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**The World Bank**  
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Report No: ICR00004669

IMPLEMENTATION COMPLETION AND RESULTS REPORT

< H435-ZR, D102-ZR >

ON A

GRANT

IN THE AMOUNT OF SDR 242 MILLION

(US\$ 356.1 MILLION EQUIVALENT)

TO THE

Ministry of Finance

FOR THE

DRC Urban Water Supply Project

February 27, 2022

Water Global Practice  
Africa Region

## CURRENCY EQUIVALENTS

(Exchange Rate Effective {June 30th, 2021})

Currency Unit = Franc Congolais (Fc)

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FC 1,987.99 = US\$1

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US\$ 1.43 = SDR 1

### FISCAL YEAR

January 1 - December 31

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## ABBREVIATIONS AND ACRONYMS

AF	Additional Financing
AfDB	African Development Bank
AFO	Administrative and Financial Officer
AGREE	Projet de Gouvernance et d'Accès à l'Électrification, à l'Eau et à l'Assainissement.
CAS	Country Assistance Strategy
CEP-O	Project Implementation Unit (Cellule d'Exécution du Projet)
CICOS	Commission Internationale du bassin Congo-Oubangui-Sangah
COPIREP	Steering Committee for the Reform of State-owned Enterprises
COVID-19	Corona Virus Disease 2019
CMU	Country Management Unit
DRC	Democratic Republic of Congo
EIRR	Economic Internal Rate of Return
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESIRT	Environmental and Social Incident Response Toolkit
FA	Financing Agreement
FC	Franc Congolese
FCV	Fragile Conflict and Violence
FIRR	Financial Internal Rate Return
FM	Financial Management
GDP	Gross Domestic Product
GoDRC	Gouvernement of Demonicratic Republic of Congo
ICR	Implementation Completion and Results Report
IO	Instance Officielle
IRR	Internal Rate Return
ISR	Implementation Status and Results Report
M&E	Monitoring and Evaluation
MC	Management Contract
MP	Minsitere du Portefeuille
MS	Moderately Satisfactory
MU	Moderately Unsatisfactory
NPV	Net Present Value
O&M	Operations and Maintenance
OHS	Occupational Health and Safety
OI	Official Institutions
OP/BP	Operational Policy / Bank Procedure
PAD	Project Appraisal Document
PAP	Project Affected Persons

PARP	Poverty Reduction Action Plans
PDO	Project Development Objective
PEASU	Projet d'Eau d'Assainissement en Milieu Semi-Urbain
PEMU	Urban Water Supply Project
PILAEP	Promotion de modalités Innovantes pour L'Accès à l'Eau Potable
PIU	Project Implementation Unit
PPR	Procurement Post Review
PRSP	Poverty Reduction Strategic Paper
RAP	Resettlement Action Plan
REGIDESO	State Water Utility Company – DRC
RF	Result Framework
SC	Service Contract
SCD	Systematic Country diagnostic
SDR	Special Drawing Right
SRP	Staff Restructuring Plan
SWC	Social water connections
TOC	Theory of Change
UNICEF	United Nations Children's Fund
USD	United State Dollard
WASH	Water Sanitation Hygiene
WB	World Bank
WSS	Water Supply and Sanitation
WTP	Water Treatment Plant

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**DATA SHEET**

**BASIC INFORMATION**

**Product Information**

Project ID P091092	Project Name DRC Urban Water Supply Project
Country Congo, Democratic Republic of	Financing Instrument Investment Project Financing
Original EA Category Partial Assessment (B)	Revised EA Category Partial Assessment (B)

**Organizations**

Borrower Ministry of Finance	Implementing Agency COPIREP, REGIDESO, REGIDESO, Democratic Republic of Congo, Represented by the Ministry of Finance
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**Project Development Objective (PDO)**

Original PDO

The project objective is to increase sustainable access to water in selected urban areas and the efficiency of REGIDESO.

Revised PDO

The revised PDO is to increase access to sustainable water services in selected urban areas, and to improve the operational performances and viability of the Project Implementing Entity.

PDO as stated in the legal agreement

to increase sustainable access to water in selected urban areas and improve the efficiency of the Project Implementing Entity



**FINANCING**

	<b>Original Amount (US\$)</b>	<b>Revised Amount (US\$)</b>	<b>Actual Disbursed (US\$)</b>
<b>World Bank Financing</b>			
TF-92105	78,000	65,087	65,087
IDA-H4350	190,000,000	189,278,695	190,543,563
IDA-D1020	166,000,000	123,856,300	120,105,946
<b>Total</b>	<b>356,078,000</b>	<b>313,200,082</b>	<b>310,714,596</b>
<b>Non-World Bank Financing</b>			
Borrower/Recipient	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Project Cost</b>	<b>356,078,000</b>	<b>313,200,083</b>	<b>310,714,597</b>

**KEY DATES**

<b>Approval</b>	<b>Effectiveness</b>	<b>MTR Review</b>	<b>Original Closing</b>	<b>Actual Closing</b>
18-Dec-2008	13-Jun-2008	19-Nov-2012	31-Mar-2014	30-Jun-2021

### RESTRUCTURING AND/OR ADDITIONAL FINANCING

Date(s)	Amount Disbursed (US\$M)	Key Revisions
17-Jul-2012	39.09	Change in Results Framework Change in Loan Closing Date(s) Reallocation between Disbursement Categories Change in Procurement
10-Jul-2013	74.70	
16-Oct-2015	171.72	Change in Loan Closing Date(s) Reallocation between Disbursement Categories
03-Feb-2016	186.71	Additional Financing Change in Project Development Objectives Change in Results Framework Change in Components and Cost Change in Loan Closing Date(s) Change in Disbursements Arrangements Change in Safeguard Policies Triggered Change in Legal Covenants Change in Procurement Change in Implementation Schedule
21-Dec-2018	231.38	Change in Results Framework Change in Components and Cost Change in Loan Closing Date(s)
25-Jun-2019	255.76	Change in Loan Closing Date(s)
05-Jun-2020	284.97	Change in Loan Closing Date(s)
23-Dec-2020	299.35	Change in Loan Closing Date(s)

### KEY RATINGS

Outcome	Bank Performance	M&E Quality
Moderately Unsatisfactory	Moderately Satisfactory	Substantial

### RATINGS OF PROJECT PERFORMANCE IN ISRs

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US\$M)
01	18-May-2009	Satisfactory	Moderately Satisfactory	.76
02	30-Nov-2009	Satisfactory	Moderately Satisfactory	.98





03	12-Jun-2010	Satisfactory	Moderately Satisfactory	2.84
04	26-Apr-2011	Moderately Unsatisfactory	Moderately Unsatisfactory	17.75
05	11-Oct-2011	Moderately Unsatisfactory	Moderately Unsatisfactory	28.71
06	12-May-2012	Moderately Unsatisfactory	Moderately Satisfactory	33.66
07	24-Oct-2012	Satisfactory	Moderately Satisfactory	40.17
08	05-May-2013	Satisfactory	Satisfactory	55.44
09	16-Nov-2013	Satisfactory	Satisfactory	78.92
10	09-Jun-2014	Moderately Satisfactory	Moderately Satisfactory	111.51
11	15-Dec-2014	Moderately Satisfactory	Moderately Satisfactory	142.07
12	05-Jun-2015	Moderately Satisfactory	Moderately Satisfactory	156.88
13	04-Sep-2015	Moderately Satisfactory	Satisfactory	167.35
14	18-Jan-2016	Moderately Satisfactory	Satisfactory	186.71
15	31-Oct-2016	Satisfactory	Satisfactory	191.34
16	05-Jun-2017	Moderately Satisfactory	Moderately Satisfactory	206.38
17	23-Jan-2018	Moderately Satisfactory	Moderately Satisfactory	208.04
18	03-Aug-2018	Moderately Satisfactory	Moderately Unsatisfactory	223.51
19	08-Feb-2019	Moderately Unsatisfactory	Moderately Unsatisfactory	235.90
20	09-Aug-2019	Moderately Satisfactory	Moderately Unsatisfactory	259.58
21	05-Feb-2020	Moderately Satisfactory	Moderately Satisfactory	277.67
22	05-Aug-2020	Moderately Satisfactory	Moderately Satisfactory	288.50
23	03-Feb-2021	Moderately Satisfactory	Moderately Satisfactory	300.54



**SECTORS AND THEMES**

**Sectors**

Major Sector/Sector (%)

**Water, Sanitation and Waste Management 100**

Water Supply 95

Public Administration - Water, Sanitation and Waste Management 5

**Themes**

Major Theme/ Theme (Level 2)/ Theme (Level 3) (%)

**Private Sector Development 0**

Public Private Partnerships 10

**Public Sector Management 0**

Public Administration 24

Transparency, Accountability and Good Governance 24

**Urban and Rural Development 0**

Urban Development 76

Services and Housing for the Poor 76

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## 1. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

