



1. Project Data

Project ID

P091092

Project Name

DRC Urban Water Supply Project (FY09)

Country

Congo, Democratic Republic of

Practice Area(Lead)

Water

L/C/TF Number(s)

IDA-D1020,IDA-H4350,TF-92105

Closing Date (Original)

31-Mar-2014

Total Project Cost (USD)

310,714,596.56

Bank Approval Date

18-Dec-2008

Closing Date (Actual)

30-Jun-2021

IBRD/IDA (USD)
Grants (USD)

Original Commitment

190,000,000.00

78,000.00

Revised Commitment

313,200,082.53

65,087.25

Actual

310,714,596.56

65,087.25

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2. Project Objectives and Components

a. Objectives

The Project Development Objective (PDO) is "to increase sustainable access to water in selected urban areas and to improve the efficiency of the Project Implementing Entity." (Schedule 1, page 6 of the Financing Agreement dated January 19, 2009) The Project Implementing Entity is the state water utility company of the Democratic Republic of Congo (DRC), or REGIDESO, which henceforth will be referred to directly as such.



The project objective was modified on February 3, 2016 when the Bank's Board approved Additional Financing [AF]. The revised PDO was "to increase access to sustainable water services in selected urban areas, and to improve the operational performances and viability of the Project Implementing Entity."

For the purposes of this assessment and the split methodology for deriving the overall outcome rating (see Section 5 on Efficacy), the project PDO will be assessed as two sub-objectives, original and revised:

Objective 1: "To increase sustainable access to water in selected urban areas", later revised as "To increase access to sustainable water services in selected urban areas".

Objective 2: "To improve the efficiency of REGIDESO", later revised as "To improve the operational performances and viability of REGIDESO."

b. Were the project objectives/key associated outcome targets revised during implementation?

Yes

Did the Board approve the revised objectives/key associated outcome targets?

Yes

Date of Board Approval

03-Feb-2016

c. Will a split evaluation be undertaken?

Yes

d. Components

The project as appraised included the following two main components and sub-components:

Component A: Improvement and expansion of water supply services in major urban centers (US\$101.6 million estimated at appraisal; US\$257.85 million with Additional Financing; US\$215.85 million actual cost)

This component intended to carry out investment and rehabilitation programs in Kinshasa, Lubumbashi and Matadi to improve water production capacity, the secondary and tertiary distribution networks, and individual connections and collective distribution systems (standposts).

Component B: Support to sector reform, capacity building and improved governance (US\$88.4 million estimated at appraisal; US\$98.15 with Additional Financing; US\$98.15 million actual cost)

This component was designed to support the sustainability of the Component A investments (and those of other donors) by helping achieve operational and financial viability of REGIDESO. It was also intended to enable REGIDESO to extend water provision and initiate rehabilitation in other cities that are not covered by the project, using cash from profitable centers. This component comprises the following sub-components:

B.1: Management Contract



This sub-component was intended to support payments to a Private Operator (PO) under a management contract, and technical and financial auditors to measure the PO's performance, whose main goal was to restore the sound financial footing and improve the commercial operations of REGIDESO.

B.2: Repair, Replacement and Rehabilitation Fund

The Fund was intended to finance minor equipment and works needed to achieve the performance indicators under the Management Contract, such as meters, replacing or repairing connections, data processing equipment, etc.

B.3: Severance Program

This sub-component was to help the Government to implement necessary staff reductions through negotiated retrenchment packages based on fair and adequate compensation, and included termination grants, commercial bank fees, an audit of the severance program, and surveys of the program's impact, including the outcomes of reinsertion measures to assist separated staff in finding alternative employment or engaging in substitute commercial activities.

B.4: Communication Program

This sub-component was intended promote understanding of the reforms among stakeholders, improve bill collection, strengthen good governance, and promote a strategy for sanitation, hygiene, and behavioral changes to prevent the spread of HIV/AIDS in selected cities.

B.5: Capacity Building for the Ministries of Energy, REGIDESO, and COPIREP

This sub-component was intended to build the capacity of: (i) the Ministry of Energy, also in charge of the water sector, for sector planning; (ii) the Ministry of Portfolio and Steering Committee for the Reform of State-Owned Enterprises (COPIREP) in planning, regulation, and management contract monitoring; and (iii) REGIDESO in technical, commercial, and financial matters.

B.6: Improved Governance in the Water Sector

Improvements in REGIDESO's internal governance covered by the PO's management contract; this sub-component was to focus on improving REGIDESO's relationship with users and government agencies. The activities included: (i) client satisfaction surveys; (ii) a workshop to promote good governance among parliamentarians; and (iii) a web site to publish contract awards under the project.

B.7: Implementation of an Action Plan to Reduce and Control Water Consumption by Public Institutions

Public agencies, which accounted for about 43 percent of REGIDESO's total billings, have had large unpaid bills and a collection ratio of less than 3 percent. The sub-component's activities were to: (i) strengthen REGIDESO's capacity and provide information technology (IT) to streamline billing; (ii) conduct awareness campaigns; and (iii) install and maintain meters, and rehabilitate the internal installations of key public users.

B.8: Sanitation Strategies and Programs in Lubumbashi and Matadi



This sub-component included the identification of technical options and institutional arrangements for the effective delivery of services in the beneficiary cities, and studies to develop sanitation strategies and programs.

B.9: Monitoring and Evaluation (M&E), Supervision of Works and Audits

This sub-component was intended to finance M&E and supervision activities, environmental and social impact studies, engineering studies, technical audits for works, and financial audits.

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project Cost. The original project cost as appraised was US\$190 million. Additional Financing of US\$166 million increased the project cost to US\$356 million. The actual disbursement was US\$310.7 million.

Financing. The project was financed by two IDA grants, specifically the original project (P091092, US\$190 million) and the Additional Financing (AF) (P155266, US\$166 million). Respectively, the actual disbursements were US\$190.5 million for the original grant and US\$120.1 million for the AF, for a total disbursement of US\$310.7 million. A Trust Fund grant for project preparation (TF-921050) was also provided amounting to \$78,000, of which \$65,087 was expended.

Borrower Contribution. There was no Borrower contribution.

