potential for change in the project documents overly optimistic?	document analysis, cross-checking with results from interviews and workshops		good
	To what extent were potential (security) risks for (GIZ) staff, partners, target groups/final beneficiaries identified and considered?	see left	document analysis, cross-checking with results from interviews and workshops	inception mission (see inception report)	good
	To what extent are the intended impacts regarding the target group(s) realistic from today's perspective and the given resources (time, financial, partner capacities)?	Can the project staff describe changes in the framework conditions? Can they explain how the project reacted to those changes?	document analysis, cross-checking with results from interviews and workshops	Int_GIZ_7	good
The project concept (1) is adequately designed to achieve the chosen project objective. Max. 20 points	Assessment of current results model and results hypotheses (theory of change) of actual project logic: - To what extent is the project objective realistic from today's perspective and the given resources (time, financial, partner capacities)? - To what extent are the activities, instruments and outputs adequately designed to achieve the project objective? - To what extent are the underlying results hypotheses of the project plausible? - To what extent is the chosen system boundary (sphere of responsibility) of the project (including partner) clearly defined and plausible? - Are potential influences of other donors/organisations outside of the project's sphere of responsibility adequately considered? - To what extent are the assumptions and risks for the project complete and plausible?	What are examples of digital solutions? What is their use in the partner organisations? Which advantages do they provide compared to non-digital solutions?	document analysis, cross-checking with results from interviews and workshops	see above	good
	To what extent does the strategic orientation of the project address potential changes in its framework conditions?	Have there been exchange between the project and the partners/within the donor community about changing framework conditions?	document analysis, cross-checking with results from interviews and workshops	Int_GIZ_7	good
	How is/was the complexity of the framework conditions and guidelines handled? How is/was any possible overloading dealt with and strategically focused?	Can the project team describe the changes? What is the partner perspective on those changes?	document analysis, cross-checking with results from interviews and workshops	Int_GIZ_1-7	good
The project concept (1) was adapted to changes in line with requirements and readapted where applicable. Max. 20 points	What changes have occurred during project implementation? (e.g. local, national, international, sectoral, including state-of-the-art sectoral know-how)?	How did the project react, e.g. on the delays in devolution of LCC?	document analysis, cross-checking with results from interviews and workshops	Int_GIZ_3, 7	good
	How were the changes dealt with regarding the project concept?	Is the reference framework properly analysed in the project documents?	document analysis, cross-checking with results from interviews and workshops	GRZ (2015). National Water Supply and Sanitation Capacity Development Strategy (2015–2020). MLGH. Lusaka GRZ (2019). Ministry of Water Development, Sanitation and Environmental Protection: 2018–2021 Strategic Plan. MWDSEP. Lusaka GRZ (2011). Water Supply Investment Master Plan Strategy Report Summary. USACE Europe District/ Millennium Challenge Corporation. Lusaka. GRZ (2017). Seventh National Development Plan 2017–2021. Volume I. Ministry of National Development Planning. Lusaka GRZ (2007). The National Policy on Environment. Ministry of Tourism, Environment and Natural Resources. Lusaka GRZ (2010). National Water Policy. Ministry of Energy and	good

					Water Development. Lusaka NWASCO (2016). Strategic Plan 2016–2020. National Water Supply and Sanitation Council. Lusaka Water Supply and Sanitation Act, No. 28 0f 1997	

(1) The ‘project concept’ encompasses project objective and theory of change (see 3) with activities, outputs, instruments and results hypotheses as well as the implementation strategy (e.g. methodological approach, CD strategy, results hypotheses)

(2) In the GIZ Safeguards and Gender system risks are assessed before project start regarding following aspects: gender, conflict, human rights, environment and climate. For the topics gender and human rights not only risks but also potentials are assessed. Before introducing the new safeguard system in 2016 GIZ used to examine these aspects in separate checks.