### A. CONTEXT AT APPRAISAL

#### Context

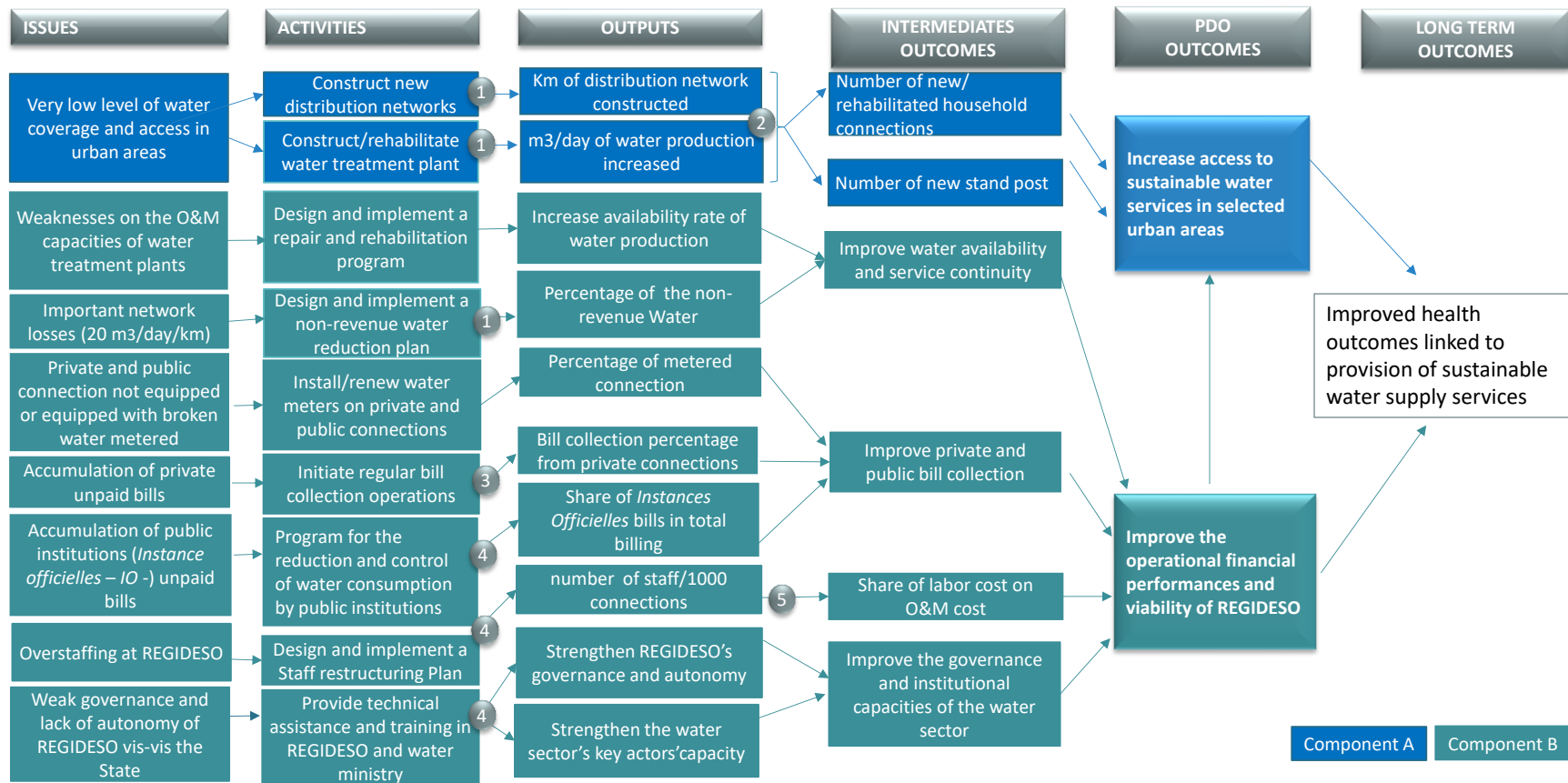
1. At the time of appraisal of the PEMU project, the Democratic Republic of Congo (DRC) was in a post-conflict situation. The country was among the poorest countries in the world, with a GDP per capita of US\$139 (CAS, 2007). Despite economic growth, which restarted in 2001, 94.3 percent of the population lived on less than \$1.9 per day in 2004. In addition, the infrastructure suffered from a lack of maintenance, considerable physical damage, and weak governance, which exacerbated the poor quality of social services delivery and reduced access to the poorest part of the population.
2. The Water Supply and Sanitation (WSS) sector was particularly affected during and after the conflict. In 2008, only 22 percent of the total population had access to safe drinking water. The country needed to provide an additional 45 million people access in order to meet the Millennium Development Goal target of 71 percent access by 2015, which represented a significant challenge. In addition, the service delivery in urban areas was inefficient. From 1990 to 2006, the rate of water supply services coverage in urban areas fell from 68 percent to 35 percent, due to combined effects of the war, lack of investment and maintenance, suspension of aids, commercial and technical inefficiency of the national water utility, REGIDESO, and population growth.
3. The commercial, technical and managerial inefficiency of REGIDESO was particularly challenging and needed to be addressed to ensure a sustainable water service provision. At the time of appraisal, Water services ceased to function in more than 30 of the 94 urban centers supplied by REGIDESO, and many neighborhoods of the remainder, including the capital city, Kinshasa, faced long-lasting service interruptions. The dearth of REGIDESO services led many communities to install autonomous water networks, particularly in peri-urban areas of major cities, but those efforts were insufficient to avoid the decline of the coverage rate of urban water supply (UWS) services. Whereas in the 1980s, REGIDESO was one of the best-performing African water utilities, later its key performance indicators (non-revenue water [NRW], collection rate, and staff productivity) significantly deteriorated, half of the service connections became inactive, and the water sales decreased markedly. In addition, REGIDESO employed 4,803 staff and had about 247,000 active connections. Benchmarking REGIDESO to other performing water utilities in the region at that period and using any classic ratios (staff/connections, turnover/staff, and sales per m<sup>3</sup> per staff) clearly indicated that the utility was overstaffed.

#### Theory of Change (Results Chain)

4. The Project Appraisal Document (PAD) did not require a Theory of Change (TOC) or Results Chain. Therefore, an ex-post TOC was constructed based on the PDO, the results indicators, and the PAD description. Figure 1 summarizes the reconstructed TOC underlying the Project. The different changes throughout the project implementation (see section B.), including the additional financing, did not change the TOC as the PDO and long-term outcomes remain similar.



Figure 1: Theory of change



**Critical Assumptions**

- REGIDESO has the necessary engineering and management expertise (including expertise for non-revenue water management) to make performance improvements and oversee construction
- Water resources and energy are not limited in the project zones
- Customers (new and existing) are able and willing to pay for service
- The Government is committed to the infrastructure priorities and reform needs within REGIDESO
- Voluntary departures (initiated as part of the staff restructuring plan) make it possible to reduce high-paying positions in order to significantly reduce the labor cost.



## Project Development Objectives (PDOs)

5. The original PDO defined in the Financing Agreement (FA) is "to increase sustainable<sup>1</sup> access to water in selected urban areas and improve the efficiency of the Project Implementing Entity."

## Key Expected Outcomes and Outcome Indicators

6. The original PDO defined in the FA was structured around two objectives, unpacked with corresponding outcome indicators below:

**Objective 1: increase sustainable access to water in selected urban areas**, corresponding to the outcome: (i) "greater access to basic water supply services, mainly through household connections and standposts," measured by the percentage of people in the targeted cities with access to potable water.

**Objective 2: improve the efficiency of the Project Implementing Entity.** This objective has two outcomes: (i) "reduced losses and higher productivity" and (ii) "improved financial position of REGIDESO." Unfortunately, there was no PDO indicator to measure the first outcome at approval. Still, three intermediate indicators were used to measure this outcome: percentage of non-revenue water, increased water production, and index of network losses. The second outcome is measured by the percentage of annual REGIDESO operation & maintenance (O&M) costs covered by revenues.

## Components

7. As described in the PAD of the parent Project (P091092, US\$190 million) and the Additional Financing (AF) (P155266, US\$166 million), the Project is organized into two components that covered three urban areas: Kinshasa, Lubumbashi, and Matadi.

**Component A - Water supply services in major urban centers:** (cost at appraisal US\$101.6 M; increased to US\$257.85 million after the additional financing; actual cost at completion US\$215.85 million<sup>2</sup>). REGIDESO implemented the component through an internal PIU (CEP-O). The component had two types of activities:

- **improve water production capacity toward** (i) the rehabilitation and expansion of production facilities, mainly in Lubumbashi and Matadi; (ii) the rehabilitation of pumping stations (all cities) and (iii) the rehabilitation/construction of storage tanks in Lubumbashi.
- **improve the distribution system** (both secondary and tertiary networks) and finance individual connections and collective distribution through (iv) the rehabilitation of distribution pipes and household connections (all cities); (v) the construction of new household connections and standposts (all cities); and (vi) the provision and installation of water meters (all cities)

**Component B – Support to sector reform, capacity building, and improved governance:** (cost at appraisal US\$88.4 M; increased to US\$98.15 million after AF; actual cost at completion US\$98.15 million). The component was envisioned to be implemented by COPIREP (*Comité de pilotage de la réforme des entreprises publiques*), a national Steering Committee created to implement the reform of State-owned enterprises. The component was designed based on an in-depth assessment of the REGIDESO's technical and commercial performances (described in para 3). It includes the following activities: (i) A Management Contract with a private operator, (ii) a repair and rehabilitation fund, (iii) a staff restructuring Plan (SRP) for REGIDESO, (iii) a program for the reduction and control of water consumption by public institutions (*instances officielles, IO*). These activities aimed to address the issues described in the TOC (figure 1) in order to achieve the PDO2.

<sup>1</sup> There is a difference between the FA and the PAD PDO: The PDO in the PAD doesn't mention the sustainability dimension of the water access. It is limited "to increase access to water in selected urban areas and increase the efficiency of REGIDESO"

<sup>2</sup> Partial grant cancellation, see para 16.



## B. SIGNIFICANT CHANGES DURING IMPLEMENTATION

### Revised PDOs and Outcome Targets

8. **The PDO was revised in February 2016 restructuring as follows:** "to increase access to sustainable water services in selected urban areas, and to improve the operational performances and viability of the Project Implementing Entity."
9. **This restructuring was linked to an additional financing aiming to scale up the original project objective 1.** Therefore, the target of its outcome indicator, "the number of people provided with access to sustainable water services supply," increased from 1,205,000 to 2,600,000 people to reflect the additional activities. The change in PDO also further clarified the performance improvement expected for REGIDESO.

### Revised PDO indicators

10. **The PDO indicator associated with the first outcome was revised twice** respectively during the restructurings of July 2012 and February 2016:
  - **The first change was: people in urban areas provided with access to "Improved Water Sources" under the project.** The indicator value shifted from percentage to number to align with the current practice and wording for sector indicators.
  - **The second change was: people provided with access to "Improved Water Sources" under the project.** The word "urban" was removed to include some beneficiaries in peri-urban areas of the targeted cities.

### Revised Components

11. **On July 2012 restructuring, the scope and activities of three sub-components under the component B were revised as follow:**
  - Sub-component B.1 (Management Contract – MC-) was renamed "Services Contract-SC-."
  - Sub-component B.2 (Repair, Replacement, and Rehabilitation Fund) was renamed "Repair, Replacement, and Rehabilitation and Operational Support Fund."
  - The scope of Sub-component B.3 (Staff Restructuring Plan) was reduced, leading to cost-saving.