Dates. The project took 12 and a half years to implement. It was approved on December 18, 2008 (the ICR erroneously indicates an Effectiveness Date six months earlier, on June 13, 2008). The midterm review was conducted on November 19, 2012. The original closing date was March 31, 2014 but the project's actual closing date was over seven years later on June 30, 2021.

The project had seven restructurings:

July 17, 2012: The indicator value for "people in urban areas provided with access to improved water sources" was shifted from "percentage" to "number", in line with prevailing practice in wording sector indicators. The management contract was scaled down to a services contract. The scope of the Staff Restructuring Plan was also reduced. The number of intermediate indicators (18) was scaled down; 9 indicators that were deemed redundant were dropped. The Results Framework was changed; funds were reallocated among disbursement categories; and the procurement plan was modified. The closing date was extended by 21 months to December 31, 2015.

October 16, 2015: The closing date was extended by 4 months to April 30, 2016.

February 3, 2016: This restructuring changed the PDO (discussed in Section 2 above) and provided Additional Financing (AF) to scale up the expansion of water supply services (Objective 1). In line with the additional activities, the target for the outcome indicator (i.e., "the number of people provided with access to sustainable water services supply" was increased from 1,205,000 to 2,600,000 people. The performance improvements expected from REGIDESO were also clarified. In addition, the word "urban" was removed from the indicator "people in urban areas provided with access to improved water sources" to enable the inclusion of peri-urban areas in the targeted cities. The 2016 restructuring also revised the project's scope by adding the city of Kindu to benefit from water facilities Component A. Consequently, there were changes



in the Results Framework, the components and costs, disbursement arrangements, safeguards policies triggered, procurement, and implementation schedule. The project closing date was extended by 36 months to December 31, 2018.

December 31, 2018: This restructuring reduced the project's scope by removing activities for the city of Kindu, which was added earlier under the February 2016 restructuring; hence, some targets for intermediate outcomes targets were also reduced, without changing the final outcome target for Objective 1. The Results Framework was modified. The project closing date was extended piecemeal by 12 months to December 31, 2019.

June 25, 2019: The closing date was extended to June 30, 2020.

June 5, 2020: The closing date was extended to December 31, 2021.

December 23, 2020: The closing date was extended to June 30, 2021.

The last three restructurings of six months each were "because the preparation of the new project took longer than anticipated". (ICR, page 11)

3. Relevance of Objectives

Rationale

Country and Sector Background. When the project was appraised in 2007, the Democratic Republic of Congo (DRC) was a post-conflict country whose per capita GDP of US\$139 ranked it among the poorest in the world. In 2004, around 94 percent of the population was living on less than US\$1.90 per day. The country's infrastructure suffered from much physical damage and lacked maintenance during the conflict period. Seriously weakened governance had worsened the already poor quality of services and further reduced access by the poorest. The water supply and sanitation (WSS) sector was especially affected by the conflict. At appraisal, only 22 percent of the total population had access to safe drinking water. Meeting the MDG target of 71 percent—i.e., to give access to an additional 45 million people—was a major challenge. In urban areas, water service delivery was inefficient, with the coverage rate falling from 68 percent to 35 percent between 1990 to 2006, due to the conflict, lack of investments, poor maintenance, aid suspension, and population growth.

Institutionally, there were serious technical weaknesses, managerial inefficiencies, and commercial failures in the national water utility, REGIDESO, which was unable to deliver sustainable water supply. At appraisal, water services had ceased to function in more than 30 of the 94 urban centers served by REGIDESO. Of the centers served, including the capital Kinshasa, many neighborhoods experienced lengthy service interruptions. REGIDESO's failure to deliver led to the installation of independent water networks in many peri-urban communities of major cities, but the overall urban water supply coverage continued to decline nonetheless. Although REGIDESO had been one of the best-performing African water utilities in the 1980s, half of its connections subsequently became inactive, water sales significantly decreased, and all of its key performance indicators deteriorated, particularly the non-revenue water (NRW), collection rate, and staff productivity. Accumulated arrears from public institutions totaled 67 months of water consumption and accounted for 43 percent of REGIDESO's turnover. The collection rate—49 percent of billed amounts—was



the worst in Sub Saharan Africa. REGIDESO employed 4,803 individuals and was clearly overstaffed when benchmarked with other water utilities in the region.

Relevance to the Government's Strategy. At appraisal, the PDOs were directly relevant to the prevailing Poverty Reduction Strategy Paper (PRSP) and the Governments Priority Action Plan of August 2007, which emphasized the need to implement water sector reforms in order to improve the rate of access to water supply. REGIDESO's reform was to be pursued within the DRC's broader public enterprise reform agenda that followed the 2006 Presidential elections and the start of a new Government in March 2007. The legal framework that was promulgated in July 2008 called for the disengagement from public enterprises and greater private sector participation, which were both pursued in the project under review.

At closing, the PDOs remained fully consistent with the PRSP (2011-2015), in which the third Pillar called for a focus on "improving access to potable water, hygiene, and sanitation." This focus area covered drinking water in urban areas and provides two operational recommendations fully in line with the Project's two components: first, "increase access to drinking water in urban centers...through vast programs of rehabilitation and extension of infrastructure and the construction of new systems" and second, reform the potable water sub-sector in urban areas, which "should include the transformation and recovery of REGIDESO, following the decentralization and disengagement laws of the State." (ICR, paragraph 26)

Relevance to the Bank's Strategy. At appraisal, the PDOs were fully consistent with two of the strategic priorities of the Country Assistance Strategy (CAS) dated December 18, 2007, which were derived from the PRSP. These priorities were "to promote good governance and consolidate peace" and "to help improve the provision of social services and reduce vulnerability." A decade later, the latest available Systematic Country Diagnostic (SCD, 2018) continued to identify the lack of water sector reform as the major bottleneck to water access. Water sector issues had worsened, notably the low water supply coverage in urban areas, the public arrears on water bills, the uncontrolled increase in the salaries of the bloated REGIDESO staff, hence the seriously debilitated financial viability of the water utility, and the weak overall governance that continued to prevent institutional reform. These persistent sector issues highlight the importance and relevance of the PDOs.

