

Ex-post evaluation

Urban water supply secondary towns II, Democratic Republic of Congo

Title	Municipal water supply secondary towns II (investment (Inv.) and accompanying measure (AM))		
Sector and CRS code	1402000 Water supply, sanitation and wastewater management		
Project number	2007 65 990 (Inv.), 2004 70 690 (AM)		
Commissioned by	BMZ		
Recipient/Programme executing agency	DEMOCRATIC REPUBLIC OF CONGO (DRC) / Regie de Distribution d'Eau de la République du Congo S.A.(REGIDESO)		
Project volume/Financing instrument	EUR 15.5 million / grant (inv.), EUR 2.5 million / grant (AM)		
Project duration	12/2008 - 02/2020		
Year of report	2024	Year of random sample	2024

Objectives and project outline

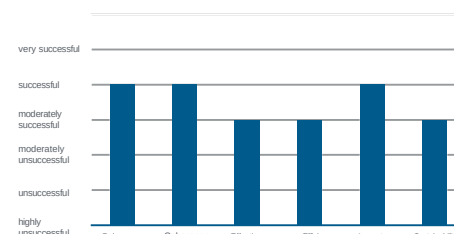
The programme PROSECO Phase II aimed at the technical and administrative rehabilitation of the existing water systems in selected secondary towns of REGIDESO in the province of South-Ubangi. The investment measures and executing agency support for the operation of the infrastructure via the accompanying measure were intended to improve access to safe water and thus reduce the water-induced health risks of the target group. The rehabilitation and expansion work was carried out in the secondary towns of Bumba, Zongo and Gemena.

Key findings

Despite obvious deficits in terms of sustainability, the programme is rated as "moderately successful" for the following reasons:

- The measure represents an appropriate approach without alternative to solve the core problem and takes into account the needs of the entire population, while at the same time being highly relevant to the female population.
- The programme has a high health impact. The health facilities in the secondary towns, which benefit from the repaired infrastructure, have confirmed that the risk of water-related infections has decreased significantly over the past 5 years.
- The cost-covering tariffs set by REGIDESO are too high for the low-income population - particularly in Zongo - which means that specific consumption is low. There are no structural central government subsidies, which is why the secondary towns have to cover the high energy and personnel costs themselves. Administrations and public entities do not pay for the water purchased, which jeopardises sustainability.
- There is a high number of private water vendors in REGIDESO's supply area that offer water without disinfection and compete with REGIDESO's high-quality water.
- The sustainability of the measures is jeopardised (chlorination only partially functional, hardly any financial reserves available, lack of spare parts, systems without redundancies) and the administrative and technical water losses are high.

Overall rating:
moderately successful



Conclusions

- The programme has a high health and gender impact.
- For subsequent phases, energy supply and transport routes/logistics should be given greater consideration when selecting locations.
- The strong population growth should also be taken into account in future investment planning.
- The need for subsidies must be prioritised in the political dialogue in order to make water tariffs in secondary towns pro-poor and to improve the sustainability of investments.

Ex-post evaluation - assessment according to OECD DAC criteria

Overview of the rating per criterion:

Relevance	2
Coherence	2
Effectiveness	3
Efficiency	3
Overarching developmental impact	2
Sustainability	3
Overall rating:	3

Abbreviations:

AK	Project completion report
AM	Accompanying measure
BMZ	Federal Ministry for Economic Cooperation and Development
CCSWEB	Accounting system introduced by the AM consultant in the secondary towns
DAC	Development Assistance Committee
DIGCS	Direction Général des Centres Secondaires
DRC	Democratic Republic of the Congo
EUR	Euro
FC	Franc Congolais, Congolese Franc
FCFA	CFA franc
FC	Financial cooperation
FC E	FC Evaluation
GDP	Gross Domestic Product
GIZ	German Agency for International Cooperation
HDI	Human Development Index
MICS	Multiple Indicator Cluster Survey
PP	Project appraisal
PPB	Project appraisal report
PROSECO	Programme Sectoriel de l'eau
PV	Project proposal
REGIDESO	Régie de Distribution d'Eau, project executing agency
SDG	Sustainable Development Goals
SNEL	Société Nationale d'Electricité
TC	Technical Cooperation
UNICEF	United Nations Children's Fund
USD	US Dollar

General conditions and classification of the project

The project "Urban Water Supply Secondary Towns II" is part of the DC programme Water Sector Programme (Programme Sectoriel de l'Eau (PROSECO)) and is the second phase of a total of eight phases of investment measures in secondary towns of the project executing agency, REGIDESO, some of which are still ongoing. The various investment phases as part of an open programme were successively supported by four AM. All phases contribute to the current DC programme objective "the poor (marginal) urban population uses sustainable and affordable water and (basic) sanitation in compliance with health-related hygiene standards"⁽¹⁾. The projects are implemented in a fragile context and under difficult logistical conditions, which have been exacerbated in recent years by rising energy costs and world market prices.

Brief description of the project

The PROSECO project, Phase II, follows on from Phase I as an open programme and aims to carry out technical and administrative repairs to the existing water systems and, in some cases, to expand them in selected secondary towns of REGIDESO in the province of Sud-Ubangi in the north-west of the DRC. The investment measures and executing agency support for the operation of the infrastructure via the complementary measure are intended to improve access to safe drinking water and thus reduce the water-induced health risks of the target group. In the course of implementation, the original total of five project locations was reduced to three project locations, which is why the final target group was the population of the REGIDESO supply area in the secondary towns of Gemena, Zongo and Bumba with an estimated 200,000 people².

In Phase II, generally simple systems were implemented in the above-mentioned secondary towns, consisting of wells with well pumps, delivery pipes, tanks and distribution networks. The complementary measure supplemented the investments with measures to strengthen the water supply with the aim of achieving economically viable and well-functioning operation and promoting the hygienic use of drinking water and demand through awareness-raising campaigns.

Breakdown of total costs

This Phase II was subsidised with EUR 15.0 million for the investment measure and 2.5 million in grant funding was approved for the AM. The budget overrun for the investment measures was financed from subsequent phase III.