### Other Changes

12. **In July 2012 restructuring, the intermediate indicators were streamlined.** During the preparation of the SC scope of work, the intermediate indicators were streamlined in order to: (i) align the sector related indicators with current practice updated vocabulary, (ii) align the PAD list of indicators with the list provided in the Financing Agreement<sup>3</sup>, and (iii) streamline the number of Intermediate Results indicators (18), which was not only excessive but also already reflected in the Performance Contract (PC) signed between the GoDRC and REGIDESO. Overall, several indicators were revised to refine the language and ensure consistency across documents, and eight indicators judged redundant with the PC were dropped. Annex 6 (Table I) shows a summary of the specific changes.
13. **The AF, in February 2016, revised the scope of the project** by adding the city of Kindu as new beneficiaries of water facilities funded under component A. **The December 2018 restructuring then reduced the scope of the Project by removing activities scheduled for the city of Kindu.** Therefore, some intermediates outcomes targets were reduced to reflect the changes, but it did not impact the outcome target of the PDO 1.
14. **During the twelve years of the project implementation, seven extensions of its closing date occurred, in addition**

<sup>3</sup> Financing Agreement, Grant NUMBER H435-ZR, January 19, 2009



to the initial length of 64 months. The first closing date of the project was April 31<sup>st</sup> 2014. The different extensions are summarized below:

- Restructuring of July 2012: 21-month extension, new closing date December 31, 2015
  - Restructuring of October 2015: 4-month extension, new closing date April 15, 2016
  - Restructuring of February 2016: 36-month extension, new closing date December 31, 2018
  - Restructuring of December 2018: 6-month extension, new closing date December 30, 2019
  - Restructuring of June 2019: 6-month extension, new closing date June 30, 2020
  - Restructuring of June 2020: 6-month extension, new closing date December 31, 2021
  - Restructuring of December 2020: 6-month extension, new closing date June 30, 2021.
15. **During three of the Project restructurings, cost savings were found and used to finance the next activities, namely:**
- After the SRP, 446 employees opted for separation, against a PAD estimate of about 1,000 people. Consequently, in July 2012, a first cost saving of US\$5 million was reallocated to finance six months of chemicals needed for REGIDESO's operations.
  - **Two others cost-saving occurred, respectively, as part of the July 2013 restructuring (US\$44.46 million) and October 2015 restructuring (SDR 14.57 million).** They were reallocated to component A activities to increase water production and the number of people accessing water. The July 2013 savings were due to lower than anticipated costs for certain works (as during preparation in 2008, unit costs of activities were based on estimates).
16. **Partial grant cancellation before closing:** By the project's closing date two major activities (the Ozone Water Treatment Plant -WTP- and N'djili intake plant, included in rehabilitation works) were not achieved. It was decided that these activities would be financed instead by a new project (Kin Elenda, P171141. The committed amount for these works was 29,500,000 SDR (approximately US\$ 42 million). This amount was canceled through the last project restructuring of June 2021, and funds from the new project (Kin Elenda) were allocated to cover the remaining construction costs.
- Rationale for Changes and Their Implication on the Original Theory of Change**
17. **Restructuring of July 2012.** Two years after the project's effectiveness, there was no significant progress in the project implementation, except the SRP completion. The progress toward the PDO and the implementation were rated Moderately Unsatisfactory because both components A and B faced significant setbacks described below:
18. **For component A,** infrastructure investments, the bidding documents for Kinshasa were delayed by about 20 months, which necessitated the first extension of the project closing date.
19. **For component B,** sector reform, the MC bidding failed to attract qualified operators. This high-risk bidding process occurred in a context of institutional fragmentation and poor governance of the sector that hampered the DRC water reform. After the unsuccessful bidding process, the objectives of the MC were transferred to REGIDESO through a performance contract signed with GoDRC. Three years of Service Contract (SC) was also signed with a private operator to help REGIDESO reach its objectives under the performance contract. As mentioned above, several changes occurred in the project's intermediate indicators and in some of its components to reflect the evolving realities seen during implementation.
20. **The scope of the Service Contract remained the same as for the Management Contract,** with two series of activities:  
(i) a number of assessments and action plans to improve REGIDESO's commercial, technical, and human resource



performances and the preparation of a tariff study; and (ii) management assistance, including strategy formulation, water production and distribution, and commercial, human resource, and financial management. However, the Services Provider did not carry out full managerial responsibilities. The private operator does not take on decision-making nor fiduciary responsibilities for the water utility. The utility remains exclusively in the hands of the utility's own management structure. This approach allowed the Project to attract qualified firms but limited the scope of improvements that could be achieved through the SC.

21. **Restructuring and Additional Financing of October 2015. The project's closing date was extended from December 2015 to March 2016 to incorporate the additional financing.** Three years after the in-depth restructuring of July 2012, the project was on track to achieve its PDO as the works scheduled in component A were almost completed, providing access to improved water sources to about 1,248,420 people (i.e., 100 percent of the end-of-project objective). The progress in component B was also satisfactory since the operating cost ratio reached 101.2 percent (with a 104 percent end-of-project target). Based on these results and in response to a Government request, the World Bank approved an additional financing for the project. The additional financing aimed to scale up the development effectiveness and impact of the project by delivering additional results through the implementation of new activities in line with the original project objective.
22. **Restructuring of February 2016.** This restructuring revised the PDO to emphasize the "Services" dimension of component B, associated with the "sustainable water access of component A, and to replace the word "efficiency" in the original PDO with "operational performances and viability" as areas of efficiency expected from the Project Implementing entity. Therefore, the wording of the PDO indicators was revised accordingly to reflect these changes. In addition, the GoDRC requested to enhance the scope of the infrastructure component by adding Kindu as a new targeted city. The infrastructure in this city concerned a new water treatment plant, the rehabilitation and expansion of water transmission, storage, and distribution facilities, and the construction of 1,000 social connections (i.e. subsidized connection fees) and 50 standposts. Several existing outcomes and outputs indicators targets (mainly in the infrastructure component) were also increased to reflect the impact of the AF activities. The design studies of these investments have been prepared during the parent project. The AF will then prepare the detailed design studies. The overall structure of the project components did not undergo significant changes. (Table I. Annex 6). The project was also extended by three years to implement the scale-up activities in the infrastructures component and continue the water sector reform.
23. **Restructuring of December 2018.** Two years after the approval of the AF, the progress towards achievement of the PDO was rated Moderately Satisfactory (MS). However, the project implementation was rated Moderately Unsatisfactory (MU) since many activities planned would not be achieved by the end of the project's closing date (December 2018). Three major activities were particularly of concern: (i) the construction of the WTP at Ozone in Kinshasa, delayed due to procurement challenges and the anticipated two-year construction timeline; (ii) the private connection works, delayed by procurement process to equip the private connections and, (iii) the Kindu works, also delayed due to preparation of detailed design studies, which have just been finalized at the project initial closing date. Considering the overall ten years of implementation of the PEMU project and the anticipated six months for the bidding process, it was decided to cancel all the activities in Kindu. The scope of component A and some output indicators targets were reduced to reflect the cancellation (Table I. Annex 6). The project's closing date was extended by six months to ensure satisfactory completion of Ozone WTP works, which were already started.





24. **The six-month extension (December 2018 restructuring) did not provide enough time to procure and complete the construction of the Ozone WTP.** Therefore, it was decided that these activities would be financed through a new project (Kin Elenda, P171141). Because preparation of the new project took longer than anticipated three additional structurings (2019, 2020, and 2021) were needed to extend the closing date by six months each time.

## 2. OUTCOME

### A. RELEVANCE OF PDOs

#### Assessment of Relevance of PDOs and Rating

##### *Rating: High*

25. **The Project's objectives remain highly relevant** regarding its consistency with (i) the country development priorities<sup>4</sup>, (ii) the most recent country partnership strategy,<sup>5</sup> and (iii) the country's commitments to regional<sup>6</sup> and international agendas<sup>7</sup>.
26. **The PDO is still fully aligned with the Government Poverty Reduction Strategic Paper (PRSP, 2011-2015).** Its third Pillar contains a specific focus area on "improving access to potable water, hygiene, and sanitation." This focus area underpins the sub-sector of drinking water in urban areas and provides two recommendations in line with the Project's two components. First, in line with Component A, the PRSP aims to "increase access to drinking water in urban centers...through vast programs of rehabilitation and extension of infrastructure and the construction of new systems." Secondly, in line with component B, the following recommendation is mentioned: "the reform of the Potable Water sub-sector in urban areas should include the transformation and recovery of REGIDESO, following the decentralization and disengagement laws of the State."
27. **The last Systematic Country Diagnostic (SCD, 2018) identified the major bottlenecks that hampered the water sector reform and, consequently, the sustainable access to drinking water.** It particularly pointed out the low water supply coverage in urban areas and recalled the weak financial viability of the water utility due to the uncontrolled increased salaries and the public arrears on water bills. The SCD also mentioned the poor governance of the sector as the main obstacle to the ongoing institutional reform. All these issues highlight the continued importance of the PDO. The Country Partnership Framework is still under preparation,<sup>8</sup> but the current draft includes significant continued investments in the Water sector, given the continued priority the Government is putting on increasing access to water supply.

### B. ACHIEVEMENT OF PDOs (EFFICACY)

#### Split-rating based assessment of each Objective/Outcome achievement

28. **The PDO has two objectives.** The first objective (PDO1) has one outcome: greater access to basic water supply services, mainly through household connections and standposts. The second objective (PDO2) has two outcomes: (i) reduced losses and higher productivity and (ii) improved financial position of REGIDESO. The operational performance of REGIDESO is reflected in the first outcome of PDO2. In addition, the two outcomes of PDO2 are designed to ensure the sustainability of water service targeted in PDO1.
29. **The wording of the original PDO was revised** to better reflect the targeted outcomes without changing the TOC. Nevertheless, the project underwent four major restructuring which, streamlined the indicators (2012

<sup>4</sup> DRC's Growth and Poverty Reduction Strategy Paper, Second Generation 2011-2015 (Volume 1) – IMF country report NO 13/126, October 2011

<sup>5</sup> Systematic Country diagnostic (SCD, 2018) - Report No. 112733-ZR

<sup>6</sup> Africa Water Vision for 2025

<sup>7</sup> Millennium Development Goals 2015-2030, Goal 6



restructuring), increased several targets as well as the scope by adding one additional city (2016 restructuring), and finally removed the last city added and decreased some targets that have been previously increased (2018 restructuring).