The PDOs remained relevant to the Country Partnership Framework (CPF) dated January 24, 2022 (which was not yet available when the ICR was prepared). The water supply and sanitation sector was covered under CPF Focus Area 2, namely to "Strengthen systems for improved service delivery and human capital development" within which Objective 2.2 was to "Improve access to basic infrastructure services", including water, among others. Improved governance, which was directly relevant to the water sector, was a common theme across the three CPF Focus Areas.

Previous Bank Involvement. In support of "CAS Outcome 1.3. Enhancing governance and increasing the operational performance of SOEs", IDA commitments have totaled US\$2.1 billion across six operations, one of which is the Urban Water Supply Project (P091092) under review (the other projects were in the transport and electricity sectors). Moreover, in support of "CAS Outcome 3.1: Increased access to clean water and sanitation", IDA commitments have totaled US\$494 million. The World Bank Group financed four projects: the Emergency Social Action Project (P086874), the Emergency Urban and Social Rehabilitation Project (P104497), the Urban Water Supply Project (P091092), and the Eastern Recovery Project (P145196). This CAS outcome was to be measured in terms of: (i) the percentage of the population in the targeted areas with access to potable water; and (ii) the number of people provided with access to improved water sources. (Source: Country Partnership Framework, January 24, 2022)



The PDOs were directly relevant to the past and current strategies of the Bank and the Government. However, one shortcoming was the activity related to the management contract, for which there was little institutional readiness in the DRC. The management contract activity proved over-ambitious and, after much delay, was replaced with a performance contract. While recognizing this shortcoming in one activity, which was not appropriately pitched to the post-conflict context at the DRC at the time of preparation and appraisal, the relevance of the project's objectives is rated high.

Rating

High

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

To increase sustainable access to water in selected urban areas

Rationale

Theory of Change

Since a theory of change (TOC) was not required for the Project Appraisal Document (PAD), the ICR constructed an ex-post TOC based on the PDOs, which did not change during the Additional Financing, and the PAD's description of the project activities and the results indicators. The ICR's TOC is well-articulated and shows tight logical connections that sufficiently and convincingly demonstrate the project's causal chain toward the achievement of the PDOs. Whereas many TOCs in PADs and ICRs start with "Inputs" that lead to "Outputs", the ICR's TOC start with "Issues" that need to be resolved, followed by "Activities" (not "Inputs") that directly address those sector issues, as the first two columns. This makes the causality chain much clearer between the final outcomes (that signal PDO achievement) and the initiating sector bottlenecks that serve as the justification for the project's interventions. This causal link is less evident if the first column is "inputs". The list of "Issues" (first column in the ICR's Figure 1) is comprehensive in covering physical, commercial, financial and institutional bottlenecks in the water and sanitation sector. Moreover, whereas many TOCs in PADs and ICRs jump from outputs to (final) outcomes, the ICR's TOC also delineates the intermediate outcomes that occur between production of outputs and achievement of PDO outcomes.

Overall, while the TOC is robust and easy to comprehend, its one significant shortcoming is the lack of realism in its Critical Assumptions. All of the five assumptions (for the TOC to operate efficiently as intended) were present only to a limited or negligible extent in the post-conflict DRC at the time of appraisal. Most notably, there was a lack of the assumed Government commitment to resolving the mounting arrears of public institutions. Other assumptions that underpin the efficient operation of the TOC—i.e., that REGIDESO has adequate engineering and management expertise, that customers will be able and willing to pay for services, that staff will voluntarily separate from REGIDESO—were not founded in reality, leading to the project's eventual failure in achieving its objectives. In particular, the more rigorous control and the timely payment of the water bills of public agencies was one of the key reform pillars and the single most important pre-condition



that could lead to the restoration of REGIDESO's financial viability, but this failed to materialize. Since the TOC was prepared ex post, it raises the question why those assumptions were made in 2021 (the ICR's completion date), when it was already known during the project's unusually long implementation period of more than 12 years that those assumptions were unfounded. A more useful approach would be to identify the prior actions needed to enable those critical assumptions to materialize (e.g., legislative and/or budgetary actions by the government to enable or facilitate payment of public billing arrears), which would also help lay the groundwork for designing a possible DPO as the ICR suggests as a future potential lending operation.

Finally, another shortcoming of the TOC is that there was no discussion whether the PDO outcomes could be fully or only partially attributed to the project. This is important given the assistance coming from other donors into DRC, a post-conflict FCV country at the time of appraisal.

The foregoing assessment of the TOC also applies to PDO2 below, since the rate and magnitude of delivering water & sanitation services sustainably is closely linked to the efficiency, operational performance and financial viability of REGIDESO.

Split Rating Approach

The split rating approach for evaluating the project's efficacy is keyed to the July 2012, February 2016, and December 2018 restructuring events, which divides the project implementation timeframe into four periods:

- From effectiveness in November 2009 to July 2012
- From July 2012 to December 2015
- From February 2016 to December 2018
- From January 2019 to June 2021, when the project closed

Each of these four periods has its own efficacy rating, which is assigned a numerical value as prescribed in the ICR preparation guidelines. Those four numerical values are weighted by the amount disbursed during each specific time period. Those four weighted values are added to derive the project's overall efficacy,

Assessment of the original project (prior to the first restructuring)

The project performed poorly from effectiveness up to the project's first restructuring in 2012. Achievement of the objective—for which greater access to water supply services was to be provided mainly through household connections and stand posts—was to be signaled by only one indicator, namely, “people provided with access to improved water sources.” The project was unable to demonstrate any progress in achieving the intermediate indicators or this PDO indicator.

The project's efficacy in achieving PDO 1 during this first period is rated as **negligible**.

Rating
Negligible

OBJECTIVE 1 REVISION 1

Revised Objective



To increase sustainable access to water in selected urban areas

Revised Rationale

At the July 2012 restructuring, the PDO was not changed but both the outcome and the outcome target were changed. Instead of the percentage of people in targeted cities, the PDO outcome was changed to “the number of people in urban areas provided with access to improved water sources”. According to the ICR (page 11), this was done “to align with the current practice and wording for sector indicators.” That number was set at 1,205,000. The project surpassed this target and achieved 1,653,000 people.

The outputs leading to the above outcome were also achieved: secondary and tertiary networks, community water points, and new household connections.