In EUR million	Inv. (plan)	Inv. (actual)	AM (plan)	AM (actual)
Total costs	15,54	16,3	2,6	2,4
Own contribution	0,04	0	0,1	0
External financing	15,5	16,3	2,5	2,4
<i>of which budget funds (BMZ)</i>	<i>15,5³</i>	<i>16,3⁴</i>	<i>2,5</i>	<i>2,4</i>

¹ The DC programme objective was adjusted in 2016 (old programme objective: "Contribution to improving the health situation of the target group"). The old programme objective is used for this EPE.

² During the project appraisal, the target group was estimated at around 300,000 people. However, due to the elimination of two project locations, the target group was reduced during implementation. Based on the reports of the implementation consultant, it can be deduced that the target group in Zongo comprised 51,290 people, in Gemena 92,571 and in Bumba 54,190 people (Rapport d'évaluation environnementale et sociale, Igip Gauff, September 2011).

³ EUR 0.5 million was financed from the Urban Water Supply Secondary Towns III programme (BMZ no. 2012 65 396).

⁴ Includes funds from phase III totalling EUR 1.3 million

Map of the project country incl. project areas

Figure 1 - Map of the South-Ubangi project region with the three project locations

Source: AK



Rating according to OECD DAC criteria

Relevance

1. *Alignment with policies and priorities*

The programme was implemented in one of the poorest regions of the DRC and therefore has a very high relevance to poverty due to the selection of the project region and the condition of the drinking water infrastructure in the secondary towns of Gemena, Zongo and Bumba at the start of the project. According to the UNICEF MICS (Multiple Indicator Cluster Survey) household surveys, the child poverty rate in the South Ubangi region (Gemena and Zongo, see Fig. 1) was almost 79.7 % in 2018, 2.3 times higher than in the capital Kinshasa⁵. The DRC's Human Development Index (HDI) in 2024 was 0.481, while the HDI for South-Ubangi was 0.456. The DRC's most recent National Poverty Strategy for the period 2011-2015 is committed to the SDGs and aims to increase the population's water supply rate in rural areas from 20 % in 2010 to 32 % in 2016⁶. A separate national water strategy has not yet been adopted.

The objectives of the programme are aligned with global, regional and country-specific policies and priorities, in particular those of the stakeholders and affected (development policy) partners and the BMZ. The project aims to improve the water supply for the population in the project locations (secondary towns). The programme thus contributes to the achievement of Millennium Development Goal No. 10 "Sub-goal: Halve the proportion of people without access to drinking water and basic sanitation". The project also contributes to the achievement of Sustainable Development Goal (SDG) No. 6 "Ensure access to water and sanitation for all" and Goal No. 3 "Good health and well-being".

At the time of the project appraisal, the programme was considered to be relevant to development policy from both a Congolese and a German perspective and is in line with the BMZ's "Water and sanitation" sector concept at the time, which, among other things, sets the overarching theme of "water for people" as its goal and sees the supply of drinking water and basic sanitation as an important prerequisite for a dignified life. From today's perspective, the project also is in line with the strategic orientation of the BMZ and the 2030 Agenda. BMZ classifies DRC as a "nexus and peace partner" and works, among other things, in the core topic "Protecting our natural livelihoods" / field of action "Water". The project is the second of a total of eight phases that the BMZ has committed to by supporting secondary towns in the area of water and basic sanitation.

The project fits in well with the political and institutional framework of the DRC. In terms of organisational responsibility and technical expertise, the executing agency REGIDESO is the natural project executing agency for the designed measures, with de facto no alternative.

2. *Alignment with the needs and capacities of the beneficiaries and stakeholders*

Both today and at the time of the project appraisal, the availability of hygienically safe water in the DRC is the decisive prerequisite for the socio-economic development of entire regions. With an extremely low water supply rate of 22% at the time of the project appraisal and a low level of hygiene awareness among the population, combined with a high incidence of water-borne diseases, the initial situation in the DRC was precarious. Women and girls suffered particularly from the poor supply and hygiene situation, as they spend a lot of time fetching water and can hardly devote themselves to other (economic) activities during this time. Shorter distances to the water sources improve the security situation, as women and girls are particularly affected by assaults when fetching water. Against this backdrop, the selected measures are basically the appropriate means of achieving the goal of improving the supply of clean water to the population in the programme locations/secondary towns.

The impacts of the individual measures were therefore indirectly geared to the developmental needs and capacities of the target group and were appropriately taken into account by the project measures designed.

⁵ Source: <https://www.unicef.org/drcongo/media/6846/file/COD-2021-NMODA-SUD-UBANGI.pdf>

⁶ Source: [Programme-Gouvernement-Matata.pdf \(radiookapi.net\)](#)

Essentially, the measures are aimed at improving the water supply in the area of the executing agency REGIDESO. The population in the programme locations benefits from a safe and more continuous water supply, which is also achieved through improved operation of the systems by REGIDESO. From the perspective of the evaluation, however, the high production cost of the water is problematic due to the high energy costs of the programme towns that are not connected to the electricity grid, which weakens the relevance to poverty. In Gemena, the costs per cubic metre of water range between USD 1.10 and USD 2.15, while the costs in Zongo are as high as USD 3.50. In comparison, the cost of a cubic metre of water in the capital Kinshasa is currently only USD 0.87. This high discrepancy could have been minimised by choosing project locations that remain poor and are connected to the SNEL (Société Nationale d'Electricité) power grid. Population growth in the programme towns has also developed disproportionately since the project appraisal, which means that a large part of the population in the secondary towns cannot benefit from the measures, which were only designed for a lower population density and expansion in the secondary towns. This could not be corrected retrospectively due to the limited availability of funds.

Discrimination against parts of the target group with regard to access to the project capacities within the locations is implausible, as the entire population in the REGIDESO supply area is connected to the pipeline network. At most, discrimination in the selection of sites would be conceivable. However, there are no corresponding indications that the choice of location might have led to discrimination against ethnic minorities (i.e. refugees).

3. Appropriateness of design

The inadequate supply of the population with safe water and adequate sanitation is a major obstacle to social and economic development in the DRC. The project was intended to improve the level of supply in a targeted manner and, as an open programme, followed on from the "Water Supply to Secondary Cities" project, which has been running since 2007.