30. **A split rating was used to assess the objectives.** The split-rating is justified the significant changes in the outcome's targets. Accordingly, the efficacy rating was split into four parts representing the original outcomes and targets at effectiveness without any restructuring and the revised targets after the three restructurings (2012, 2016, 2018) mentioned above. Annex 6 (Table II) presents the split rating detailed results.

31. **PDO1: Increase sustainable access to water in selected urban areas.**

This objective was measured by one outcome indicator: people provided with access to improved water sources under the Project (number).

- **From effectiveness in November 2009 to July 2012 (*targets before restructuring*) - Rating: Negligible:** the project did not showcase any progress in the achievement of the PDO indicator, nor in the intermediate indicators (see Table II, in annex 6). The reasons for poor achievement justify the first restructuring of July 2012. (see para 12).
- **From July 2012 to December 2015 (*Targets of July 2012 restructuring*) - Rating: High:** during this period, the project showcased excellent performances by providing safe drinking water to 1,653,060 people, surpassing the target of 1,205,000. To reach this outcome, all the intermediate indicators described in the TOC (i.e., the secondary and tertiary network, community water points, and new household connections) were above their respective target values.
- **From February 2016 to December 2018 (*targets of February 2016 restructuring*) - Rating: Substantial:** this period reflects the AF achievement according to its initial closing date (December 2018). The project provided safe drinking water to 1,893,630 people, below the target value. Indeed, the Ozone water treatment plant's delayed construction negatively impacted the water productivity (36 % of achievement) and the network construction (57% of achievement), which in turn did not allow to achieve the targeted 2,600,00 people having access to safe drinking water. However, significant progress was made to rehabilitate 116,265 private connections (105 percent of achievement), and the new connections indicator also showed substantial progress with 63 % of achievement.
- **January 2019 to June 2021, end of the project (*targets of December 2018 restructuring*) - Rating: High:** at the end of the project, 3,071,430 people had access to safe drinking water, representing 118% of the target. The project has been proactively restructured to readjust the water productivity and the network construction targets based on the actual progress observed on these activities. In addition, an intensive communication campaign allowed to boost the number of new household connections. As a result, 88,881 households benefited from new connections (121 % of achievement), and 153,490 connections were rehabilitated (139 % achievement). In addition to the new connections, 9020 others (inactivated for more than five years) were reactivated and considered as new connections<sup>9</sup>. The beneficiaries include many of the most vulnerable and poor households that would otherwise not have access to drinking water at home due to the high connection fees.

<sup>8</sup> Delivery is expected in FY22.

<sup>9</sup> The DRC standards are: 1 private connection for 30 people and 1 standpipe for 300 people.



32. **PDO2: Improve the operational performance and viability of the Project Implementing Entity (i.e., REGIDESO).**

This PDO2 contains two outcomes that need to be assessed: (i) reduced losses and higher productivity and (ii) improved financial position of REGIDESO. However, there is only one PDO indicator: "Operating cost coverage ratio in utilities targeted by the project," which assesses the second outcome related to the financial position of REGIDESO. Therefore, to evaluate the first outcome, three intermediate indicators were used: The non-revenue water (to assess the reduction in losses) and the additional water production and the availability rate of water production (to assess the increase in productivity).

- **From effectiveness in November 2009 to July 2012 (*targets before restructuring*) - Rating: Negligible:** the financial viability remained weak as evidenced by the operating cost ratio, which did not show any achievement. However, the bill collection rate of private connections increased significantly (92% achievement), and thanks to the successful completion of the staff restructuring plan, the number of employees per 1,000 active connections decreased, leading to progress on this indicator (37% achievement). Operational performance had not improved either. The non-revenue water was at 6.7 percent of its target achievement, due to the significant loss of water in the network, and the lack of additional water produced due to the delays observed in construction works.
- **From July 2012 to December 2015 (*Targets of July 2012 restructuring*) - Rating: Modest:** the financial viability of REGIDESO showed meaningful progress: the operating cost ratio reached 82.5 percent of its target. This good result was mainly due to the payment of public connection bills (91 percent of the achievement) and the number of staff per 1000 active connections, whose indicator achievement had steadily increased to reach 79 percent of the target. Furthermore, the existing water production plants were fully available (131 percent of achievement). But, the non-revenue water achievement remained low (12.5% of indicator target), meaning that the NRW is mainly driven by the network's physical water losses rather than the commercial losses due to unpaid bills. So, despite good performances on the financial viability, the operational performance was modest.
- **From February 2016 to December 2018 (*targets of February 2016 restructuring*) - Rating: Negligible:** The financial viability of REGIDESO has significantly regressed. The operating cost ratio was at 60%, lower than the baseline<sup>10</sup>. This poor performance was due to several factors: a low collection rate of public and private connections, which were respectively at 65 % and -11.5 % of their achievements. In addition, the inactive connection percentage was still high (36 percent, for a target value of 20 percent). Furthermore, the operational performance kept the same trend of modest achievement: the availability rate of water production steadily increased, but the additional water production reached only 36 percent of its targeted value, and the non-revenue water indicator achievement remained negligible.
- **From January 2019 to June 2021 end of the project (*targets of December 2018 restructuring*) Rating: Negligible:** The financial viability has continued to decline and currently stands just below the baseline. This poor performance was reflected in the steady decline in collection rates of private and public bills combined with the human resource cost that did not reduce despite the staffing ratio improvement. The reasons for this appeared to be: (i) continued implementation of costly benefits packages; (ii) salary increases that exceeded inflation (3.4% salary increases against 2.6% inflation); and (iii) an increase in consultants to replace

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<sup>10</sup> This indicator is defining as: Total annual operational revenues/Total annual operating costs (PAD) but the terms "operational revenues" and "operating costs" were not defined. This led to successive discrepancies that persisted until the end of the project.



the decreased full-time staff (Tribeche, 2015)<sup>11</sup>. Finally, if water productivity and available water production plants had significantly increased at the project completion (respectively 124 and 109 percent of achievement), the non-revenue water indicator did not show any progress throughout the project implementation, which drove a modest achievement in the operational performance.

### Justification of Overall Efficacy Rating

33. The project's overall efficacy rating is split into four periods (see Table 3 below). For each period, the rating is driven by the achievement level of the two objectives of the PDO. The first objective was almost fully achieved (except for the first period). In contrast, the project barely achieved its second objective related to the water utility's operational performances and financial viability, leading to a majority of negligible ratings.

Table 3: Efficacy assessment based on split rating

	From effectiveness in November 2009 to July 2012 (targets before restructuring)	From July 2012 to December 2015 (Targets of July 2012 restructuring)	From February 2016 to December 2018 (targets of February 2016 restructuring)	From January 2019 to June 2021, the end of the project (targets of December 2018 restructuring)
<b>PDO1. increase access to sustainable water services in selected urban areas</b>				
<i>PDO1. Ind. Number of people in urban areas provided with access to Improved Water Sources under the project</i>	Negligible	High	Substantial	High
<i>PDO1 rating</i>	Negligible	High	Substantial	High
<b>PDO2. Improve the operational performances and viability of the Project Implementing Entity (percent)</b>				
<i>PDO2. Ind. Operating cost coverage ratio in utilities targeted by the project</i>	Negligible	High	Negligible	Negligible
<i>Water production capacity installed under the project m3/day</i>	Negligible	NA	Moderate	High
<i>Availability rate of water production plants %</i>	NA	High	High	High
<i>Non-revenue water in targeted cities (percent)</i>	Negligible	Negligible	Negligible	Negligible
<i>PDO rating 2</i>	Negligible	Modest	Negligible	Negligible
<i>Efficacy (PDO)</i>	Negligible	Substantial	Negligible	Modest

<sup>11</sup> Evolution institutionnelle du secteur de l'eau en milieu urbain en RDC - Investigations préliminaires – version approuvée juin 2015 – French report on Institutional Evolution of the Urban Water Sector in DRC - Preliminary Investigations - Approved version of June 2015



## C. EFFICIENCY

### Assessment of Efficiency and Rating (substantial)

34. **The impact of PEMU on the financial management of REGIDESO.** This impact is assessed based on the elements of the operating account and the cash flow account contained in REGIDESO's financial statements (the detailed methodology is described in Annex 4).
35. **REGIDESO's financial state** over the project's life shows a series of deficits, with an average value of -33.6 billion FC (-16.8 million USD) per year, this average increases to -31.3 billion FC (-15.6 million USD) per year over the period of the project additional financing. This slight positive evolution remains insufficient to make a real recovery of the financial viability of REGIDESO. The driving factors of this deficit are, on the one hand, the low rate of collection of the public bills (named Official Institutions [OIs] bills) and private bills, which constitutes a real shortfall in REGIDESO's revenue. On the other hand, the staff cost remained high despite the staff restructuring plan and reduction in total staff, which contributes to the high operating costs. The OIs receivables are particularly significant in the deficit. From 2013 to 2015, the cumulative receivables of the OIs amounted to 220.814 billion FC (110 million USD), i.e., an average of 44.16 billion FC (23 million USD) per year. This amount mainly covers (i.e., 3.7 times) the average gap in REGIDESO's net cash position. Consequently, it is undeniable that the current situation of unpaid IOs invoices jeopardizes REGIDESO's solvency.
36. **FIRR and NPV.** The project's financial internal rate of return (FIRR, calculated solely based on sales revenue) is 7.2%, and the net present value (NPV) is USD 17.5 million at a discount rate of 6%.
37. **The PEMU and the financial viability of REGIDESO.** The PEMU was implemented in a challenging context where the operational and commercial performances, as well as the self-financing capacity of REGIDESO, were structurally degraded by an inefficient productive capital, disproportionate operating costs, an approximate control of the water market (supply, consumption, price, collection) and an environment that did not allow the public power to be empowered. All these things limited the project's impact on the financial viability of REGIDESO despite the progress made.
38. **The Economic Analysis** section updates the cost-benefit analysis to assess the Internal Rare Return (IRR) and NPV of all activities under the original project and the additional financing. The analysis was based on the actual implementation of the PEMU at the completion date and the impact of its activities.
39. **The methodology** used in the PAD was applied and complemented by the identification of the benefits brought by the project. Calculations are made over 20 years, and the NPV at appraisal was calculated as 12% (see PAD, page 104, §4.). Benefits include "increased water consumption," "consumer surplus," which corresponds to beneficiaries that have shifted from other non-potable water sources to connections or standpipes, and "cost savings" resulting from improved operational performance within REGIDESO.
40. **The baseline assumptions** (Parent Project and AF) were updated to reflect current values of per capita consumption, average water revenues (for REGIDESO), prices (at the consumer level), and operating costs contained (see Annex 4, Table 2).
41. **Overall economic benefit of the PEMU.** The updated and completed analysis results in table 4 indicate that the PEMU is economically profitable with an IRR of 28.7 percent and an NPV of USD 70.9 million. The significant



benefits are distributed among REGIDESO, which increases its productive capital and business volume; the beneficiary households benefit from improved access to drinking water and surplus water consumption; and the state, which saves substantially on health costs. The investments were more massive and diversified in Kinshasa, which presents a more satisfactory IRR of 37.2%, and NPV that contributes to 82.5% of the overall NPV of the PEMU. The two other centers also have positive returns, exceeding the discount rate of 12%. The allocation of resources to these centers is economically relevant.