The project’s efficacy in achieving PDO 1 during this second period is rated **high**.

Revised Rating

High

OBJECTIVE 1 REVISION 2

Revised Objective

To increase sustainable access to water in selected urban areas

Revised Rationale

At the February 2016 restructuring, which corresponded to the approval of the Additional Financing, the PDO was not changed but the outcome and the outcome target were changed. In order to allow investments in peri-urban areas, the restrictive word “urban” was deleted from the PDO outcome, and was changed to “the number people provide with access to improved water sources.” Compared to the target of 2,600,000 people that was set, the project’s result was below target at 1,893,630 people (73 % achievement). The construction of the Ozone water treatment plant was also delayed, which had a negative impact on water productivity (36 % achieved) and network construction (57 % achieved). New connections also achieved only 63 % of targets. The only fully achieved target was the rehabilitation of 116,265 private connections (105 % achieved).

Since most of the targets were two-thirds achieved, and in one case was slightly exceeded, the project’s efficacy in achieving PDO 1 during this third period is rated **substantial**.

Revised Rating

Substantial

OBJECTIVE 1 REVISION 3

Revised Objective

To increase sustainable access to water in selected urban areas



Revised Rationale

At the December 2018 restructuring, the PDO was not changed but an investment that was added during the Additional Financing was cancelled. The Kindu works were significantly delayed, and the preparation of the detailed design studies had just been finalized yet six more months were required for the bidding process. Given the ten years of implementation that had already passed and the many closing date extensions that had already been granted, the Government and the Bank decided to cancel the Kindu works. This, in turn, necessitated a reduction of the scope of Component A and some output indicators.

By the project completion date, 3,071,430 people had access to safe drinking water, which was 118 % of the target. New connections reached 88,881 households (121 % of the target), while 153,490 connections were rehabilitated (139 % of target). In addition to new connections, 9,020 existing ones that had been inactive for more than five years were reactivated, covering many poor and vulnerable households.

The project's efficacy in achieving PDO 1 during this fourth period prior to the closing date is rated high.

Revised Rating

High

OBJECTIVE 2

Objective

To improve the efficiency of REGIDESO

Rationale

The TOC is the same as above.

From effectiveness up to the first restructuring, there was no improvement in REGIDESO's operating cost ratio. The bill collection rate for private connections did improve and achieved 92 % of the target, mainly due to the completion of REGIDESO's staff restructuring plan. However, while the number of employees per 1,000 of active connections decreased, overall progress on this indicator was only 37 % of the target. Operational performance had not improved: water losses in the network remained significant and the reduction in non-revenue water was a meager 6.7 % of the target set at appraisal, exacerbated in part by the lack of additional water supplies due to the major delays in construction works under the project. Overall, REGIDESO's financial viability remained precarious.

The project's efficacy in achieving PDO 2 from effectiveness to the first restructuring in November 2009 is **negligible**.

Rating

Negligible



OBJECTIVE 2 REVISION 1

Revised Objective

To improve the efficiency of REGIDESO

Revised Rationale

At the July 2012 restructuring, there were no revisions in PDO 2, its outcomes, or its targets (the changes concerned PDO 1). For PDO2, the progress in REGIDESO's financial viability were still less than envisaged. Its operating cost ratio reached 90 % of targets. Full availability of the existing water production was achieved (131 % of the target). However, the reduction of non-revenue water was still low at 12.5 % of the target, indicating that REGIDESO's financial insolvency was being driven mainly by physical water losses rather than commercial losses from unpaid bills.

The project's efficacy in achieving PDO 2 during this second period is rated **modest**.

Revised Rating

Modest

OBJECTIVE 2 REVISION 2

Revised Objective

To improve the operational performance and viability of REGIDESO

Revised Rationale

At the February 2016 restructuring, which corresponded to the approval of the Additional Financing, PDO 2 was changed. The word "efficiency" in the original wording was replaced by "operational performance and viability." This period corresponded with a significant deterioration of REGIDESO's finances. Its operating cost ratio plummeted to 60 %, which was lower than the original baseline. This dismal position was driven by (i) a low collection rate for public and private customers, at 65 % and (-) 11.5 % of targets; (ii) a persistently high percentage of inactive connections (36 % versus the target of 20 %); (iii) the production of additional water reached only 36 % of the target; and (iv) negligible results in addressing non-revenue water losses.

The project's efficacy in achieving PDO 2 during this third period is rated **negligible**.

Revised Rating

Negligible

OBJECTIVE 2 REVISION 3

Revised Objective

To improve the operational performance and viability of REGIDESO

Revised Rationale



From the January 2019 restructuring until project closing, REGIDESO's financial situation just continued its steep decline and, by the time of ICR preparation, was below the baselines. The collection rate of public and private bills steadily declined. Despite the improvement in the ratio of staffing to number of connections, REGIDESO's human resources cost was not reduced due to: (i) the granting of costly benefits packages; (ii) salary increases that exceeded the inflation rate, i.e., 3.4 % and 2.6 %, respectively; and (iii) increases in the number of consultants who replaced departing staff. There was no progress in addressing non-revenue water losses, which was the case throughout project implementation.

The project's efficacy in achieving PDO 2 during this fourth and final period prior to project closing is rated **negligible**.

Revised Rating
Negligible

OVERALL EFFICACY

Rationale

Based on the sub-ratings presented above, the ratings for each of the four restructuring periods are as follows:

- From effectiveness in November 2009 to July 2012 - Negligible

Overall Efficacy Rating
Negligible

Primary Reason
Low achievement

OVERALL EFFICACY REVISION 1

Overall Efficacy Revision 1 Rationale

Based on the sub-ratings presented above, the ratings for each of the four restructuring periods are as follows:

- From July 2012 to December 2015 - Substantial

Overall Efficacy Revision 1 Rating
Substantial

OVERALL EFFICACY REVISION 2

Overall Efficacy Revision 2 Rationale



Based on the sub-ratings presented above, the ratings for each of the four restructuring periods are as follows:

- From February 2016 to December 2018 - Negligible

Overall Efficacy Revision 2 Rating
Negligible

Primary Reason
Low achievement

OVERALL EFFICACY REVISION 3

Overall Efficacy Revision 3 Rationale

Based on the sub-ratings presented above, the ratings for each of the four restructuring periods are as follows:

- From January 2019 to June 2021, when the project closed - Modest

Overall Efficacy Revision 3 Rating
Modest

Primary Reason
Low achievement

5. Efficiency

The project's efficiency in achieving the PDOs is modest at best, and not substantial as the ICR indicates. Although there is some data that suggests efficiency in increasing water access (PDO1), there is negligible if not zero evidence that the project had any demonstrable effectiveness in increasing the efficiency of REGIDESO (the original PDO2) or its operational performance and viability (the revised PDO at the time of Additional Financing).