In general, simple systems were generally implemented, consisting of wells or wells with well pumps or pumping stations, delivery pipes, tanks and distribution networks. When designing the measure, attention was paid to simplicity and the technical competences of the executing agency for operation and maintenance as well as the local construction companies. The individual measures under the complementary measure also included animation and information campaigns for the population, training for the operating staff, immediate measures to maintain the water supply and start-up financing for the operating phase.

In general, it must be noted that the project locations are far away from the capital. The rehabilitation of the infrastructure requires logistically demanding and comparatively expensive construction measures, also due to a lack of competition for the isolated project locations. However, as the project was also implemented in the very poor province of Sud-Ubangi and was intended to give as many people as possible access to clean water via standpipes, its relevance to poverty is very high.

Since the DRC has a very low level of water and basic sanitation supply and is difficult to access logistically due to the size of the country and the still underdeveloped transport infrastructure, the technical and organisational design of the project can be assessed as appropriate and adapted to the given implementation conditions.

The results chain can be described as follows: by repairing the water supply facilities and connecting peri-urban areas to the central water supply (output), the sustainable supply of hygienically safe water to the target group is improved (outcome). This leads to an improvement in the health situation of the target group (impact). The complementary measure supports the results chain through information campaigns (health aspect) and training for operating staff (improvement of the target group's supply situation). While the programme objective (impact) was adjusted as part of the DC programme design in 2016 to "The target group uses the sustainable and affordable infrastructure that meets the minimum health standards", the evaluation is of the opinion that the original target system was appropriate and plausible and should remain in place, with the programme objective formulation "Contribution to improving the health situation of the target group". The target group is the population of the selected decentralised programme towns (secondary towns) with special consideration to the poorest and female sections of the population.

The target system is fundamentally appropriate. However, from the perspective of the evaluation, it should have taken into account that the production cost of water and the water tariffs based on it play a significant role in the utilisation of the outputs produced and the poverty relevance of the project, as the price is decisive for the affordability of water for the population. This was also considered in later follow-up phases and included in the target system of the development cooperation programme from 2016.

The gender-related indicator "the behaviour of users, especially women, with regard to the transport and storage of water has improved" was removed from the original target system during the development cooperation programme. Due to the high gender relevance of the project, the evaluation mission is of the opinion that a gender indicator is necessary and has used the following indicator reformulation for this purpose: *"The female users in the programme areas spend an average of 3 hours less per day on the procurement/transport of water for domestic purposes, which*

gives them more time for other (economic) activities." This is also accompanied by a reduction in the risk of violent assaults and sexual harassment during water procurement.

The design of the project is considered sufficiently precise. In general, the selected indicators and their values were only partially appropriate, as, for example, the values are difficult to measure (behaviour of women - gender), no baseline studies were carried out and target values were not formulated comprehensively. The subsequent adjustment of individual target values (particularly with regard to indicators 1a and 1b) is not comprehensible from the perspective of the EPE.

In principle, the programme addresses the holistic and sustainable development of the target region, with water supply as a basic prerequisite for any social and ecological development. However, the affordability of water for the target population as well as sufficient financial resources for the executing agency REGIDESO for operation and maintenance are also prerequisites. The financial situation of the executing agency remains wretched even after the end of the project, as there are no subsidies from the capital, but in addition to operating costs, high pensions for former employees have to be financed from the water revenues. In addition, the REGIDESO towns have high outstanding debts from public customers, which have a negative impact on cash flow.

4. Adaptability – response to change

During the implementation of the project, there were significant deviations from the choice of location. It was recognised at an early stage that test drillings were required for the other original locations in addition to Gemena, Bumba and Zongo, namely Aketi and Buta, which could not be carried out due to the transport logistics and the available drilling equipment in the DRC. Aketi and Buta were subsequently withdrawn from the project in 2012. A similar scenario was repeated in 2016 with the alternatively identified sites of Libenge and Gbadolite, which is why ultimately only the logistically easier to develop sites of Gemena, Bumba and Zongo were pursued further.

In addition, it became apparent early in the project that the planned systems were very likely oversized in terms of specific consumption. This was taken up with the executing agency at the time, which spoke out against an adjustment. As part of the evaluation, various donors confirmed that the smallest common planning dimension in rural areas of the DRC was 20 litres/person/day and in line with WHO recommendations. From today's perspective, the decision made for the design of the systems for a specific daily consumption of 20 litres per inhabitant is not considered inappropriate against the background of the higher specific consumptions found on site during the EPE than those surveyed by the AM consultant.

Rating summary

The project has a very high relevance per se in terms of poverty and development policy and is orientated towards the policies and priorities of the DRC and other donors in the sector as well as the needs of the population, with consideration given to the needs of the female population. The project design is appropriate in the difficult rural-central context of Congo. A critical assessment is that the strong population growth and demographic change in the secondary towns as well as the affordability of the water tariff for the population could have been better considered in the conceptual phase of the project. The overall relevance of the programme is therefore rated as good.

Relevance: 2

Coherence

5. Internal coherence

The project is part of a comprehensive German development cooperation commitment to the provision of water and sanitation in rural and semi-urban areas of the DRC. It is also part of the PROSECO development cooperation programme. FC and TC work in a largely complementary manner in the secondary towns at provincial level. GIZ supports the personnel capacities in the decentralised administrative structures and provides selective support to the REGIDESO secondary towns on operational issues, e.g. through training or minor emergency repairs. Thanks to a permanent presence in Gemena, GIZ was able to support the secondary towns beyond the AM, which was particularly necessary during the pandemic. The provincial administrative structure "Régie Provinciale" is currently being actively supported by GIZ in Sud-Ubangi, with the long-term goal of taking over sector regulation at provincial level. Regular consultations are held with GIZ in Kinshasa or Gemena on key implementation issues.

6. External coherence

The measures complement REGIDESO's own efforts at provincial level and build on the infrastructure of REGIDESO's secondary towns, which was rehabilitated and expanded through the project. Due to the desolate financial situation of

REGIDESO at provincial level, also due to a lack of subsidies from Kinshasa, the secondary towns' own contributions are very limited. However, the general administration of the secondary towns made a good and careful impression on the evaluation delegation (reporting channels, reporting and monitoring of operational indicators).