Table 4: Cost-effectiveness indicators for the PEMU

Economic profitability of water centers targeted in the PEMU project		
Center	Net Present Value (NPV) @12% (M\$)	Internal Return Rate (IRR) (%)
Kinshasa	58.5	37.2
Lubumbashi	7.7	19.8
Matadi	4.7	17.7
Total	70.9	28.7
Using Original project assumptions	132	41
Using updated assumptions at AF	20.9	13.7

42. **The project results** become most important if a lower discount rate (10% or 6%) is used, which is generally recommended for Water Supply and Sanitation (WSS) projects. Indeed, if the discount rate used is 10%, the NPV of the project increases from USD 70.9 million to USD 98.5 million. The NPV rises to a very significant 189.1 million USD if the discount rate increases to 6%. The assumptions used at the beginning of the project (table 4) were very optimistic, whereas those used at the time of the additional financing were reduced because the project's impacts were not sufficiently visible to be integrated into the analysis. At the end of the project, the indicators are between the two analyses, with an NPV representing 53% of that obtained in the PAD and 3.35 times that retained in the additional financing.

43. **The economic results of the PEMU are very robust.** A sensitivity test was carried out on the indicators to assess the effects of a 10% change in network efficiency, a 10% change in recovery rate, and a 10% increase in average water price separately. The results in table 5 indicate that the economic indicators are more sensitive to water price, followed by collection rate performance and then network efficiency. However, the overall results remain broadly stable, with IRRs around 29% and NPV evolving in a narrow range from USD 73.5 million to USD 75.4 million (Table 5).

Table 5: Sensitivity testing of profitability indicators

Centers	Sensitivity test					
	Network efficiency improved by 10%		Private connections bills collection rate improved by 10%		Average water price increased by 10%	
	NPV @ 12%	IRR	NPV @ 12%	IRR	NPV @ 12%	IRR



		%				
Kinshasa	60.9	38.2	60.6	38.2	61.6	38.2
Lubumbashi	7.3	19.5	8.4	20.5	8.36	20.6
Matadi	5.3	18.4	5.1	18.2	5.2	18.3
<b>Total</b>	<b>73.5</b>	<b>29.2</b>	<b>74.1</b>	<b>29.5</b>	<b>75.4</b>	<b>29.5</b>

**Justification of Efficiency Rating – substantial**

44. **The project brought high economic profitability to millions of people** living in Kinshasa, Lubumbashi, and Matadi, and GoDRC 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. For these reasons, the overall effectiveness of the project is considered substantial.

**D. JUSTIFICATION OF OVERALL OUTCOME RATING – MODERATELY UNSATISFACTORY**

45. The Project was and remains highly relevant. However, its efficacy is split-rated with two periods out of four, judged negligible (table 6), and its efficiency is rated substantial. Therefore, the overall rating of the Project is deemed Moderately Unsatisfactory (Table 6).

Table 6: Final outcome rating based on efficacy split-rating

	From effectiveness in November 2009 to July 2012 (original targets)	From July 2012 to December 2015 (Targets of July 2012 restructuring)	From February 2016 to December 2018 (targets of February 2016 restructuring)	From January 2019 to June 2021, the end of the project (targets of December 2018 restructuring)
<b>Relevance of PDO</b>	High			
<b>Efficacy (PDO)</b>	Negligible	Substantial	Negligible	Modest
<b>Efficiency</b>	Substantial			
<i>1. Outcome ratings</i>	Unsatisfactory	Satisfactory	Unsatisfactory	Moderately Unsatisfactory
<i>2. Numerical value of outcome ratings*</i>	2	5	2	3
<i>3. Disbursement - million US\$</i>	39.09	147.62	44.67	124.62
<i>4. Share of disbursement</i>	11%	41%	13%	35%
<i>5. Weighted value of the outcome rating (row)</i>	0.22	2.07	0.25	1.05
<b>Final outcome rating</b>	<b>3.59</b> <b>Moderately Unsatisfactory</b>			





## E. OTHER OUTCOMES AND IMPACTS (IF ANY)

### Gender

46. **The project has benefited nearly 1.5 million girls and women who have access to safe water through private connections or standpipes closer to their homes.** This has significantly improved the living conditions of these people in several ways: (i) the reduction or elimination of water collection, an activity mainly carried out by women (47%) and girls (33%), for which the average collection time has decreased from 142.7 minutes<sup>12</sup> per day to 30 minutes per day (see Annex 4 on efficiency analysis); (ii) an improvement in water quality and hygiene, which provides benefits, especially for maternal and child health (see Annex 4 on efficiency analysis); (iii) improvements for the safety of women and girls in charge of water collection, as having a private connection at home eliminates the need to fetch water (sometimes very early in the morning or late at night) over a long distance. This gives women more time to perform higher value-added activities and girls more time to devote to learning at school and even to a better quality of life through improved sleeping hours.

### Institutional Strengthening

47. **The water reform component** planned a specific sub-component aiming to strengthen the institutional capacity of REGIDESO, the Ministère du Portefeuille (MP), and the Ministry of Environment (who is charged with overseeing sanitation, among other technical areas). Under this sub-component, several key outputs were delivered to strengthen the water and sanitation sectors.
48. **REGIDESO benefited from management training in human resources, marketing, and procurement.** The Project also strengthened the training capacity of the water utility through the rehabilitation and equipment of the water training center of Lubumbashi.
49. **The MP and the COPIREP benefited from technical assistance on the Private Sector Participation and sector quality assurance** through the management contract and the service contract executed under the Project.
50. The Ministry of Environment's Department of Sanitation (DAS) was supported under the PEMU to develop a new institutional framework for the sanitation sector, as reflected in a road map for the development of the sector and a National Sector Strategy.
51. The PEMU has supported the Government in preparing a set of relevant decrees that aim to, *inter alia*: provide further clarity on the institutional arrangements and mandates of institutions at various levels and detail the types of Public Private Partnership arrangements envisioned for the sector.
52. The project has also financed the hydraulic master plan of the city of Kananga. The proposed investments in the plan will now be financed under the new Electricity & Water Access and Governance Project (P173506).

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<sup>12</sup> Baseline Survey for the Impact Assessment of the PILAEP 2 Project (April-May 2018)



## Mobilizing Private Sector Financing – (non applicable)

### Poverty Reduction and Shared Prosperity

53. **The Project provided 82,880<sup>13</sup> subsidized household water connections**, providing direct, reliable water access to more than 200,000 vulnerable people in Kinshasa, Matadi, and Lubumbashi. Customers paid US\$50 to get a new connection under the project, which is five times less than the actual cost of US\$265. This program reduced the inequality between rich and poor households in accessing a private household connection.

### Other Unintended Outcomes and Impacts

54. **To reduce cholera outbreaks, the PEMU AF constructed twenty standpipes, two tanker trucks (10 m<sup>3</sup> each), and a water reservoir** of 250 m<sup>3</sup> in several peri-urban sites in Kinshasa chosen based on cholera hotspot mapping. In 2018, 346 cases of cholera with 11 deaths (lethality: 3.17%) were reported in 21 health zones out of the 35 in the city province of Kinshasa. According to data from the national surveillance system, in 2017, the DRC reported a cumulative total of 55,000 cases with 1,190 deaths (case fatality: 2.1%). The standpipes and reservoir were achieved in September 2020. The action mobilized a total of 598,549.78 USD to reach 10,800 direct beneficiaries<sup>14</sup>.
55. **As part of the GoDRC's coronavirus (COVID-19) pandemic response**, the Project constructed, at the request of GoDRC, an additional 20 water points (10 m<sup>3</sup> storage tanks, supplied by tanker trucks, with taps). The population targeted by this emergency activity is from areas of Kinshasa that the existing network cannot serve. The number of beneficiaries is estimated at 215,000 inhabitants. The Project also mobilized funds to support the emergency procurement of chlorine for Kinshasa, as during the lockdown in March/April 2019, border closures resulted in a significant delay in REGIDESO's expected shipment. Given the utility's acute financial crisis, worsened by COVID-19 and the Government's announcement of two months of free water supply, the utility did not have the funds on hand to make the necessary emergency procurement.
56. **The project supported the setting up of the REGIDESO call center** with extensible positions that can receive all REGIDESO subscribers online. This has contributed to REGIDESO's ability to respond to and resolve complaints and queries received from customers related to the project and ongoing service provision.

## 3. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

### A. KEY FACTORS DURING PREPARATION

57. At appraisal, the Project identified clear and realistic objectives that reflected very ambitious targets based on defined needs in the urban water sector. The Project design was based on existing studies, assessments, previous sectoral lessons learned, and technical meetings, which informed the project objectives, components, and institutional arrangements. At that time, the country was in a post-conflict context with an urgent need to extend and rehabilitate water infrastructures in the main centers of REGIDESO. Governance of the water sector was also

<sup>13</sup> PEMU Activity report 44. January - March 2021

<sup>14</sup> PEMU activity report 42, June-September 2020



fragile and required strong and ambitious reform to ensure sustainable access to water services through investment in infrastructure. The PAD described this situation and evaluated the risk categories appropriately.

58. **The preparation of the AF did not sufficiently utilize the lessons learned from the implementation phase of the parent project to readjust the project objectives.** In the infrastructure component, more attention could have been paid to reducing non-revenue water (through a dedicated sub-component) to ensure better performance on this critical indicator that did not show sufficient progress at AF appraisal. In the sector reform component, the preparation of the AF could also have used stronger incentive mechanisms to increase the Government's political will to pay the bills of official connections (e.g., through performance-based disbursements) and handle other needed reform. Those indicators significantly impacted the efficacy of the project at completion.