(3) Theory of Change = GIZ results model = graphic illustration and narrative results hypotheses

(4) Deescalating factors/ connectors: e.g. peace-promoting actors and institutions, structural changes, peace-promoting norms and behaviour. For more details on ‘connectors’ see: GIZ (2007): ‘Peace and Conflict Assessment (PCA). Ein methodischer Rahmen zur konflikt- und friedensbezogenen Ausrichtung von EZ-Maßnahmen’, p.55/135.
(5) Escalating factors/ dividers: e.g. destructive institutions, structures, norms and behaviour. For more details on ‘dividers’ see: GIZ (2007): ‘Peace and Conflict Assessment (PCA). Ein methodischer Rahmen zur konflikt- und friedensbezogenen Ausrichtung von EZ-Maßnahmen’, p.135.
(6) All projects in fragile contexts, projects with FS1 or FS2 markers and all transitional aid projects have to weaken escalating factors/dividers and have to mitigate risks in the context of conflict, fragility and violence. Projects with FS1 or FS2 markers should also consider how to strengthen deescalating factors/ connectors and how to address peace needs in its project objective/sub-objective?

Italic questions: These questions are only relevant for projects in fragile contexts and transitional aid projects. Please delete the questions if they do not apply.

OECD/DAC criterion Effectiveness (max. 100 points)

Assessment dimensions	Evaluation questions	Evaluation indicators	Data collection methods (e.g. interviews, focus group discussions, documents, project/partner monitoring system, workshop, survey, etc.)	Data sources (list of relevant documents, interviews with specific stakeholder categories, specific monitoring data, specific workshop(s), etc.)	Evidence strength (moderate, good, strong)
The project achieved the objective (outcome) on time in accordance with the project objective indicators.(1)	To what extent has the agreed project obective (outcome) been achieved (or will be achieved until end of project), measured against the objective indicators? Are additional indicators needed to reflect the project objective adequately?	Outcome indicators 1-5, some have been reformulated; output indicators will be used to verify the logic of achievement of outcome indicators	document analysis, results from interviews and workshops	project monitoring, final report, progress reports Int_Partner_3, 4, 10 Int_Stakeholder_6 Int_GIZ_1-6	good
Max. 40 points	To what extent is it foreseeable that unachieved aspects of the project objective will be achieved during the current project term?	project has already come to an end	document analysis, results from interviews and workshops document analysis, results from interviews and workshops	project monitoring, final report, progress reports Int_Partner_3, 4, 10 Int_Stakeholder_6 Int_GIZ_1-6	Good
The activities and outputs of the project contributed substantially to the project objective achievement (outcome).(1)	To what extent have the agreed project outputs been achieved (or will be achieved until the end of the project), measured against the output indicators? Are additional indicators needed to reflect the outputs adequately?	project has already come to an end	document analysis, results from interviews and workshops	project monitoring, final report, progress reports Int_Partner_3, 4, 10 Int_Stakeholder_6 Int_GIZ_1-6	good
Max. 30 points	good How does the project contribute via activities, instruments and outputs to the achievement of the project objective (outcome)? (contribution analysis approach)	3 strains of results will be analysed in detail to analyse the project's contributions; alternative hypothesis have been developed	document analysis, results from interviews and workshops	all interviews with partners and stakeholders	Good
	Implementation strategy: Which factors in the implementation contribute successfully to or hinder the achievement of the project objective? (e.g. external factors, managerial set-up of project and company, cooperation management)	Have those factors materialised? Are there any other factors?	document analysis, results from interviews and workshops	all interviews with GIZ and stakeholders	Good
	What other/alternative factors contributed to the fact that the project objective was achieved or not achieved?	List of factors	document analysis, results from interviews and workshops	interviews with stakeholders	Good
	To what extent has the utilisation of digital solutions contributed to the achievement of objectives?	large extent – medium extent – small or no extent	document analysis, results from interviews and workshops	Int_Partner 1, 3, 4, 5, 6 Int_GIZ_1	Good
	What would have happened without the project?	Can partners and beneficiaries convincingly related improvements to activities of the project?	document analysis, results from interviews and workshops	all interviews with partners and stakeholders	Good
No project-related (unintended) negative results have occurred – and if any negative results occurred the project responded adequately.	Which (unintended) negative or (formally not agreed) positive results does the project produce at output and outcome level and why?	What additional results are reported by the project/the partners?	document analysis, results from interviews and workshops	all interviews with GIZ and partners	Good
	How were risks and assumptions (see also GIZ Safeguards and Gender system) as well as (unintended) negative results at the output and outcome level assessed in the monitoring system (e.g. 'Kompass')? Were risks already known during the concept phase?	Are those factors included in teh monitoring system? Are there any other systems for monitoring those factors?	document analysis, results from interviews and workshops	Int_GIZ_1, 7	Good
The occurrence of additional (not formally agreed) positive results has been monitored and additional opportunities for further positive results have been seized.	What measures have been taken by the project to counteract the risks and (if applicable) occurred negative results? To what extent were these measures adequate?	Can the project team describe the strategic process to counteract the risks and possible negative results? Were the partners part of those discussions?	document analysis, results from interviews and workshops	Int_GIZ_1, 7	Good
Max. 30 points	To what extent were potential (not formally agreed) positive results at outcome level monitored and exploited?	large extent – medium extent – small or no extent	document analysis, results from interviews and workshops	Int_GIZ_1, 2, 3, 4, 7	Good