During the evaluation, it became clear that there is strong competition with smaller, privately organised structures that also provided water at unregulated standpipes, i.e. without monitoring the quality of the water sold. This development is particularly strong in Gemena, where REGIDESO has been forced to reduce the tariffs at the standpipes in some neighbourhoods to increase the specific consumption at its standpipes and to try to force the private, unregulated operators out of the market. As a result, it is no longer possible to cover operating costs in these neighbourhoods. Regulation of the sector also appears to be urgently required due to this development.

Although there is formally a water donor group, which is led by UNICEF, there is no very active exchange. However, PROSECO regularly coordinates with other donors, such as the World Bank, which is also active in Sud-Ubangi, but in other secondary towns. The African Development Bank also intervenes in the rural water sector at provincial level in coordination with FC. Furthermore, other donors are hardly active in the Congolese water sector at provincial level. There was therefore no overlap in the secondary towns Gemena, Zongo and Bumba, which are part of Phase II.

The measure is consistent with the norms and standards of German development cooperation and is part of efforts to safeguard the human right to water. The programme is in line with Sustainable Development Goal (SDG) 6 "Clean water and sanitation". There are no discernible inconsistencies between the programme and other relevant international norms and standards.

Rating summary

Coherence is successful due to the regular exchange and coordination on the division of labour between international donors active in the sector, including German TC. The development of unregulated, privately organised alternative water systems, some of which are in competition with the project, should be viewed critically.

Coherence: 2

Effectiveness

7. Achievement of (intended) objectives

The project objective defined at the project appraisal of the open programme (outcome level) was the sustainable supply of the target group with hygienically safe water and adequate basic sanitary facilities. As no sanitation measures were financed under this Phase II, this part of the project objective has been cancelled for the evaluation, meaning that the project objective now reads: "*The objective of the project is the sustainable supply of hygienically safe water to the target group.*"

The achievement of the objective at outcome level can be summarised as follows:

Table Target achievement Outcome:

Indicator	Status at PA	Target value according to PA/EPE	Actual value at PCR (optional)	Actual value at EPE
Indicator 1a: The target group has access to at least 10 litres of water per person per day.	n.a.	10 l / 7 l	n.a.	average of 10 litres per capita /day Indicator fulfilled.
Indicator 1b: The connection rate is at least 80 %	25 %	80 % / 70 %	91 %	Indicator fulfilled.

Indicator 3 (EPE): Users spend an average of 3 hours less per day on the procurement/transport of water for domestic purposes, which gives them more time for other (economic) activities.	New	Fulfilled	n.a.	Indicator fulfilled.
Indicator 4 (PA): The regional associations created cover at least 90 % of their variable costs through revenues	20 %	90 %	97-100 %	Value partially fulfilled, target value was reduced from 100 % to 90 % in 2016.
New: Indicator 5: The quality of the water is hygienically safe at 90 % of the water points	n.a.	90 %	n.a.	Indicator fulfilled.

The module objective indicators largely achieved.

Indicator 1 of the project appraisal (the percentage of the target group in the programme area that has access to at least 10 litres of hygienically safe water per person per day is 80%) was divided into 2 indicators (1a and 1b, see above) as part of the EPE.

Indicator 1a: Consequently, there is no baseline indicator for indicator 1a (specific consumption per capita per day). However, it can be deduced from the reports of the AM that the specific consumption in the year 2013 in the secondary towns was between 4 (Gemena and Zongo) and 8 (Bumba) litres per day and user. The reports of the subsequent AM show that the specific consumption at the time of the EPE was 7 litres per day and user in all secondary towns. However, user surveys at the time of the EPE show a higher specific consumption, which in Gemena and Zongo averages 10 litres, and in economically better-off households even 20 litres per day and user.

Indicator 1b: At the time of the final inspection, the connection rates in Gemena, Zongo and Bumba were estimated at around 70 % for the total population. The definition of the connection area was adjusted over the course of the project. While all residents within a maximum radius of 500 metres around the water points were part of the direct target group at the project appraisal, the definition of the target group and specific consumption in the current 2022 report is defined as 250 metres from the nearest standpipe. The EPE retains the original definition (500 metres). The WHO definition of "access to safe water" is less than 1 km to the nearest safe water source⁷.

Indicator 2 of the PA was deleted as part of the EPE, as no measures in the area of basic sanitation were financed through this programme phase.

The programme was G1 at the time of the PA, but no clear gender-related indicator was formulated. The original indicator 3, "The behaviour of users, especially women, with regard to the transport and storage of water has improved", which is difficult to measure and was formulated without a baseline, was deleted during the EPE and replaced by the following indicator: "Users spend an average of 3 hours less per day on the procurement/transport of water for domestic purposes, which gives them more time for other (economic) activities." Household surveys conducted as part of the EPE in Gemena and Zongo showed that this indicator was achieved. In addition, over 50 % of the standpipe operators in Gemena are female.

The target value for indicator 4 was reduced from 100% to 90% in 2016. The financial data received from the secondary towns as part of the EPE shows that the operating cost coverage of the Gemena, Zongo and Bumba secondary towns was between 84% (Zongo) and 99% (Bumba) in 2021, between 89% (Gemena) and 120% (Zongo) in 2022 and between 99% (Gemena and Bumba) and 110% (Zongo) in 2023. The indicator was therefore achieved. At the same time, the financial data shows that no reserves, e.g. for preventive maintenance or reinvestment, were recognised. This is also due to the fact that state subscribers and authorities do not pay their water bills.