Financial Efficiency. Based on evidence from the ICR itself (mainly Annex 4), the resources expended by the project (i.e., US\$88.4 million at appraisal and US\$98.15 million actual cost at completion) had negligible or no efficiency in achieving PDO2, as follows:

- REGIDESO was in a deficit situation throughout the project's life. The slight improvement after Additional Financing (from an average per year of FC -33.6 million to FC -31.3 billion) was not adequate to allow REGIDESO's financial viability to recover.
- By project closing, the collection rate for public arrears and private bills remained seriously low and even declined, causing major real shortfalls in REGIDESO's revenue. Receivables from public agencies were an especially significant portion of REGIDESO's overall deficits and largely accounted for its insolvency.
- REGIDESO's staff costs remained high at project closing, despite the staff restructuring plan and reductions in total staff, thus continuing to drive REGIDESO's high operating costs. Between 2015 to 2019, a high 36.4% of REGIDESO's total operating expenses were attributable to personnel costs. Although the number of staff per 1,000 connections decreased, the average annual cost per agent increased from US\$ 20,155 in 2016 to US\$ 20,550 in 2017.
- The ICR's Annex 4, Graph 1 (covering 12 years from 2009 to 2020) shows that although there were slight improvements in the collection rate for private customers and in the percentage of unbilled water,



the collection rate for public agencies declined precipitously, which represented strong contrary evidence to a substantial project efficiency rating.

- The project was unable to reduce non-revenue water. To the contrary, since 2012, the trend was toward a decrease in network efficiency

Based on sales revenue alone, the ICR calculated the project's financial internal rate of return (FIRR) as 7.2 % and the net present value (NPV) at US\$17.5 million using a 6 % discount rate. The detailed assumptions underlying the financial forecasts were not available in Annex 4 of the ICR.

Economic Efficiency. The ICR used the same methodology as in the PAD in updating the project's economic internal rate of return (EIRR) and NPV, with important updates related to the Additional Financing and the impact of the much later completion date on the timing of project benefits. The EIRR calculation covered over 20 years and used the same discount rate of 12 % as in the PAD. The project's benefit stream included the incremental water consumption, cost savings from improved operational performance by REGIDESO, and the "consumer surplus" that accrued to beneficiaries from having shifted to formal connections and standpipes, away from non-potable water sources

The ICR reports an overall project EIRR of 28.7% and an NPV of US\$ 70.9 million. When disaggregated across the three urban areas (Kinshasa, Lubumbashi, and Matadi), the EIRR (37.2%) and NPV (US\$58.5 million) is markedly higher in Kinshasa, given the size and diversity of the project investments allocated to the capital. This compares favorably with the PAD EIRR of 41 %. At lower discount rates of 10 % and 6%, the NPV increases to US\$ 98.5 million and US\$ 189.1 million, respectively.

Moreover, survey results from a project funded by the French Development Agency (the PILAEP 2 project) showed that the estimated time to collect 83 liters of water decreased from 142.7 minutes without the project to just 30 minutes with the project.

In summary, as Annex 4, paragraph 27 of the ICR indicates: "The project brought high economic profitability to millions of people living in Kinshasa, Lubumbashi, and Matadi, and [the Government] throughout several sectors (water, gender promotion, education, and health). However, the project was not able to improve the financial management of REGIDESO to the extent envisioned."

Administrative and Implementation Efficiency. The project's implementation record has been characterized by a large number of major delays that had serious consequences, including the necessity for repeated extensions of the project closing date. From the very start, the project could not commence implementation because the bidding documents for Kinshasa itself (under Component A) were delayed by 20 months, or almost two years; the works for private connections were delayed as well due to procurement issues. The works at Kindu were delayed because the detailed engineering studies were only nearing completion by the time of the original closing date, hence the Kindu works had to be dropped from the project. There were delays in constructing the Ozone water treatment plant, which had major negative impacts: only 36% and 57% of the water productivity and network construction targets were achieved, respectively, hence the water access target of 2.6 million people was also not achieved. These construction delays had a serious negative impact on REGIDESO's finances: the reduction of non-revenue water achieved only 6.7 percent of its target, due to large water losses in the network and delays in construction works, which resulted in little or no additional water production. Even the emergency procurement of chlorine for Kinshasa was seriously delayed in 2019; in any event, given REGIDESO's severe financial crisis, it did not have the funds to pay for the shipment. The Abbreviated Resettlement Action Plans (ARAPs) and Resettlement Action Plans (RAPs) were also delayed, resulting in a



delay in disbursements. The recruitment of the Administrative and Financial Officer to be responsible for overseeing financial management was also delayed.

The ICR's evidence demonstrates that the project's efficiency in achieving PDO1 (increased water access) is substantial, while that of PDO2 (improved efficiency, operational performance and viability of REGIDESO) is negligible. The project's administrative and implementation efficiency is modest. The project's overall efficiency is rated **modest**.

Efficiency Rating

Modest

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	✓	41.00	0 <input checked="" type="checkbox"/> Not Applicable
ICR Estimate	✓	28.70	0 <input checked="" type="checkbox"/> Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

While there was some over-ambitiousness in some of the activities, the past and current relevance of the project's PDOs to the strategies of the government and the Bank is high. Taking into account the change in PDO2 and the successive restructurings that changed the targeted outcomes, the assessment of the project's efficacy in achieving the two PDOs demonstrates a preponderance of negligible performance. The efficiency for PDO1 is substantial; however, the negligible efficiency for the critically important PDO2 of reforming REGIDESCO, together with the modest administrative and implementation efficiency, lead to an efficiency rating of modest. Based on these sub-ratings, the overall project outcome rating is moderately unsatisfactory.