## B. KEY FACTORS DURING IMPLEMENTATION

59. **Fiduciary and procurement challenges slowed the implementation of the project.** The detailed design and bidding documents for Kinshasa construction work planned in the parent project suffered from twenty months of delays, mainly due to the firm's poor performance and a lack of proactivity and coordination within the PIU's system of contract management. This delay resulted in the need to extend the project by 21 months. Similarly, during the implementation of the PEMU AF activities, the design processes in Kindu took too long and resulted in dropping the interventions in the entire city. Still during the PEMU AF, the changes in the leadership of the project management negatively impacted the preparation of the bidding documents for the construction of the Ozone water treatment plant.
60. **Two months of free water supply (provided in response to COVID-19)** have significantly adversely impacted several core financial indicators, such as the bill collection rate from private connections. Though the indicators have slightly rebounded since the start of 2020, REGIDESO is still struggling to attain its pre-pandemic billing and collection efficiency.
61. **REGIDESO has taken little ownership of the reform and the improvement** in operational and financial performance, which had a negative impact on the overall achievement of the PDO. The REGIDESO has put in place an internal structure to pilot an action plan to improve their operational and financial performance, but this initiative did not allow the achieve the expected results targeted in the projet. The reform efforts were also hindered by a series of short-term closing date extensions at the end of the project. The 6-month extensions were motivated by the long duration of the project and external factors, but this approach limited the type and number of actions that could be taken in support of the REGIDESO reform agenda.

## 4. BANK PERFORMANCE, COMPLIANCE ISSUES, AND RISK TO DEVELOPMENT OUTCOME

### A. QUALITY OF MONITORING AND EVALUATION (M&E)

#### M&E Design

62. **The Project's results framework (RF) mainly focused on constructing the water supply infrastructure investments and implementing the water sector reform.** Therefore, despite the absence of a theory of change not required at the time of appraisal, the RF described the link between most of the PDO and intermediate indicators and their corresponding project components, baseline, end target, data sources, and parties responsible for data collection. Nonetheless, the RF underwent a significant adjustment during June 2012 restructuring (para 12 and the Table I in



annex 6), which was useful in streamlining the RF, but still resulted in a long list of indicators, particularly on Component B. This long list made it more difficult to prioritize actions during implementation.

63. **The M&E framework could have been strengthened as follow:** (i) including a more specific indicator (at PDO level) to better track the sustainability dimension of water access mentioned in the PDO, to help further define "sustainable"; and (ii) deleting some indicators which provide similar/overlapping information (e.g., "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") or information not likely to change throughout the project implementation (e.g., "number of a water utility that the project is supporting").

#### M&E Implementation

64. **The M&E implementation arrangements were straightforward.** The overall coordination, validation, and production of the M&E framework were handled by CEP-O (REGIDESO's PIU) with inputs from REGIDESO centers and departments and from COPIREP, especially for data related to the water sector reform. CEP-O also verified and ensured the quality of the data.
65. **The M&E framework was streamlined and revised over the life of the Project to better monitor current activities and scale-ups.** However, redundancy and relevancy persisted in the intermediates indicators that could have been removed during the restructurings.
66. **The M&E framework could have benefited from the development of a comprehensive Water Sector Information System (SIS) to monitor and evaluate the water asset.** Indeed, the processing and archiving of the collected data remain relatively simple, especially since the data collected from field surveys is done manually. Data retention is not guaranteed without a centralized database that could be transferred to REGIDESO after the Project. However, the Project has financed a database in Kinshasa to manage better customer service that could be considered the first step toward an integrated SIS for the entire assets of REGIDESO.

#### M&E Utilization

67. **The M&E data on results progress was periodically reported, used, and incorporated in the Implementation Status and results Reports (ISRs).** M&E was used to inform project management and decision-making, especially when preparing restructurings (2016 and 2018) to revise indicators' targets and to track the household connections program. For example, the 2016 restructuring for the PEMU AF used the parent project indicators achievements to demonstrate the good performances of the water investment component and the relevancy to scale up these results. Nevertheless, the 2016 restructuring should also have been an opportunity to add a PDO indicator to assess REGIDESO's operational performance. This indicator was missing throughout the implementation of the project and, therefore, negatively impacted the efficacy assessment of PDO2 at the project completion.
68. **The PIU used the GEMS tool** to monitor the "Social Connections" Operation and the GRM. In addition, the results of the PEMU in the World Bank's portfolio in DRC are also registered in GEMS.
69. **The PIU, name CEP-O in French acronym, used the M&E data to inform the quarterly report of the Project** but also more regularly used the information to target problems and bottlenecks in implementation in different cities. For instance, the household connection program was more efficient in Kinshasa, in part due to the possibility of weekly tracking, so the model of field supervisors was replicated in the other cities.

#### Justification of Overall Rating of Quality of M&E - Substantial

70. **Throughout the project, the results framework was improved to align with the evolution of activities and the**



**consequences of subsequent restructuring.** However, a better rationalization of the indicators could have been done, on the one hand, to eliminate redundancies and irrelevant indicators, and on the other hand, to add indicators essential to a better monitoring of the PDO2 outcomes. As a result, although the M&E system remained a reliable tool for informing project decision-makers and monitoring project performance, some shortcomings in the design persisted during the implementation, which led to a substantial rating.

## B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE

71. **Environmental and social safeguard compliance.** The original Project triggered two safeguard policies: Environmental Assessment (OP/BP 4.01) and Involuntary Resettlement (OP/BP 4.12), and two others were added for the PEMU AF regarding the physical Cultural Resources (OP/BP 4.11) and projects on International Waterways (OP/BP.7.60) (linked to the plans for the Ozone water treatment plan).
72. **To comply with the International Waterways (OP/BP.7.60) policy,** a notification referred CAB.MIN-ENRH/NYB 930/MA/15, dated July 7, 2015, from the Government of DRC, was sent to riparian countries through the Commission Internationale du Bassin Congo-Oubangui-Sangah (CICOS).
73. The environmental Category of the Project was rated B. Safeguards compliance for PEMU, and PEMU AF were based on the Environmental and Social Management Framework (ESMF) and the Resettlement Policy Framework (RPF). Therefore, both were disclosed according to the Bank's disclosure policies in the Project selected areas. In addition, when deemed necessary for civil works, Environmental and Social Impact Assessments (ESIAs) and Abbreviated Resettlement Action Plans (ARAPs) and Resettlement Action Plans (RAP) were conducted by CEP-O.
74. **At the project closure, all the safeguard policies were rated satisfactory except the Involuntary Resettlement,** which was rated Moderately Satisfactory, leading to an overall Safeguard rating as Moderately Satisfactory. This is mainly due to some delay in completing the ARAP and RAP in the three cities, which delayed the disbursement condition for Component A. A RAP in Kinshasa was also implemented without waiting for approval from the WB. The issue was reconciled through a follow-on assessment report of economic loss produced by the government and deemed satisfactory by the World Bank (WB). All the remaining planned actions were implemented with satisfactorily, and the environmental and social impacts of works were systematically mitigated as per the standards and guidelines included in all contracts under the project.
75. **The Contractor's Environmental and Social Management Plans (ESMP)** were adjusted to include measures relating to COVID-19 prevention/mitigation, with guidelines from the WB.
76. **A Grievance Redress Mechanisms (GRM)** was in place from when the PEMU-AF started in early 2018 (in line with World Bank Policy at that time) and was functional across all project locations. The GRM was accessible both to PAPs and anyone wishing to file a complaint or concern related to the Project. In addition, proactive efforts were made to resolve all grievances through trained local complaint management committees and a call center in Kinshasa, with a free number accessible to all for any questions or concerns regarding the Project. At the end of the project, 187 complaints were registered and processed (100% of the processing rate), of which 162 were founded and 25 were unfounded<sup>15</sup>.
77. **The Project has reported 7 Occupational Health and Safety (OHS) incidents since its start.** None are classified as severe, six as serious, and one as indicative. All incidents are confirmed accounted through the Environmental and Social Incident Response Toolkit (ESIRT) and closed. The WB team and the PIU regularly checked with

<sup>15</sup> PEMU-FA : Final report of social safeguard, juillet 2021



relevant contractors and consultants if any OHS incidents occurred and closely followed up the number of incidents and their appropriate handling. Safeguards Corrective Action Plans were prepared and implemented.

78. **Procurement.** The procurement rating was satisfactory from the beginning of the Project until December 2017, where the rating was downgraded to Moderately Satisfactory until the project closing date. Throughout the project implementation, delays in procurement for the construction of some important infrastructure (Ozone treatment plant, construction work in Kindu) negatively impacted the project implementation, requiring several extensions of the project closing date (see para 22 and 23). In addition, Supervision missions noted problems in some selections reported under post review. The PIU addressed these issues by updating the project implementation manual (PIM) that better clarified the role of the international procurement expert according to the General Procurement Guidelines. This resolution was satisfactory to the World Bank. Procurement Post Reviews (PPR) also identified some issues and provided recommendations to the PIU, which were then appropriately implemented. On the positive side, the Project is considered one of the champions in the DRC portfolio on using STEP for procurement.
79. **Financial Management.** FM arrangements in place during project implementation were consistently rated as satisfactory and/or moderately satisfactory. In February 2017, a supervision mission had concluded that the Financial Management could be improved, and the PIU addressed a series of recommendations. However, the FM rating was downgraded to Moderately Unsatisfactory in August 2018, mainly because the in-depth review of the transactions identified certain expenses as ineligible. Also, the recruitment process of the administrative and financial officer (AFO) underwent some delays. The ineligible costs were reimbursed to the World Bank, and the recruitment process was finalized, allowing the rating to be upgraded to Moderately Satisfactory until the end of the Project.

## C. BANK PERFORMANCE

### Quality at Entry

80. **PEMU was designed in a highly challenging context of post-conflict** where the sector of Water Supply and Sanitation (WSS) sector was particularly affected. The World Bank team ensured that the design was informed by thorough technical analysis and several preparation missions that allowed exchanges with all relevant local and national stakeholders in DRC, including other donors working in the water and sanitation sector. This contributed to focusing on urban water supply, since others, such as the Africa Development Bank (AfDB) and UNICEF, focused on semi-urban and rural sectors. In addition, the parent project was complementary to the AfDB funded water project, PEASU<sup>16</sup>, for which joint supervision missions were carried out, and critical documents benefited from the review of both donors.