⁷ Source: [Proportion of population with sustainable access to an improved water source \(who.int\)](https://www.who.int/publications/m/item/proportion-of-population-with-sustainable-access-to-an-improved-water-source)

Indicator 5: The tests carried out as part of the evaluation were negative with regard to E.-Coli contamination. The last consulting report on water quality in the secondary towns also came to the same conclusion.⁸

8. Contribution to the achievement of objectives

It applies equally to all tranches of the programme that construction measures in the DRC do represent a special challenge. Due to the post-conflict environment and the high incidence of poverty, the existing structures - both in terms of infrastructure and personnel capacities - are severely underdeveloped. Added to this is the size of the country and its ethnic diversity. The logistical challenges are enormous, for example transporting heavy construction machinery over long distances to a location that is far from any rudimentary road. The inadequate local markets for trained personnel or for construction materials of adequate quality also necessitated numerous orders from abroad and led to immense delays and cost increases during implementation of the project. The climatic conditions in the Congo also had an impact on the project. Heavy rainfall during the rainy season not only impairs the actual construction work, but also often makes access to the individual secondary towns more difficult due to washed away slopes and boggy ground that prevents heavy lorries or construction machinery from driving. This also results in time delays and therefore cost increases.

Against this background, the planned outputs in three of the original five secondary towns (Gemena, Zongo and Bumba) were provided to an adequate extent and quality and are being used by the target group, albeit with lower specific consumption than expected at the project design stage. The operation took place in the secondary towns since installation and takeover of operation without interruption, which shows that REGIDESO is able to operate the facilities despite its limited financial resources. However, the evaluation revealed initial wear and tear and damage caused by use, which is discussed in more detail in the section on sustainability.

The EPE delegation did not find that there is unequal access to the outputs provided, for example on a cultural or social level. However, user surveys indicate that there is a financial barrier due to the high tariffs at the water points (up to four times higher than in the capital Kinshasa).

During the evaluation, female user groups confirmed that their situation had improved significantly as a result of the project, as travelling times to fetch water had been reduced and the routes had become safer. The user groups confirmed that the water quality was good and that there were hardly any water-induced diseases. At the same time, there is still a greater need for standpipes and house connections, as not all neighbourhoods benefit from the measures.

9. Quality of implementation

As already mentioned under 8, the logistical and climatic challenges in implementing the project were considerable, which also had an impact on the quality of the implementation of the measures. According to reports, the implementation consultant was not permanently on site everywhere, which had a negative impact on the construction quality from the EPE's point of view, as the division of the construction work into smaller lots and their awarding to several local companies would have required more intensive and closer construction supervision. In the DRC context, the quality of the infrastructure inspected during the EPE can generally be rated as satisfactory. The quality of the steel for the water tank in Gemena (advanced corrosion) was the main area of concern. In addition, the distribution networks in Gemena had been laid very superficially and were therefore at risk from vandalism, road traffic and weather damage, which could already be observed in several places (technical water losses due to leaks). The concrete work on some standpipes is particularly at risk in Zongo due to progressive erosion.

Since the water systems in Gemena and Zongo were commissioned, there has been continuous availability of water at the installed standpipes and house connections. No system failures have been identified to date. According to REGIDESO, there is a well-functioning complaints system in place, which shows that 1,270 leaks were reported in Gemena and 488 in Zongo in 2023, of which 1,127 and 488 were repaired. Other key figures from the secondary towns also show that the water losses in Gemena and Zongo are high (sometimes over 50%), which is not surprising given the high number of reported leaks, an inestimable number of unreported leaks, and the rather cumbersome water management system. Water quality samples taken as part of the EPE did not find any E-Coli contamination in Gemena and Zongo. A report by the current AM consultant for July 2024 also shows that the water quality in Gemena, Bumba and Zongo meets the WHO quality standards for water⁹. However, the already five-year-old chlorination system without redundancies should be replaced in both Gemena and Zongo.

⁸ Source: Rapport de Contrôle-Qualité de l'eau produite et distribuée dans les trois centres secondaires de l'ex-province de l'Equateur, July 2024 (MESURES D'ACCOMPLISSEMENT PHASES IV - MAC IV)

⁹ Source: Rapport de Contrôle-Qualité de l'eau produite et distribuée dans les trois centres secondaires de l'ex-province de l'Equateur, July 2024 (MESURES D'ACCOMPLISSEMENT PHASES IV - MAC IV)

10. *Quality of implementation*

As already mentioned under 8, the logistical and climatic challenges in implementing the project were considerable, which also had an impact on the quality of the implementation of the measures. According to reports, the implementation consultant was not permanently on site everywhere, which had a negative impact on the construction quality from the EPE's point of view, as the division of the construction work into smaller lots and their awarding to several local companies would have required more intensive and closer construction supervision. In the DRC context, the quality of the infrastructure inspected during the EPE can generally be rated as satisfactory. The quality of the steel for the water tank in Gemena (advanced corrosion) was the main area of concern. In addition, the distribution networks in Gemena had been laid very superficially and were therefore at risk from vandalism, road traffic and weather damage, which could already be observed in several places (technical water losses due to leaks). The concrete work on some standpipes is particularly at risk in Zongo due to progressive erosion.

Since the water systems in Gemena and Zongo were commissioned, there has been continuous availability of water at the installed standpipes and house connections. No system failures have been identified to date. According to REGIDESO, there is a well-functioning complaints system in place, which shows that 1,270 leaks were reported in Gemena and 488 in Zongo in 2023, of which 1,127 and 488 were repaired. Other key figures from the secondary towns also show that the water losses in Gemena and Zongo are high (sometimes over 50%), which is not surprising given the high number of reported leaks, an inestimable number of unreported leaks, and the rather cumbersome water management system. Water quality samples taken as part of the EPE did not find any E-Coli contamination in Gemena and Zongo. A report by the current AM consultant for July 2024 also shows that the water quality in Gemena, Bumba and Zongo meets the WHO quality standards for water⁹. However, the already five-year-old chlorination system without redundancies should be replaced in both Gemena and Zongo.

11. *Unintended effects (positive or negative)*

The presence of alternative private operators in REGIDESO's supply area, who offer raw water from shallow wells as water without disinfection, is high and competes with REGIDESO's high-quality water (unintended, negative effect, as the high REGIDESO tariff attracts private operators). However, household surveys have shown that most of the population prefers the higher quality water from REGIDESO for drinking purposes.

The high tariffs at the standpipes (between USD 1.10 and 2.15/m³ in Gemena and USD 3.5/m³ in Zongo), which are designed to cover the operating costs of the secondary towns, lead to a reduction in the poverty relevance of the project, as the affordability of the tariffs for the poorest sections of the population is limited. In Zongo, the tariff at the standpipes is also higher than at the house connections. By setting tariffs in this way, REGIDESO aims to ensure that more households choose a private connection, but conversely, poorer households are disadvantaged by the tariff setting.