(1) The first and the second evaluation dimensions are interrelated: if the contribution of the project to the objective achievement is low (2nd evaluation dimension) this must be considered for the assessment of the first evaluation dimension also.
(2) Deescalating factors/ connectors: e.g. peace-promoting actors and institutions, structural changes, peace-promoting norms and behaviour. For more details on 'connectors' see: GIZ (2007): 'Peace and Conflict Assessment (PCA). Ein methodischer Rahmen zur konflikt- und friedensbezogenen Ausrichtung von EZ-Maßnahmen', p.55/135.
(3) Escalating factors/ dividers: e.g. destructive institutions, structures, norms and behaviour. For more details on 'dividers' see: GIZ (2007): 'Peace and Conflict Assessment (PCA). Ein methodischer Rahmen zur konflikt- und friedensbezogenen Ausrichtung von EZ-Maßnahmen', p.135.
(4) All projects in fragile contexts, projects with FS1 or FS2 markers and all transitional aid projects have to weaken escalating factors/dividers and have to mitigate risks in the context of conflict, fragility and violence. Projects with FS1 or FS2 markers should also consider how to strengthen deescalating factors/ connectors and how to address peace needs in its project objective/sub-objective?
(5) Risks in the context of conflict, fragility and violence: e.g. contextual (e.g. political instability, violence, economic crises, migration/refugee flows, drought, etc.), institutional (e.g. weak partner capacity, fiduciary risks, corruption, staff turnover, investment risks) and personnel (murder, robbery, kidnapping, medical care, etc.). For more details see: GIZ (2014): Context- and conflict-sensitive results-based monitoring system. Supplement to: The 'Guidelines on designing and using a results-based monitoring system.', pp.27–8.

OECD/DAC criterion Impact (max. 100 points)