To properly set this moderately unsatisfactory outcome in a larger context, it is worth noting the following (from the 2022 Country Partnership Framework, paragraph 221): "Through DRC Urban Water Supply Project (US\$365 million) and other emergency projects (around US\$500 million), 1,000 km of water pipes have been laid, with 2.5 million people gaining access to basic water supply services. Meanwhile, the population of Kinshasa has more than doubled—from six million to likely around 15 million—and the volume of investments has therefore not been sufficient to keep up with demographic trends and demand/need."

The derivation of the project's moderately unsatisfactory overall outcome rating based on the split-rating of its efficacy is presented below:

Split ratings (for efficacy) to derive the overall project outcome rating



	From effectiveness in November 2009 to July 2012 (original targets)	From July 2012 (targets were revised) to December 2015	From February 2016 (PDO2 and targets were revised) to December 2018	From January 2019 (targets were revised) to project completion on June 2021
Relevance of PDO	High			
Efficacy (PDO)	Negligible	Substantial	Negligible	Modest
Efficiency	Modest			
Outcome ratings	Unsatisfactory	Moderately Satisfactory	Unsatisfactory	Moderately Unsatisfactory
Numerical value of outcome ratings	2	4	2	3
Disbursement (US\$ million)	39.09	147.62	44.67	124.62
Share of disbursement	11%	41%	13%	35%
Weighted value of the outcome rating	0.22	1.64	0.26	1.05
Final outcome rating	3.17			
	Moderately Unsatisfactory			

a. Outcome Rating

Moderately Unsatisfactory

7. Risk to Development Outcome

The main threat to the long-term sustainability of the project's physical investments in water supply infrastructure is the limited improvement in REGIDESO's performance, despite the substantial increase in the number of people that have gained access to drinking water in the three main cities in DRC as a result of the project. REGIDESO continues to face the major critical challenges of high labor costs and non-payment of water bills incurred by official public institutions.

The Bank and the Government recognize this risk and remain committed to pursuing the water sector reform activities that have been initiated under the project, building upon the more robust institutional framework that offer new opportunities in the water sector. For instance, the design of the ongoing Kin Elenda project (P171141) in Kinshasa took into account the lessons learned from REGIDESO's performance improvement activities. A new Utilities of the Future approach is being used, which focuses initially on building REGIDESO's ownership of, and compliance with a 100-day plan. Based on internal steps taken and progress made, the project would finance the implementation activities. This step-wise approach is expected to result in better reform ownership, performance improvements, and alignment of activities with agreed outcomes and indicators.



8. Assessment of Bank Performance

a. Quality-at-Entry

The project's design was well grounded in the post-conflict issues that affected the DRC. The project was conceptualized as "a medium-term poverty reduction effort, with a strong focus on governance and shared growth. The CAS is derived from the PRSP, and actions proposed under the CAS are closely aligned with PRSP priorities." (PAD, paragraph 22). The project's urban focus also carefully took into account the peri-urban and rural focal areas that were already being pursued by other donors. The project's design also reflected the lessons from the 2007 Country Portfolio Performance Review, and the experience with similar projects in neighboring countries, notably with respect to promoting Public-Private Partnerships. Through several project preparation missions, the Bank team ensured that the project's design was adequately supported by technical analysis and detailed consultations with all engaged stakeholders at national and local levels, as well as other donors supporting DRC's water and sanitation sector. More specifically, the PAD indicates that: "The identification of beneficiary cities under the project comes from a study entitled "Analysis of the Efficiency of REGIDESO and the Institutional Framework in the DRC Urban Water Sector", carried out as part of project preparation. The interim reports of this study were widely disseminated for comment to all key stakeholders (in particular REGIDESO's management and unions, the Ministries of Energy, Portfolio, Finance, and Budget) as well as to donors active in the water sector in the DRC. These interim reports were further presented and discussed at two workshops organized by COPIREP, the government agency in charge of public enterprise reform, in Kinshasa in July and December 2007." One positive result of these close consultations is the decision to conduct joint supervision missions and concurrent reviews of critical documents with the African Development Bank (AfDB), which was financing a complementary project.

However, at the time of project preparation and appraisal, the Bank was unable to obtain concrete and sustained government actions to resolve the issue of non-payment of water consumption by official institutions. The sustainability of the project's outcomes depended on effectively addressing this issue, hence the extent to which this was feasible should have been addressed up front but was not. Indeed, this issue persisted and worsened during project implementation. Consequently, the scope and timetable for reforms proved lack realism, e.g., in the case of the management contract. The project design appears to have been over-ambitious in selecting a management contract approach that did not seem to be appropriately pitched to the low institutional capacities in a FCV country that was just emerging from a long period of conflict. In addition, there was a major need for strengthening procurement and contract management capacity before launching project implementation. Finally, there was also a large number of indicators, some of which overlapped, where as there was no means for tracking the sustainability of water access.

Quality-at-Entry Rating
Moderately Unsatisfactory

b. Quality of supervision



The Bank team conducted regular and in-depth supervision missions that included field visits and on-site physical inspection of project-financed facilities. As required, the team prepared Aide-Memoires and Implementation Supervision and Results Reports (ISRs) that included details on the progress (or lack thereof) of activities under the two Components. The supervision record shows that the Bank team has been candid in downgrading project performance during the periods when there was little or no implementation progress. The record also shows that the Bank team was proactive in taking timely action when major issues threatened to impede PDO achievement. A specific example was the in-depth review that the Bank team carried out related to the delays in the first bidding for works in Kinshasa, which was instrumental in contract launching and resumption of disbursement. The ICR indicates that “the Bank provided rapid and agile responses during the cholera outbreak and COVID-19 pandemic to allow REGIDESO to support the Government’s response to each.” Given the long project implementation period, it was likely that there were changes in the TTLs and composition of the Bank project team. The ICR does not discuss whether those changes had any impact on project implementation and the dialogue with the government.