Rating summary

The programme fulfilled the key objectives with regard to improving the water supply for the target group. In principle, almost all indicators were met at the time of the final inspection. However, at the time of the evaluation, considerable deficits in the condition of the facilities, defective and non-functional essential equipment elements, high water loss rates and poverty-appropriate tariffs were recognised. The effectiveness of the programme is considered to be limited.

Effectiveness: 3

Efficiency

12. *Production efficiency*

As part of the final inspection, specific investment costs of EUR 45 per inhabitant were defined for Phases I and II. However, with regard to Phase II alone, the specific investment costs, converted to the number of population reached, are considerably higher at around EUR 80/inhabitant from the perspective of the evaluation.

Costs for deliveries and services (incl. immediate measures) of around EUR 10.8 million are attributable to Phase II, and EUR 5.5 million for planning and construction supervision (total Phase II: EUR 16.3 million). Costs of EUR 2.4 million are attributable to the associated AM for consulting services. The price level of the executing companies is initially estimated to be comparatively high due to the location of the cities. The costs for planning and construction supervision amount to around 31% of the total costs (excl. AM), which is a high order of magnitude. The reasons for this are the long project duration, the logistical challenges of the DRC and the very high administrative costs for the awarding, management and administration of the construction measures. From today's perspective, the funds deployed appear appropriate for the project output; a more favourable approach is not apparent.

The implementation period for the phase in question has been significantly exceeded. This is mainly due to the problems with the contractors, which necessitated contract cancellations, new tenders and new awards. The difficult transport situation also had a major impact on the schedule.

The investment has led to a noticeable increase in production capacity. A total production capacity of 1,650 m³/day (11 litres/day/person) is now available for around 145,000 inhabitants in Gemena and Zongo. It should be noted that the population figures are generally estimated and are not based on official surveys.

Although the specific consumption is low at an average of 10 litres, the production capacities of the systems in Gemena and Zongo hardly allow for more, which is presumably also due to the high water loss rates, which averaged 40% in Gemena according to REGIDESO 2023's operational figures and as much as 50% in Zongo in the same period.

Parallel to the investments, an AM was implemented to strengthen the staff in REGIDESO's secondary towns. The AM comprised institutional and personnel support measures in the secondary towns. A German consulting firm was commissioned to implement the AM for Phase II from June 2013 to June 2016.

The services of the AM were provided in two components: Lot 1 comprised the establishment of a unit within REGIDESO, called DIGCS, managed by the consultant to control the secondary towns. The main activity was the installation of CCSWEB, a web-based management information system (MIS) for collecting and analysing operational data. Carrier surveys conducted during the evaluation revealed that the CCSWEB was no longer being used, as REGIDESO considered it to be user-unfriendly. Lot 2 included support for the secondary cities. This consisted of daily activities relating to technical and commercial problems of all kinds and assistance in emergencies and periodically recurring activities such as financial accounting audits, evaluating the performance of the individual secondary cities, training measures and water quality control.

Since the web-based MIS was implemented to a considerable extent under Lot 1, which is no longer used today, the production efficiency of the complementary measure for Lot 1 must be rated as low.

The overall production efficiency is low from the perspective of the evaluation, but still acceptable. Potential increases in efficiency hardly seem possible due to the difficult framework conditions in rural DRC.

13. Allocation efficiency

As REGIDESO's secondary towns do not receive any subsidies from Kinshasa, they are left to their own devices to operate the infrastructure they have built. While REGIDESO can offer a tariff of USD 0.87/m³ in the capital Kinshasa (tariff increases are planned for the coming years as part of REGIDESO's service contract), the tariffs in the secondary cities of Zongo and Gemena are between USD 1.10 and USD 3.50/m³, with the lowest tariff of USD 1.10/m³ in Gemena being offered in the neighbourhoods where there is strong competition with private providers to push them out of the market. REGIDESO's key operating figures also show that no reserves are being set aside for reinvestment or at least for maintenance work. The currently high operating cost recovery rates (see 7.) should therefore be viewed with caution.

As energy costs are the biggest cost driver alongside personnel costs, the question arises as to what extent these could have been reduced. Energy costs could only be influenced by the choice of location by selecting secondary towns that are connected to the national electricity grid of SNEL (Société Nationale d'Electricité). Although this is the case in Zongo, the water system is still operated separately via diesel generators. It may be possible to connect this to the electricity grid in the future, which would significantly reduce operating costs. Gemena and Bumba are unlikely to have this option soon. The energy supply in the province of Sud-Ubangi is still virtually non-existent, with only around 225 MWh currently being produced by alternative providers¹⁰. Against this background, no alternative locations with lower energy costs could have been chosen in the province of Sud-Ubangi. With regard to the high personnel costs, the pension shares of former employees, which have to be handled entirely via the secondary towns, are the main reason for the above-average costs. This fact cannot be solved without reforming the pension system of the overall REGIDESO.

Rating summary

In terms of efficiency, no more cost-effective alternatives can be identified. The project measures were appropriately aimed improving the water supply for the population and covering the operating costs of the project-executing agency.

In principle, it would be desirable to implement measures to reduce administrative and technical water losses, which would relieve the financial burden on REGIDESO and could lead to a more pro-poor tariff structure. REGIDESO's operating cost coverage must also be put into perspective, as the operating costs incurred are nowhere near sufficient to

¹⁰ Source: [PDP Sud-Ubangi, Version finale.pdf \(gouv.cd\)](#)

adequately maintain or rehabilitate the existing distribution networks. Also due to the very long delays within the programme, which led to relatively high consulting costs, among other things, the efficiency can be assessed as limited in summary.

Efficiency: 3

Overarching developmental impact

14. Overarching (intended) developmental changes

The overarching developmental objective of the programme to make a positive contribution to the health situation of the target group. No indicators were defined at impact level either during the project appraisal or as part of the evaluation. This no longer corresponds to the "state-of-the-art", according to which indicators should also be defined at impact level. However, in the case of health impacts, it is also very time-consuming to establish a direct link between these and the project. It is therefore plausible to assume, both then and now, that the impact objective was achieved if the programme objective was achieved.