Assessment dimensions	**Evaluation questions**	**Evaluation indicators**	**Data collection methods** (e.g. interviews, focus group discussions, documents, project/partner monitoring system, workshop, survey, etc.)	**Data sources** (list of relevant documents, interviews with specific stakeholder categories, specific monitoring data, specific workshop(s), etc.)	**Evidence strength** (moderate, good, strong)
The intended overarching development results have occurred or are foreseen (plausible reasons). (1) Max. 40 points	To which overarching development results is the project supposed to contribute (cf. module and programme proposal with indicators/ identifiers if applicable, national strategy for implementing 2030 Agenda, SDGs)? Which of these intended results at the impact level can be observed or are plausible to be achieved in the future?	Indicator of DC programme, results framework of LSP	document analysis, results from interviews and workshops	progress report DC programme Int_Partner_5, 6	good
	Indirect target group and 'Leave No One Behind' (LNOB): Is there evidence of results achieved at indirect target group level/specific groups of population? To what extent have targeted marginalised groups (such as women, children, young people, elderly, people with disabilities, indigenous peoples, refugees, IDPs and migrants, people living with HIV/AIDS and the poorest of the poor) been reached?	Are there convincing examples of LNOB? Can the partner relate those impacts with the project's activities?	document analysis, results from interviews and workshops	Int_Stakeholder_3, 4, 6 survey NGO	good
The project objective (outcome) of the project contributed to the occurred or foreseen overarching development results (impact) (1) Max. 30 points	To what extent is it plausible that the results of the project on outcome level (project objective) contributed or will contribute to the overarching results? (contribution analysis approach)	large extent – medium extent – small or no extent	document analysis, results from interviews and workshops	all interviews with partners and stakeholders	Good
	What are the alternative explanations/factors for the overarching development results observed? (e.g. the activities of other stakeholders, other policies)	e.g. public pressure through cholera outbreak etc.	document analysis, results from interviews and workshops	all interviews with partners and stakeholders	Good
	To what extent is the impact of the project positively or negatively influenced by framework conditions, other policy areas, strategies or interests (German ministries, bilateral and multilateral development partners)? How did the project react to this?	large extent – medium extent – small or no extent	document analysis, results from interviews and workshops	all interviews with partners and stakeholders	Good
	What would have happened without the project?	Can the partners and beneficiaries convincingly connect improvements with activities of th eproject?	document analysis, results from interviews and workshops	all interviews with partners and stakeholders	Good
	To what extent has the project made an active and systematic contribution to widespread impact and were scaling-up mechanisms applied (2)? If not, could there have been potential? Why was the potential not exploited? To what extent has the project made an innovative contribution (or a contribution to innovation)? Which innovations have been tested in different regional contexts? How are the innovations evaluated by which partners?	large extent – medium extent – small or no extent	document analysis, results from interviews and workshops	Int_GIZ_7 Int_Stakeholder_3-6	Good
No project-related (unintended) negative results at impact level have occurred – and if any negative results occurred the project responded adequately. The occurrence of additional (not formally agreed) positive results at impact level has been monitored and additional opportunities for further positive results have been seized. Max. 30 points	Which (unintended) negative or (formally not agreed) positive results at impact level can be observed? Are there negative trade-offs between the ecological, economic and social dimensions (according to the three dimensions of sustainability in the Agenda 2030)? Were positive synergies between the three dimensions exploited?	contribution analysis of three strains of results at impact level	document analysis, results from interviews and workshops	all interviews with partners and stakeholders	Good
	To what extent were risks of (unintended) results at the impact level assessed in the monitoring system (e.g. 'Kompass')? Were risks already known during the planning phase?	Have risks been properly analysed in the project documents? Have their development been monitored? workshops discussion?	document analysis, results from interviews and workshops	Int_GIZ_7	good
	What measures have been taken by the project to avoid and counteract the risks/negative results/trade-offs (3)?	Can the project team describe a strategic discussion about how to conteract these risks? Have the partners been part of this	document analysis, results from interviews and workshops	Int_GIZ_1, 7	good

	To what extent have the framework conditions played a role in regard to the negative results? How did the project react to this?	large extent – medium extent – small or no extent	document analysis, results from interviews and workshops		good
	To what extent were potential (not formally agreed) positive results and potential synergies between the ecological, economic and social dimensions monitored and exploited?	large extent – medium extent – small or no extent	document analysis, results from interviews and workshops		good

(1) The first and the second evaluation dimensions are interrelated: if the contribution of the project outcome to the impact is low or not plausible (2nd evaluation dimension) this must be considered for the assessment of the first evaluation dimension also.
(2) Broad impact (in German 'Breitenwirksamkeit') is defined by four dimensions: relevance, quality, quantity, sustainability. Scaling-up approaches can be categorised as vertical, horizontal, functional or combined. See GIZ (2014) 'Corporate strategy evaluation on scaling-up and broad impact: The path: scaling-up, the goal: broad impact' (https://www.giz.de/de/downloads/giz2015-en-scaling-up.pdf)
(3) Risks, negative results and trade-offs are separate aspects and are all to be considered.