A supervision issue that had a major negative impact was the series of four restructuring events during the project’s final years (corresponding to the Additional Financing period) that extended the closing date by six months each time. This hampered rather than facilitated the implementation of Component B (REGIDESO and sector reforms) since the REGIDESO and sector reforms required longer time periods to implement than the six-month extension provided. Instead of the “piecemeal” approach taken, the ICR argues that “Had a single two-year extension been granted, perhaps a more holistic approach might have been taken and some delays (e.g., linked to the construction of the Ozone WTP or the cancellation of works in Kindu) might have been achieved (*sic*).” (Note: the ICR probably meant “avoided”.)

Given the major shortcomings in quality at entry--notably the failure to tangibly address the non-payment of bills by official institutions, which directly impeded the achievement of PDO 2 on the financial viability of REGIDESO--as well as the repetitive short extensions of the AF closing days which negatively impacted supervision effectiveness, the overall Bank performance rating is moderately unsatisfactory.

Quality of Supervision Rating

Moderately Satisfactory

Overall Bank Performance Rating

Moderately Unsatisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

The Project Appraisal Document (PAD) included a Results Framework (RF) but did not have a theory of change, which was not yet required at the time of appraisal according to the ICR. The RF delineated the links between the individual project components/activities and their corresponding intermediate and final outcome indicators, and their respective baselines and targets, all leading towards achieving the PDOs of constructing the water supply infrastructure and implementing the water sector reform. The data sources and entities responsible for data collection were also enumerated. Despite the RF’s streamlining during the



June 2012 restructuring, it still had a long list of indicators, particularly for Component B on sector reforms. Actions were difficult to prioritize given the long list of sometimes overlapping RF indicators.

M&E design had major shortcomings. First, it should have included a more specific PDO indicator specifically aimed at defining and tracking the sustainability of water access. Second, the overlapping or identical indicators should have been further streamlined or deleted. For example, the "Proportion of bills owed by IO in total billing" provides the same type of information as "Proportion of volumes owed by IO in total volumes owed"). Similarly, some indicators are not well articulated and ask for information that is unlikely to change during implementation, such as the "Number of a water utility (*sic*) that the project is supporting". This indicator is cryptic, since the project only supported REGIDESO.

b. M&E Implementation

Implementing the M&E framework was straightforward. REGIDESO's PIU was centrally responsible for the overall coordination, production, verification, quality assurance, and final validation of M&E activities and data, with inputs from REGIDESO centers and departments. COPIREP also provided data specific to the progress of water sector reforms.

Although the M&E framework was revised and streamlined to reflect and better monitor changes in activities and scale-ups, many intermediate indicators still showed redundancy and overlap, which should have been resolved during the project restructurings. An important shortcoming during implementation is the failure to develop a comprehensive Water Sector Information System (SIS) to monitor and evaluate the water assets, and guarantee data retention by transferring that centralized database to REGIDESO after the project. The database in Kinshasa intended to manage and improve customer service was a positive first step toward an integrated SIS for all of REGIDESO's assets.

c. M&E Utilization

The M&E data were used to inform project management and formulate decisions, and were reported in Implementation Status and Results Reports (ISRs). This was evident during the preparations for the 2016 and 2018 restructurings, when indicator targets were revised based on the tracking of the household connections program. The 2016 restructuring involved the scaling-up of targets, based on M&E data. The PIU also used the M&E data to prepare the project's quarterly reports and used the information to identify problems and target the implementation bottlenecks in different cities. For example, weekly tracking in Kinshasa resulted in a more efficient household connection program; hence, the approach of using field supervisors was replicated in other cities. Nonetheless, the 2016 restructuring should have added a PDO indicator to assess REGIDESO's operational performance. The absence of such an indicator had a negative impact in assessing the efficacy of reforms.

While recognizing that the indicators could have been better rationalized during the project restructurings to eliminate redundancies and irrelevancies, the M&E system did provide an effective and reliable tool to monitor project performance and assist decision-making. Overall, M&E quality is rated substantial.



M&E Quality Rating

Modest

10. Other Issues

a. Safeguards

At appraisal, the project triggered the Environmental Assessment (OP/BP 4.01) and Involuntary Resettlement (OP/BP 4.12) safeguard policies. During the Additional Financing for the project, two other policies were triggered: Physical Cultural Resources (OP/BP 4.11) and Projects on International Waterways (OP/BP.7.60), the latter in view of the planned ozone water treatment plant. The project was classified as Category B.

To comply with safeguards, PIU prepared an Environmental and Social Management Framework (ESMF) and the Resettlement Policy Framework (RPF), which were disclosed in the selected project sites in accordance with the Bank's disclosure policies. For civil works, CEP-O prepared Environmental and Social Impact Assessments (ESIAs) and Abbreviated Resettlement Action Plans (ARAPs) and Resettlement Action Plans (RAP) when necessary. With respect to the International Waterways policy, compliance involved sending a notification dated July 7, 2015 from the DRC Government to the riparian countries through the Commission Internationale du Bassin Congo-Oubangui-Sangha (CICOS). Near project closing, the Contractor's Environmental and Social Management Plans (ESMPs) were modified to include COVID-19 prevention and mitigation measures using Bank guidelines.

When the project closed, compliance with all the safeguard policies was rated Satisfactory, except for the Involuntary Resettlement policy, which was rated Moderately Satisfactory, due to the delay in completing the ARAP and RAP in the three cities, which in turn delayed disbursement for Component A. Hence the overall rating at project closing was Moderately Satisfactory for safeguards compliance. Moreover, a RAP in Kinshasa was implemented without Bank approval, which was resolved through a Government report assessing economic loss that the Bank found satisfactory. Otherwise, implementation of all the planned actions was satisfactory; the environmental and social impacts of works were mitigated in line with the standards and guidelines in the project contracts.

From the time of the Additional Financing, a Grievance Redress Mechanism (GRM) was in place and functional in all project sites. PAPs and anyone with a project-related complaint or concern had access to the GRM. A call center with a free number and trained local complaint management committees were established in Kinshasa, to proactively resolve grievances. By project closing, 187 complaints were registered, all of which were processed; 162 were founded and 25 were unfounded.