15. Contribution to overarching (intended) development policy changes

As part of the evaluation, discussions were held with the public health centers supported by UNICEF in Gemena and Zongo. The discussions revealed that water-induced diseases such as simple and complicated diarrhea and parasites (geohelminthiasis) have fallen sharply in the last five years, i.e. since the systems were commissioned. In Zongo in particular, a difference can be seen between neighbourhoods that are supplied by REGIDESO and neighbourhoods that use alternative sources of water. The health centre in Gemena also emphasised the risk of alternative (private) operators having a negative impact on the health situation of users due to the lack of quality controls. However, this assessment was not shared by the Regie Provinciale, the administrative authority at provincial level, which receives GIZ support.

Discussions with the user groups in Gemena and Zongo, especially the female user groups, confirm the positive development of water-induced diseases at household level in the districts supplied by REGIDESO.

With regard to the positive impact of the programme on the health of the population, it can be assumed that the improved, continuous supply has reduced the health risks for the population. This was also measured using a proxy at outcome level (quality of water at the end consumer). This outcome indicator was met for all project locations. It can therefore be concluded that the provision of high-quality water has improved the health of the population, even though this is not directly measurable and no health data was collected as part of the project.

16. Contribution to overarching (unintended) developmental changes

Based on the information available to date, no overarching, unintended development policy changes can be identified.

Rating summary

The project's assumption that the improvement in the water supply has led to an improved health situation for the target group is plausible from the perspective of the evaluation. This was also confirmed by the responsible health centers. Water quality analyses carried out as part of the evaluation showed that the water quality in two of the three secondary towns is hygienically safe (0 % detection of E.-Coli). This was also confirmed by the consultant of the current AM - also for Bumba.

Overarching developmental impact: 2

Sustainability

17. Capacities of the beneficiaries and stakeholders

The technical condition of the systems inspected can be described as good to satisfactory. The installed systems in Zongo are generally in good condition, apart from the only installed dosing pump for chlorination, which was defective at the time of the evaluation and for which there is no replacement pump for emergencies. In addition, the evaluation delegation observed some very advanced soil erosion at the standpipes, which will cause the concrete platforms to become unstable in the foreseeable future, and ultimately threaten to sink or break through. In Gemena, the technical condition of the facilities was worse. One of the water tanks installed as part of the project showed severe internal corrosion. Several water meters at the level of the storage systems and distribution networks were also defective, making it difficult to

draw a meaningful balance of the production and distribution volume. This should also be viewed critically, as the volumes of water produced and distributed serve as input parameters for setting tariffs. Several leaks detected in the distribution network and at the standpipes. The distribution network was generally not laid deep enough and is therefore susceptible to vandalism and damage caused by erosion or road traffic. Although the installed equipment for chlorination still worked in Gemena, it was in a poor condition with no existing back-up system.

The qualifications and motivation of the REGIDESO employees on site are positive. Two other factors are decisive for the future operation of the facilities: firstly, the financial situation of REGIDESO and secondly, the high tariffs at the standpipes.

According to REGIDESO, the high water losses in Zongo that emerged from the balancing (around 50%) are related to a major leak in the main pipe between the waterworks and the only water tank, although this could not be verified during the EPE. According to REGIDESO, there are also irregularities at the level of the water meters at the standpipes.

In Zongo in particular, the tariffs at the standpipes are very high at **USD 3.5/m³**, which is reflected in the low specific consumption of the target group. As Zongo does a lot of trade with nearby Bangui in the Central African Republic, there is an increasing currency risk between the Franc Congolais (FC) and the FCFA. This could increase in the future due to the devaluation of the FC, which could further reduce the purchasing power of the target group.

As already described in the chapter on efficiency, REGIDESO's secondary towns are largely left to their own devices. Contributions from the central level are only made sporadically, erratically and irregularly, and can only have a short-term, volatile effect on operations at best. One exception here is the central procurement of dosing materials now introduced by REGIDESO, which are redistributed to the secondary towns without invoicing. Public spending on the water sector only accounts for 1% of the annual state budget (~ USD 10-12 million). In addition, outstanding invoices from the state to REGIDESO, high personnel costs (e.g. for pension payments) and the high energy costs for the water supply are the main reasons for the lack of reinvestment in the infrastructure in the secondary towns.

Although the secondary towns have managed to cover the operating costs as far as possible in the years 2021 to 2024 and enable cross-subsidies between the various secondary towns, this is achieved by accepting considerable restrictions on maintenance and rehabilitation expenditure (e.g. pipeline network, chlorination). Overdue rehabilitation tasks are being addressed - partly through the ongoing complementary measure and partly through the GIZ RESE programme. The existing deficits, in particular the advancing wear and tear in Gemena, will significantly impair the quality of the water supply through REGIDESO in the coming years.

18. Contribution to supporting sustainable capacities

The services of the complementary measure were provided in two components: Lot 1 comprised the establishment of a unit within REGIDESO, called DIGCS, managed by the consultant to control the secondary towns. The CCSWEB, a web-based MIS for collecting and evaluating operational data, was created as an instrument for analysing and managing the operation of the secondary cities, which should make it possible to define performance-related targets and make their achievement transparent. Surveys conducted by the executing agency as part of the evaluation revealed that the CCSWEB was no longer being used, as REGIDESO considered it to be user-unfriendly. Lot 2 comprised the permanent support of the secondary cities. This consisted of daily activities relating to technical and commercial problems of all kinds and assistance in emergencies and periodic activities such as audits of the financial accounts, evaluation of the performance of the individual secondary towns, training measures and water quality control.

The general administration of the secondary towns made a good and careful impression on the evaluation delegation (reporting, reporting and monitoring of operational key figures). The established user group committees in Gemena and Zongo are taken seriously and there is a grassroots dialogue with REGIDESO.