OECD/DAC criterion Efficiency (max. 100 points)

Assessment dimensions	**Evaluation questions**	**Evaluation indicators** **(pilot phase for indicators – only available in German so far)**	**Data collection methods** (e.g. interviews, focus group discussions, documents, project/partner monitoring system, workshop, survey, etc.)	**Data sources** (list of relevant documents, interviews with specific stakeholder categories, specific monitoring data, specific workshop(s), etc.)	**Evidence strength** (moderate, good, strong)
The project's use of resources is appropriate with regard to the outputs achieved. [Production efficiency: Resources/outputs] Max. 70 points	To what extent are there deviations between the identified costs and the projected costs? What are the reasons for the identified deviation(s)?	Das Vorhaben steuert seine Ressourcen gemäß des geplanten Kostenplans (Kostenzeilen). Nur bei nachvollziehbarer Begründung erfolgen Abweichungen vom Kostenplan.			
	Focus: To what extent could the outputs have been maximised with the same amount of resources and under the same framework conditions and with the same or better quality (maximum principle)? (methodological minimum standard: Follow-the-money approach)	Das Vorhaben reflektiert, ob die vereinbarten Wirkungen mit den vorhandenen Mitteln erreicht werden können.			
		Das Vorhaben steuert seine Ressourcen gemäß der geplanten Kosten für die vereinbarten Leistungen (Outputs). Nur bei nachvollziehbarer Begründung erfolgen Abweichungen von den Kosten. Die übergreifenden Kosten des Vorhabens stehen in einem angemessen Verhältnis zu den Kosten für die Outputs. Die durch ZAS Aufschriebe erbrachten Leistungen haben einen nachvollziehbaren Mehrwert für die Erreichung der Outputs des Vorhabens.			
		Die übergreifenden Kosten des Vorhabens stehen in einem angemessen Verhältnis zu den Kosten für die Outputs.			
		Die durch ZAS Aufschriebe erbrachten Leistungen haben einen nachvollziehbaren Mehrwert für die Erreichung der Outputs des Vorhabens.			
	Focus: To what extent could outputs have been maximised by reallocating resources between the outputs? (methodological minimum standard: Follow-the-money approach)	Das Vorhaben steuert seine Ressourcen, um andere Outputs schneller/ besser zu erreichen, wenn Outputs erreicht wurden bzw. diese nicht erreicht werden können (Schlussevaluierung).			
	Were the output/resource ratio and alternatives carefully considered during the design and implementation process – and if so, how? (methodological minimum standard: Follow-the-money approach)	Das im Modulvorschlag vorgeschlagene Instrumentenkonzept konnte hinsichtlich der veranschlagten Kosten in Bezug auf die angestrebten Outputs des Vorhabens gut realisiert werden.			
		Die im Modulvorschlag vorgeschlagene Partnerkonstellation und die damit verbundenen Interventionsebenen konnte hinsichtlich der veranschlagten Kosten in Bezug auf die angestrebten Outputs des Vorhaben gut realisiert werden.			
		Der im Modulvorschlag vorgeschlagene thematische Zuschnitte für das Vorhaben konnte hinsichtlich der veranschlagten Kosten in Bezug auf die angestrebten Outputs des Vorhabens gut realisiert werden.			
		Die im Modulvorschlag beschriebenen Risiken sind hinsichtlich der veranschlagten Kosten in Bezug auf die angestrebten Outputs des Vorhabens gut nachvollziehbar.			
		Die im Modulvorschlag beschriebene Reichweite des Vorhabens (z.B. Regionen) konnte hinsichtlich der veranschlagten Kosten in Bezug auf die angestrebten Outputs des Vorhabens voll realisiert werden.			
		Der im Modulvorschlag beschriebene Ansatz des Vorhabens hinsichtlich der zu erbringenden Outputs entspricht unter den gegebenen Rahmenbedingungen dem state-of-the-art.			
	For interim evaluations based on the analysis to date: To what extent are further planned expenditures meaningfully distributed among the targeted outputs?	n.a.			