### Quality of Supervision

81. **The World Bank undertook regular supervision missions** (and more frequent missions when needed), including field visits and physical checks of investments. Aide-Mémoires and ISRs were well-drafted and provided a good level of detail on the ongoing activities. The World Bank was also proactive and candid by downgrading the project performance rating and taking swift action in situations threatening to impede the expected progress toward the achievement of the PDO. For instance, The Bank team actively supported the first bidding documents for works in Kinshasa that had been delayed for more than 20 months through an in-depth review that helped

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<sup>16</sup> French acronym for Water and Sanitation Project in Semi-Urban areas



launch the contract and resumed disbursement. Similarly, 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.

82. **However, during the final years of PEMU, the implementation of the project was hindered by four separate restructurings to extend the closing date by six months each time.** This approach made the achievement of Component B more challenging, as the type of activities that might have driven significant progress on this component would have taken too long to implement. 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.

#### **Justification of Overall Rating of Bank Performance- Moderately Satisfactory**

83. The Quality at Entry is judged satisfactory, but the repetitive short extension of the AF closing date negatively impacted the quality of supervision, so the overall World Bank performance is moderately satisfactory.

#### **D. RISK TO DEVELOPMENT OUTCOME**

84. The project's development outcomes mainly focused on the significant increase in the number of people that have access to drinking water in the three main cities of DRC. This was possible thanks to the important physical investments in water supply infrastructure. However, the limited progress on Component B and REGIDESO performance improvements threatens the long-term sustainability of these investments. In addition, REGIDESO continues to face significant challenges, especially related to the critical problems linked to high labor costs and non-payment of water bills for official institutions. Both the WB and the GoDRC are aware of these risks and challenges and are committed to carrying on the ongoing activities initiated on the water sector reform under the PEMU project.
85. Nevertheless, at the end of the Project, the water sector has benefited from a more robust institutional framework that offers a range of new opportunities for the sector. For instance, the Kin Elenda project (P P171141) in Kinshasa was based on the experiences with REGIDESO performance improvement activities under PEMU. Therefore, a new approach is being used, in alignment with the Utilities of the Future approach, that focuses first on building REGIDESO ownership of a 100-day plan, and based on internal steps taken and progress made, the project will finance follow on activities. This approach will ensure better ownership of reform and performance improvement and align activities with specific outcomes and key indicators.

#### **5. LESSONS AND RECOMMENDATIONS**

86. **Ambitious reform agendas, especially in FCV settings, require a more agile approach to implementation that adapts to changing conditions.** The management contract foreseen at the beginning of the parent project did not attract the private sector's interest, and the tender was ultimately unsuccessful and was replaced by a less binding service contract, which consequently was not sufficient to carry out a substantive reform of the water sector. The lesson that can be drawn from the failure of the MC is the scope of the reform, which was probably too ambitious at the time when the DRC was in a post-conflict situation and not attractive enough for the private sector. The project should have been restructured to move toward more straightforward, realistic, and achievable objectives that better reflect the change in strategy that occurred after the failure of the MC. By specifically revising the water sector reform objectives, they would have been more modest and achievable in the short term while gradually building trust with the Government on the reform process to achieve more ambitious results in the long term. On these long term results, CEP-O provided the following recommendations: *"A partnership formula is needed that allows (i) local management of the drinking water service, (ii) a contribution of fresh capital for the*



*realization of new investments with (iii) a targeting of the perimeters to be exploited on the basis of investment plans and adapted operational plans. Among the lessons to be learned from the poor results of the project, we should also point out the lack of involvement of the State in the recovery of REGIDESO (non-payment of consumption by official institutions and beneficiaries, lack of public funding for the water sector)” (See borrower comments in Annex 5).*

87. **High-level sustained Government championing is required to ensure systemic changes.** At the end of the project, REGIDESO continues to have significant financial challenges linked to public arrears/non-payment and Human Resource. Without addressing these two issues, significant performance improvements will not be sustainable. However, these reforms require high-level sustained engagement from several Government partners. Given the FCV nature in DRC and the change in Government seen during the project, this support was not sufficient to reach the level of change initially targeted. Therefore, understanding the political economy and local context not only at appraisal but all along with the project implementation, is an essential success factor as the FCV nature of the country require to considerer 10% technical and 90% political economy<sup>17</sup> in the project design and implementation (i.e., during restructurings). Other Bank instruments, such as the DPO, are also needed to accompany the reforms.
88. **Procurement delays and Contract Management System Performance.** The lack of sound engineering design studies before Board approval of the Original Project and the AF resulted in significant delays and successive extensions of the project closing date. As a lesson learned, the project PIU should include at the early stage of project preparation, the completion of the engineering design studies, and the bidding document. This would allow all bidding procedures to begin as soon as the project is approved. Finally, technical assistance or capacity building for the PIU in contract management would also have made it possible to complete the civil works on time and thus avoid successive postponements of the project closing date.

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<sup>17</sup> Note- Customs reforms in fragile conflict violent and low capacity situations (P166870) – World Bank





ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS

A. RESULTS INDICATORS

A.1 PDO Indicators

Objective/Outcome: Number of people in urban areas provided with access to Improved Water Sources under the project

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of people in urban areas provided with access to Improved Water Sources under the project	Number	0.00	1,205,000.00	2,600,000.00	3,071,430.00
		25-Apr-2014	03-Feb-2016	03-Feb-2016	30-Jun-2021

Comments (achievements against targets):

Objective/Outcome: Operating cost coverage ratio in utilities targeted by the project

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Operating cost coverage ratio	Percentage	88.00	104.00		42.22



in utilities targeted by the project		18-Nov-2008	18-Nov-2008		30-Jun-2021
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Comments (achievements against targets):

### A.2 Intermediate Results Indicators

Component: Water supply services in major urban centers

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Secondary and tertiary water networks constructed	Kilometers	0.00	651.00	1,100.00	1,236.00
		18-Nov-2008	18-Nov-2008	21-Dec-2018	30-Jun-2021

Comments (achievements against targets):

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Water production capacity installed under the project	Cubic Meter(m3)	0.00	179,000.00	69,000.00	85,920.00
		28-Nov-2008	03-Feb-2016	21-Dec-2018	30-Jun-2021

Comments (achievements against targets):



Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Improved community water points constructed or rehabilitated under the project	Number	0.00 18-Nov-2008	400.00 18-Nov-2008	450.00 03-Feb-2016	455.00 30-Jul-2020
<b>Comments (achievements against targets):</b>					
Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
New piped household water connections that are resulting from the project intervention	Number	0.00 18-Nov-2008	41,000.00 18-Nov-2008	73,500.00 21-Dec-2018	88,811.00 30-Jun-2021
<b>Comments (achievements against targets):</b>					
Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Piped household water	Number	0.00	110,000.00		153,490.00



connections that are benefiting from rehabilitation works undertaken by the project		18-Nov-2008	03-Feb-2016		30-Jun-2021
<b>Comments (achievements against targets):</b>					

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Direct project beneficiaries	Number	0.00	1,205,000.00	2,600,000.00	3,071,430.00
		18-Nov-2008	12-Jul-2012	03-Feb-2016	30-Jun-2021
Female beneficiaries	Percentage	0.00	602,500.00	1,300,000.00	1,535,715.00

**Comments (achievements against targets):**

**Component:** Sector reform, capacity building & improved governance

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Citizen engagement satisfactory complaints resolution by REGIDESO	Percentage	26.00	56.00		83.47
		29-Jan-2016	03-Feb-2016		30-Jun-2021



Comments (achievements against targets):

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Citizen engagement: Surveyed beneficiaries who know at least two of their responsibilities regarding their access to water	Percentage	0.00	75.00		98.00
		29-Jan-2016	03-Feb-2016		30-Jun-2021

Comments (achievements against targets):

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of water utilities that the project is supporting	Number	1.00	1.00		1.00
		18-Nov-2008	18-Nov-2008		30-Jun-2021

Comments (achievements against targets):

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
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Services contract is bid, signed and under implementation	Yes/No	No 18-Nov-2008	No 18-Nov-2008		Yes 30-Jun-2021
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Comments (achievements against targets):

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of other water service providers that the project is supporting	Number	0.00 18-Nov-2008	0.00 18-Nov-2008		0.00 30-Jun-2021

Comments (achievements against targets):

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Preparation of water sanitation strategies and programm	Number	0.00 18-Nov-2008	3.00 18-Nov-2008	4.00 03-Feb-2016	12.00 30-Jun-2021

Comments (achievements against targets):



Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Availability rate of production plants	Percentage	87.60 18-Nov-2008	94.00 18-Nov-2008		94.60 30-Jun-2021
Comments (achievements against targets):					
Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Non-revenue water	Percentage	45.00 18-Nov-2008	29.00 18-Nov-2008		45.72 30-Jun-2021
Comments (achievements against targets):					
Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Rate of inactive connections per city	Percentage	36.00 25-Apr-2014	20.00 18-Nov-2008		30.95 30-Jun-2021
Comments (achievements against targets):					



Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Metering distribution rate	Percentage	33.00	88.00	90.00	70.74
		25-Apr-2014	18-Nov-2008	03-Feb-2016	30-Jun-2021

Comments (achievements against targets):

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Bill collection rate from private connections	Percentage	73.00	98.00	97.00	68.71
		25-Apr-2014	18-Nov-2008	03-Feb-2016	30-Jun-2021

Comments (achievements against targets):

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of staff/1000 active connections (after severance plan)	Number	17.70	9.60		8.11
		25-Apr-2014	18-Nov-2008		30-Jun-2021

Comments (achievements against targets):





Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Rate of labor costs versus operational costs	Percentage	40.00 25-Apr-2014	27.00 18-Nov-2008		36.00 30-Jun-2021
<b>Comments (achievements against targets):</b>					
Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Submission of previous years' audit reports to clients by May 15 of following year (yes/no)	Text	NA 18-Nov-2008	Yes 18-Nov-2008		yes 30-Jun-2021
<b>Comments (achievements against targets):</b>					
Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Proportion of volumes owed by "Instances Officielles" in	Percentage	21.00 25-Apr-2014	20.00 03-Feb-2016		33.88 13-Apr-2020



total volumes owed

Comments (achievements against targets):

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Proportion of bills owed by "Instances Officielles" in total billing	Percentage	42.00 18-Nov-2008	20.00 18-Nov-2008		35.93 30-Jun-2021