19. Durability of impacts over time

The REGIDESO team in the secondary towns can be described as a competent partner. However, there are risks with regard to financial sustainability in the medium to long term, as operating cost recovery is volatile due to rising energy prices and high tariffs for the destitute population. At present, no reserves are set aside for maintenance and repairs, which means there is a risk that deterioration in the condition of the water supply systems cannot be rectified in the future. However, cross-subsidisation between the secondary towns is possible and the operating cost recovery of the secondary towns has recently been positive. The current phase of the AM can also have a supportive effect, drive forward the reduction of water losses and create reserves.

Rating summary

The sustainability of the project appears to be given in terms of technology and human resources but is dependent on the income of the secondary towns, which do not receive any support from the central government in Kinshasa. As the installed equipment wears out, it will become increasingly difficult to operate the system adequately in future, also

against the backdrop of rising energy costs, which account for a large proportion of the operating costs. The ongoing AM can address and counteract these risks for a certain period. Nevertheless, the sustainability of the effects is assessed as having limited success.

Sustainability: 3

Overall rating: 3

The programme has a high degree of relevance, coherence and overarching developmental impact. Although the efficiency and sustainability criteria were rated comparatively lower the measures have generally contributed to an improvement in the water supply and health situation of the target group as well as to improved operating cost coverage for the executing agency. However, the latter has a negative impact on the poverty-relevant tariff structure.

Overall, the programme is rated as having limited success from an ex-post evaluation perspective.

Contributions to the 2030 Agenda

The project contributes to achieving Sustainable Development Goal 6 (SDG) "Ensure availability and sustainable management of water and sanitation for all". The project contributes directly to SDG 6 (clean water and sanitation). In addition, the commitment in a disadvantaged region contributes to reducing inequalities (SDG 10). The programme is part of a comprehensive, coordinated commitment by German development cooperation and other international donors in the sector.

Project-specific strengths/weaknesses and general conclusions/lessons learned

The strengths and weaknesses of the project include:

Strengths:

- The project has a high health impact.
- There is a strong awareness among the civilian population that REGIDESO's water is of high quality.
- Since the measures were put into operation, operations have been running smoothly without any major disruptions/interruptions.
- The project is highly relevant for the female population.

Weaknesses:

- The cost-covering tariffs set by REGIDESO at the standpipes are very high for the low-income population, especially in Zongo.
- Meanwhile, there are no subsidies from the capital, which is why the secondary towns have to cover the high energy and personnel costs (including bonuses and pensions) themselves.
- The sustainability of the measures is jeopardised (chlorination only partially functional, hardly any financial reserves available, lack of spare parts, systems without redundancies).

Conclusions and lessons learned:

Follow-up phases: energy supply should be given greater consideration when selecting locations, as should transport routes/logistics (efficiency). The capacities of the local building contractors made a weak impression on the delegation. Intensive construction supervision, particularly with regard to building materials, seems essential. In addition, it would seem sensible to take greater account of population growth in investment planning.

Political dialogue: the BMZ, the German embassy and the donor community should be made more accountable of the need for subsidies in the political dialogue so that water tariffs can be designed in a more poverty-oriented fashion. In addition, the public sector's debts to REGIDESO are in the three-digit million dollar range, placing a considerable burden on the sustainability of the state water supply, which should also be addressed more strongly in the political dialogue.

There is a short-term need for support for the ongoing AM: ensure chlorination and create reserves, continue to reduce water loss, enable the responsible bodies (materially) to carry out bacteriological water quality tests independently, large water meters at the water reservoirs, check connection meters at the taps and replace/calibrate them regularly.

Evaluation approach and methods

Methodology of the ex-post evaluation

The ex-post evaluation follows the methodology of a rapid appraisal, i.e. a data-supported, qualitative contribution analysis and represents an expert judgement. This involves attributing impacts to the project through plausibility considerations based on the careful analysis of documents, data, facts and impressions. This also includes - where possible - the use of digital data sources and the use of modern technologies (e.g. satellite data, online surveys, geocoding). Causes of any contradictory information are investigated, attempts are made to eliminate them, and the assessment is based on statements that are confirmed by several sources of information where possible (triangulation).

Documents:

Internal and external project documentation, secondary specialist literature, strategy papers, country/sector analyses, media reports.

Data sources and analysis tools:

Available carrier data, publicly available data relating to water/energy supply

Interview partner:

Employees of REGIDESO Kinshasa and the REGIDESO secondary towns, user groups, randomly selected users of the water supply in the project area, representatives of the local authorities visited, other donors and GIZ employees.

The analysis of impacts is based on assumed interdependencies, documented in the impact matrix already developed during the project appraisal and, if necessary, updated during the ex-post evaluation. The evaluation report presents arguments as to why which influencing factors were identified for the identified impacts and why the analysed project presumably made which contribution (contribution analysis). The context of the development measure is taken into account with regard to its influence on the results. The conclusions are set in relation to the availability and quality of the data basis. An evaluation concept is the frame of reference for the evaluation.

For project evaluations, the method offers - on average - a balanced cost-benefit ratio, in which the gain in knowledge and the evaluation effort are in equilibrium and allows a systematic assessment of the effectiveness of FC projects across all project evaluations. The individual ex-post evaluation can therefore not fulfil the requirements of a scientific assessment in the sense of a clear causal analysis.

The following aspects limited the evaluation:

Availability and reliability of data, especially on water losses and target group size.

Methodology of the performance evaluation

A six-point scale is used to assess the programme according to the OECD DAC criteria. The scale values are assigned as follows:

- Level 1** Very successful: result significantly above expectations
- Level 2** Successful: result fully in line with expectations, without significant deficiencies
- Level 3** Moderately successful: below expectations, but positive results dominate
- Level 4** Moderately unsuccessful: clearly below expectations and negative results dominate despite recognisable positive results
- Level 5** Unsuccessful: despite some positive partial results, the negative results clearly dominate
- Level 6** Highly unsuccessful: the project is useless or the situation has worsened

The overall rating on the six-point scale is based on a project-specific weighting of the six individual criteria. Levels 1-3 of the overall rating characterise a "successful" project, levels 4-6 an "unsuccessful" project. It should be noted that a project can generally only be considered developmentally "successful" if the achievement of the project objective ("effectiveness") and the impact on the overall objective ("overarching developmental impact") as well as the sustainability are rated as at least "partially successful" (rating 3).

The annex to this report is available upon request (German only).

Imprint

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