Since the project's start-up, seven Occupational Health and Safety (OHS) incidents have been reported. The ICR reported that none were severe. All incidents were accounted for through the Environmental and Social Incident Response Toolkit (ESIRT), and were closed. The Bank team and the PIU checked contractors and consultants regularly to monitor the occurrence and appropriate resolution of any OHS incidents, as well as the preparation and implementation of Safeguards Corrective Action Plans.



b. Fiduciary Compliance

Procurement. Although procurement was initially satisfactory and remained so until December 2017, it was downgraded to, and stayed Moderately Satisfactory until project closing. This resulted from procurement delays for key infrastructure (e.g., Kindu construction works, the ozone treatment plant) which led to significant implementation slowdowns and the need for several closing date extensions. During supervision missions, the Bank team identified issues in some selections that were reported under post review, which the PIU addressed by updating the project implementation manual (PIM) in line with the General Procurement Guidelines, with a view to more clearly defining the functions of the international procurement expert. This PIU action was satisfactory to the World Bank. The Bank team also noted issues during the Procurement Post Reviews (PPR), and its recommendations were implemented properly. A positive aspect is that the project has been set as an example of using STEP for procurement.

Financial Management (FM). The project's FM arrangements were rated as Satisfactory or Moderately Satisfactory throughout implementation. Nonetheless, in February 2017, the Bank's supervision mission found that FM could be improved, and provided recommendations that the PIU addressed. In August 2018, however, the FM rating was downgraded to Moderately Unsatisfactory when certain ineligible expenses were identified through an in-depth review. There were also delays in recruiting the administrative and financial officer (AFO). The rating was upgraded back to Moderately Satisfactory after the ineligible costs were reimbursed to the Bank and the AFO was recruited. The ICR (page 25) did not provide any information regarding financial audits.

c. Unintended impacts (Positive or Negative)

d. Other

11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Unsatisfactory	Moderately Unsatisfactory	
Bank Performance	Moderately Satisfactory	Moderately Unsatisfactory	There were serious shortcomings in Bank quality at entry and the piecemeal extensions seriously hampered supervision effectiveness.
Quality of M&E	Substantial	Modest	There was no indicator to measure the sustainability of water access and many indicators were overlapping or repetitive.
Quality of ICR	---	Substantial	



12. Lessons

The following four lessons were derived from the project's implementation experience. The first lesson was formulated by IEG while the other three lessons were from the ICR, with some modifications.

The scope and timetable for reforms need to be realistic and scaled to match the capacity of implementing institutions, particularly in FCV countries. The management contract in the original project design proved too ambitious, given the FCV conditions in the DRC. It did not attract interest from the private sector and the tendering was unsuccessful. The project's ambition was lowered to that of a less-binding service contract, which ultimately proved insufficient to implement meaningful reforms in the water sector.

The implementation of ambitious reforms requires an agile and adaptive approach as local conditions change. After the failure of the management contract tendering, the project should have been restructured to move toward more straightforward and realistically achievable objectives that better reflect the change in strategy toward that of a service contract. The revision towards more modest water sector reform goals should have focused on gradually building the Government's trust with the reform process in the short term, thus laying the groundwork for introducing more ambitious reforms in the longer term.

To achieve systemic changes, Government support needs to be sustained and demonstrated at the highest levels. The project's poor performance takes root in the State's lack of involvement in resolving the major issue of non-payment of water consumption by official institutions and beneficiaries, and the lack of public funding for the water sector, thus preventing the financial recovery of REGIDESO. The project closed with REGIDESO facing serious financial losses linked to non-payment of public arrears and persistent issues with its human resources. These two challenges need to be addressed; otherwise, any significant performance improvements would not be sustainable. However, these reforms require sustained championing and engagement from the highest levels of Government. With the DRC's FCV conditions, and weak support in the previous as well as the new Government, the targeted changes were not attained. seen during the project, this support was not sufficient to reach the level of change initially targeted. For the Bank's part, an in-depth understanding the political economy and local context at appraisal and throughout implementation is essential factor in achieving targeted results.

The required procurement and contract management capacity need to be strengthened and in place prior to project approval. Sound engineering design studies were lacking prior to the Board approvals of the original project and the Additional Financing. This resulted in procurement delays and poor contract management performance, which in turn led to major implementation delays and repeated extensions of the project closing date. The engineering design studies and the bidding documents should have been completed (by the project PIU) at the early stages of project preparation, thus enabling the bidding process to start upon project approval. The project PIU also need to be provided technical assistance and continued capacity building in contract management to enable the timely completion of the civil works and avoid successive postponements that in turn lead to numerous project closing date extensions.



13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR is well prepared, especially in its focus on providing quantitative evidence and its candor. The ICR constructed an ex-post theory of change (not in the PAD), which was notable in presenting the underlying sector issues before outlining the causal chains from inputs to final outcomes. It required much effort to delineate the inputs, outputs and outcomes for each of the four periods that had to be separately assessed, given the three major restructurings that changed the second PDO, the outcomes, and the outcome targets. The ICR was consistent with the Bank guidelines for ICR preparation, notably in its application of the split rating methodology.

However, the ICR did not discuss the project's administrative and implementation efficiency under the Efficiency section. Moreover, there was a large number of errors in the text. There were numerous spelling mistakes and wrong words used (in some cases the wrong verbs were used), which changed the meaning of the sentences. There were also numerical errors. A few of many other examples are given below:

Paragraph 14: From the previous closing date of December 31, 2018, the ICR stated that an extension of "six months" was granted, and the new closing date was December 31, 2019. The correct length of the extension is twelve months, not six. Similarly, in June 2020, the extension of 6 months from June 30, 2020 would result in a new closing date of December 31, 2020, not December 31, 2021 as the ICR indicates.

Paragraph 23 refers to December 2018 as "Two years after the Additional Financing...", thus implying that the AF occurred in 2016. However, paragraph 21's subtitle refers to "the Additional Financing of October 2015."

Annex 3. For Component A, the actual cost (US\$215.85 million) as a percentage of cost at approval (US\$101.6 million) is not 84%. Similarly, for Component C, the actual cost (US\$98.15 million) as a percentage of cost at approval (US\$88.4 million) is not 100%. Respectively, the correct figures are 212% and 111%.

Although an effort should have been clearly made in proofreading the text to eliminate the high number of errors, the overall quality of the ICR is rated substantial.

a. Quality of ICR Rating

Substantial