The project's use of resources is appropriate with regard to achieving the projects objective (outcome). [Allocation efficiency: Resources/outcome] Max. 30 points	To what extent could the outcome (project objective) have been maximised with the same amount of resources and the same or better quality (maximum principle)?	Das Vorhaben orientiert sich an internen oder externen Vergleichsgrößen, um seine Wirkungen kosteneffizient zu erreichen.			
	Were the outcome-resources ratio and alternatives carefully considered during the conception and implementation process – and if so, how? Were any scaling-up options considered?	Das Vorhaben steuert seine Ressourcen zwischen den Outputs, so dass die maximalen Wirkungen im Sinne des Modulziels erreicht werden. (Schlussevaluierung)			
		Das im Modulvorschlag vorgeschlagene Instrumentenkonzept konnte hinsichtlich der veranschlagten Kosten in Bezug auf das angestrebte Modulziel des Vorhabens gut realisiert werden.			
		Die im Modulvorschlag vorgeschlagene Partnerkonstellation und die damit verbundenen Interventionsebenen konnte hinsichtlich der veranschlagten Kosten in Bezug auf das angestrebte Modulziel des Vorhaben gut realisiert werden.			
		Der im Modulvorschlag vorgeschlagene thematische Zuschnitte für das Vorhaben konnte hinsichtlich der veranschlagten Kosten in Bezug auf das angestrebte Modulziel des Vorhabens gut realisiert werden.			
		Die im Modulvorschlag beschriebenen Risiken sind hinsichtlich der veranschlagten Kosten in Bezug auf das angestrebte Modulziel des Vorhabens gut nachvollziehbar.			
		Die im Modulvorschlag beschriebene Reichweite des Vorhabens (z.B. Regionen) konnte hinsichtlich der veranschlagten Kosten in Bezug auf das angestrebte Modulziel des Vorhabens voll realisiert werden.			
		Der im Modulvorschlag beschriebene Ansatz des Vorhabens hinsichtlich des zu erbringenden Modulziels entspricht unter den gegebenen Rahmenbedingungen dem state-of-the-art.			
	To what extent were more results achieved through cooperation / synergies and/or leverage of more resources, with the help of other ministries, bilateral and multilateral donors and organisations (e.g. co-financing) and/or other GIZ projects? If so, was the relationship between costs and results appropriate or did it even improve efficiency?	Das Vorhaben unternimmt die notwendigen Schritte, um Synergien mit Interventionen anderer Geber auf der Wirkungsebene vollständig zu realisieren.			
		Wirtschaftlichkeitsverluste durch unzureichende Koordinierung und Komplementarität zu Interventionen anderer Geber werden ausreichend vermieden.			
		Das Vorhaben unternimmt die notwendigen Schritte, um Synergien innerhalb der deutschen EZ vollständig zu realisieren.			
		Wirtschaftlichkeitsverluste durch unzureichende Koordinierung und Komplementarität innerhalb der deutschen EZ werden ausreichend vermieden.			
		Die Kombifinanzierung hat zu einer signifikanten Ausweitung der Wirkungen geführt bzw. diese ist zu erwarten.			
		Durch die Kombifinanzierung sind die übergreifenden Kosten im Verhältnis zu den Gesamtkosten nicht überproportional gestiegen.			
		Die Partnerbeiträge stehen in einem angemessenen Verhältnis zu den Kosten für die Outputs des Vorhabens.			
	To what extent has the utilisation of digital solutions contributed to gains in efficiency? To what extent have digital solutions offered opportunities for upscaling?	Examples of digital solutions. Can the project team describe how they contributed to improved efficiency or upscaling?			

OECD/DAC Criterion Sustainability (max. 100 points)

Assessment dimensions	Evaluation questions	Evaluation indicators	Data collection methods (e.g. interviews, focus group discussions, documents, project/partner monitoring system, workshop, survey, etc.)	Data sources (list of relevant documents, interviews with specific stakeholder categories, specific monitoring data, specific workshop(s), etc.)	Evidence strength (moderate, good, strong)
Prerequisite for ensuring the long-term success of the project: Results are anchored in (partner) structures. Max. 50 points	What has the project done to ensure that the results can be sustained in the medium to long term by the partners themselves?	Examples for activities; What is the partners' perspective on sustainability?	document analysis, results from interviews and workshops	all interviews with GIZ Int_Stakeholder_3-6	Good
	In what way are advisory contents, approaches, methods or concepts of the project anchored/institutionalised in the (partner) system?	Description of partners of achorage/institutuionalisation	document analysis, results from interviews and workshops	all interviews with GIZ and partners	Good
	To what extent are the results continuously used and/or further developed by the target group and/or implementing partners?	proof in the field (e.g. demonstration of improved procedures of data collection by LCC)	document analysis, results from interviews and workshops	all interviews with GIZ and partners	Good
	To what extent are resources and capacities at the individual, organisational or societal/political level in the partner country available (long term) to ensure the continuation of the results achieved?	large extent – medium extent – small or no extent	document analysis, results from interviews and workshops	Int_Stakeholders_3-6 Int_Partners_3-6	Good
	If no follow-on measure exists: What is the project's exit strategy? How are lessons learnt for partners and GIZ prepared and documented?	How are the key topics of the project integrated in teh RWS-project?	document analysis, results from interviews and workshops	Int_GIZ_2-4; 7	Good
Forecast of durability: Results of the project are permanent, stable and long-term resilient. Max. 50 points	To what extent are the results of the project durable, stable and resilient in the long term under the given conditions?	large extent – medium extent – small or no extent	document analysis, results from interviews and workshops	Int_Stakeholders_3-6 Int_Partners_3-6	Good
	What risks and potentials are emerging for the durability of the results and how likely are these factors to occur? What has the project done to reduce these risks?	Has the project staff a clear understanding of those risks and potentials? Does it match with the perspective of the partners?	document analysis, results from interviews and workshops	Int_Stakeholders_3-6 Int_Partners_3-6	Good

(1) Escalating factors/dividers: e.g. destructive institutions, structures, norms and behaviour. For more details on 'dividers' see: GIZ (2007): 'Peace and Conflict Assessment (PCA). Ein methodischer Rahmen zur konflikt- und friedensbezogenen Ausrichtung von EZ-Maßnahmen', p.135.
(2) Deescalating factors/ connectors: e.g. peace-promoting actors and institutions, structural changes, peace-promoting norms and behaviour. For more details on 'connectors' see: GIZ (2007): 'Peace and Conflict Assessment (PCA). Ein methodischer Rahmen zur konflikt- und friedensbezogenen Ausrichtung von EZ-Maßnahmen', p.55/135.
(3) All projects in fragile contexts, projects with FS1 or FS2 markers and all transitional aid projects have to weaken escalating factors/dividers and have to mitigate risks in the context of conflict, fragility and violence. Projects with FS1 or FS2 markers should also consider how to strengthen deescalating factors/ connectors and how to address peace needs in its project objective/sub-objective?

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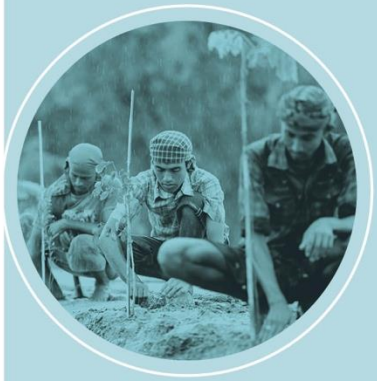

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