Comments (achievements against targets):



B. KEY OUTPUTS BY COMPONENT

<b>Objective/Outcome 1 : Increase sustainable access to water in selected urban areas</b>	
Outcome Indicators	1. Number of people in urban areas provided with access to Improved Water Sources under the project
Intermediate Results Indicators	<ul style="list-style-type: none"> <li>1. Secondary and tertiary water networks constructed</li> <li>2. Water production capacity installed under the project</li> <li>3. Improved community water points constructed or rehabilitated under the project</li> <li>4. New piped household water connections that are resulting from the project intervention</li> <li>5. Piped household water connections that are benefiting from rehabilitation works undertaken by the project.</li> <li>6. Direct project beneficiaries</li> <li>6.1 Female beneficiaries</li> </ul>
Key Outputs by Component (linked to the achievement of the Objective/Outcome 1)	<ul style="list-style-type: none"> <li>1) <b>3,1 million</b> people provided with access to improved water under the project, as direct beneficiaries.</li> <li>1.1) <b>1.5 million</b> of female among direct beneficiaries</li> <li>2) <b>1,236 km</b> of secondary and tertiary water networks constructed</li> <li>3) <b>85,920 m3</b> of water production capacity installed</li> <li>4) <b>455</b> improved community water points constructed or rehabilitated</li> <li>5) <b>88,811</b> new piped household water connections constructed</li> <li>6) <b>153,490</b> Piped household water connections from rehabilitation works</li> </ul>
<b>Objective/Outcome 2: Improve the operational performance and viability of the Project Implementing Entity</b>	
Outcome Indicators	1. Operating cost coverage ratio in utilities targeted by the project



<p>Intermediate Results Indicators</p>	<ol style="list-style-type: none"><li>1. Citizen engagement satisfactory complaints resolution by REGIDESO</li><li>2. Citizen engagement: Surveyed beneficiaries who know at least two of their responsibilities regarding their access to water</li><li>3. Number of water utilities that the project is supporting</li><li>4. Services contract is bid, signed and under implementation</li><li>5. Number of other water service providers that the project is supporting</li><li>6. Preparation of water sanitation strategies and programm</li><li>7. Availability rate of production plants</li><li>8. Non-revenue water</li><li>9. Rate of inactive connections per city</li><li>10. Metering distribution rate</li><li>11. Bill collection rate from private connections</li><li>12. Number of staff/1000 active connections (after severance plan)</li><li>13. Rate of labor costs versus operational costs</li><li>14. Submission of previous years' audit reports to clients by May 15 of following year (yes/no)</li><li>15. Proportion of volumes owed by "Instances Officielles" in total volumes owed</li><li>16. Proportion of bills owed by "Instances Officielles" in total billing</li></ol>
<p>Key Outputs by Component (linked to the achievement of the Objective/Outcome 2)</p>	<ol style="list-style-type: none"><li>1) <b>83.47 percent</b> of satisfactory complaints resolved by REGIDESO</li><li>2) <b>93 percent</b> of beneficiaries know at least two of their responsibilities regarding the access to water</li><li>3) <b>94.6 percent</b> of availability rate of production plants</li><li>4) <b>No achievement</b> on the Non-revenue water reduction</li><li>5) <b>31 percent</b> rate of inactive connections per city</li><li>6) <b>71 percent</b> of metered distribution rate</li><li>7) <b>69 percent</b> of bill collection rate from private connections</li></ol>



- |  |   |
|--|---|
|  | <p>8) <b>8 staffs/1000 active connections</b>, after severance plan<br/>9) <b>36 percent</b> of labor costs versus operational costs<br/>10) <b>34 percent</b> of water volumes owed by "instances Officielles" in total volumes owed</p> |
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**ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION****A. TASK TEAM MEMBERS**

<b>Name</b>	<b>Role</b>
<b>Preparation Parent project</b>	
Franck Bousquet	Task Team Leader(s)
Gilles Veuillot	Sr. Counsel, LEGAF
Madio Fall	Sr. Water Supply & Sanitation Specialist, WSP
Jean Doyen	Water Supply & Sanitation Specialist-Consultant, WSP
Aissata Zerbo	Procurement Analyst, AFTU2
Philippe Mahele	Procurement Specialist, AFTPM
Jeff Ramin	Sr. Operations Officer, AFTRL
Serigne Mbaye Seye	Communications Specialist, WSP
Nestor Coffi	Sr. Financial Management Specialist, AFTFM
Jean.-Charles. Kra	Sr. Financial Management Specialist, AFTFM
Abdoul-Wahab Seyni	Sr. Social Development Specialist, AFTCS
Paul Martin	Sr. Environmental Specialist, AFTEN
Ernestina Attafuah	Sr. Program Assistant
<b>Supervision/ICR</b>	
Rebecca Jean Gilsdorf, Pierre Francois-Xavier Boulenger, Patrick Goy Ndolo	Task Team Leader(s)
Jean-Claude Azonfack, Cheick Traore, Clement Tukeba Lessa Kimpuni	Procurement Specialist(s)
Lydie Madjou	Financial Management Specialist
Bella Diallo	Team Member
Rahmoune Essalhi	Team Member
Madio Fall	Team Member
Maximilian Leo Hirn	Team Member



Lucie Lufiauluisu Bobola	Procurement Team
Richard Everett	Social Specialist
Koho Francine Takoy	Procurement Team
Alice Museri	Procurement Team
Patricia Komina Dele	Team Member
Joelle Nkombela Mukungu	Environmental Specialist
Yeli Mariam Dakoure Sou	ICR main contributor

**B. STAFF TIME AND COST**

Stage of Project Cycle	Staff Time and Cost	
	No. of staff weeks	US\$ (including travel and consultant costs)
<b>Preparation</b>		
FY06	31.641	188,668.43
FY07	14.523	49,169.32
FY08	21.038	125,423.39
FY09	23.192	193,132.95
FY10	0	0.00
FY18	.200	543.76
FY19	.150	457.26
FY20	.200	609.68
<b>Total</b>	<b>90.94</b>	<b>558,004.79</b>
<b>Supervision/ICR</b>		
FY09	0	2,116.22
FY10	30.898	247,535.23
FY11	30.030	224,309.17
FY12	17.751	139,411.11
FY13	23.725	258,874.53



FY14	37.861	204,660.72
FY15	20.446	148,741.34
FY16	15.197	132,623.69
FY17	10.554	73,735.65
FY18	22.287	179,380.39
FY19	38.580	213,597.72
FY20	35.969	191,675.71
<b>Total</b>	<b>283.30</b>	<b>2,016,661.48</b>





**ANNEX 3. PROJECT COST BY COMPONENT**

<b>Components</b>	<b>Amount at Approval (US\$M)</b>	<b>Actual at Project Closing (US\$M)</b>	<b>Percentage of Approval (US\$M)</b>
Water supply services in major urban centers	101.6	215.85	84%
Sector reform, capacity building & improved governance	88.4	98.15	100%
<b>Total</b>	<b>190.00</b>	<b>356.00</b>	<b>88%</b>



#### ANNEX 4. EFFICIENCY ANALYSIS

1. The objective of the PEMU Project and its Additional Financing was to increase sustainable access to safe drinking water in three cities<sup>18</sup> of Democratic Republic of Congo (DRC), and to improve the efficiency of the country water utility, REGIDESO. The areas of improvement of the REGIDESO efficiency were (i) an investment, expansion and rehabilitation program, and (ii) a program to support REGIDESO's reform, capacity building and sector governance.
2. **The major project beneficiaries** were urban communities based on the mains urban center of the countries: Kinshasa, Lubumbashi and Matadi. At appraisal the number of beneficiaries was estimated to be 1,205,000 and later increased to 2,600,000 at the additional financing.
3. **Cost of the project.** The Project was financed through an IDA credit amounting to USD 199 million. USD 101.6 million were allocated for water supply services in the three targeted cities while USD 88.4 million were allocated in the water sector to support reforms, enhance capacity building, and improve governance. An additional financing amounting to USD 166 million was later approved to scale up the water supply services in the same cities and carry on the sector reform.
4. **Project approval, effectiveness, and duration:** The initial project was approved on December 18<sup>th</sup>, 2008 and became effective on November 3<sup>rd</sup>, 2009. The parent project initial closing date was on April 31<sup>st</sup>, 2014. A first restructuring occurred in July 2012, to extend the project closing date by 21 months, until December 31, 2015. A second restructuring occurred in October 2015, recording a 4-month extension of closing date April 15<sup>th</sup>, 2016, to provide time for signing of the Credit Agreement for the Additional Financing. The Additional Financing (AF) was approved on February 25<sup>th</sup>, 2016, with an original closing date on December 31<sup>st</sup> 2018. The AF PEMU project closing date was extended four times (to 6 months at each restructuring) to allow delayed works to be completed. The last 6 months restructuring finally closed the project on June 30<sup>th</sup>, 2021.
5. An ex-post financial and economic analysis of the project's impacts is conducted in accordance with ICR guidelines to reassess the performance of the project at completion stage. The assessment is done against the targets of the results indicators specified in the PAD. In this regard, the various analyses were revisited to: (i) update the data, parameters and hypotheses used to establish the level of financial and economic criteria and (ii) broaden the scope of analysis of the project's economic impacts in light of the results recorded. The analysis approach is based essentially on the various steps described in the Annex 9 of the PAD and Annex 5 of the Additional Financing (AF) relating to the economic and financial analysis of the PEMU project. The present analysis has three parts: (i) a section on REGIDESO's financial viability; (ii) a section on the financial impact of the project; and (iii) a section on the economic analysis of the project.
6. **The economic and financial evaluation shows that:** (i) overall, the PEMU has generated a satisfactory internal Rate Return (IRR) and a Net Present Value (NPV), which are well above the forecasts mentioned in the additional financing PAD. At the level of the centers, the results remain positive, but the most significant impacts are recorded in the city of Kinshasa, then in Lubumbashi and finally in Matadi. Regarding the situation of REGIDESO, it appears that although the project has contributed to improve some of the utility's operational performance, its financial viability remains structurally dependent on (a) the low rate of collection of public's bills, (b) the high percentage of unbilled water volume, (c) the average price of water sales, and (d) the low self-financing capacity of the utility.

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<sup>18</sup> Kinshasa, Lubumbashi and Matadi



**A - REGIDESO's financial viability**

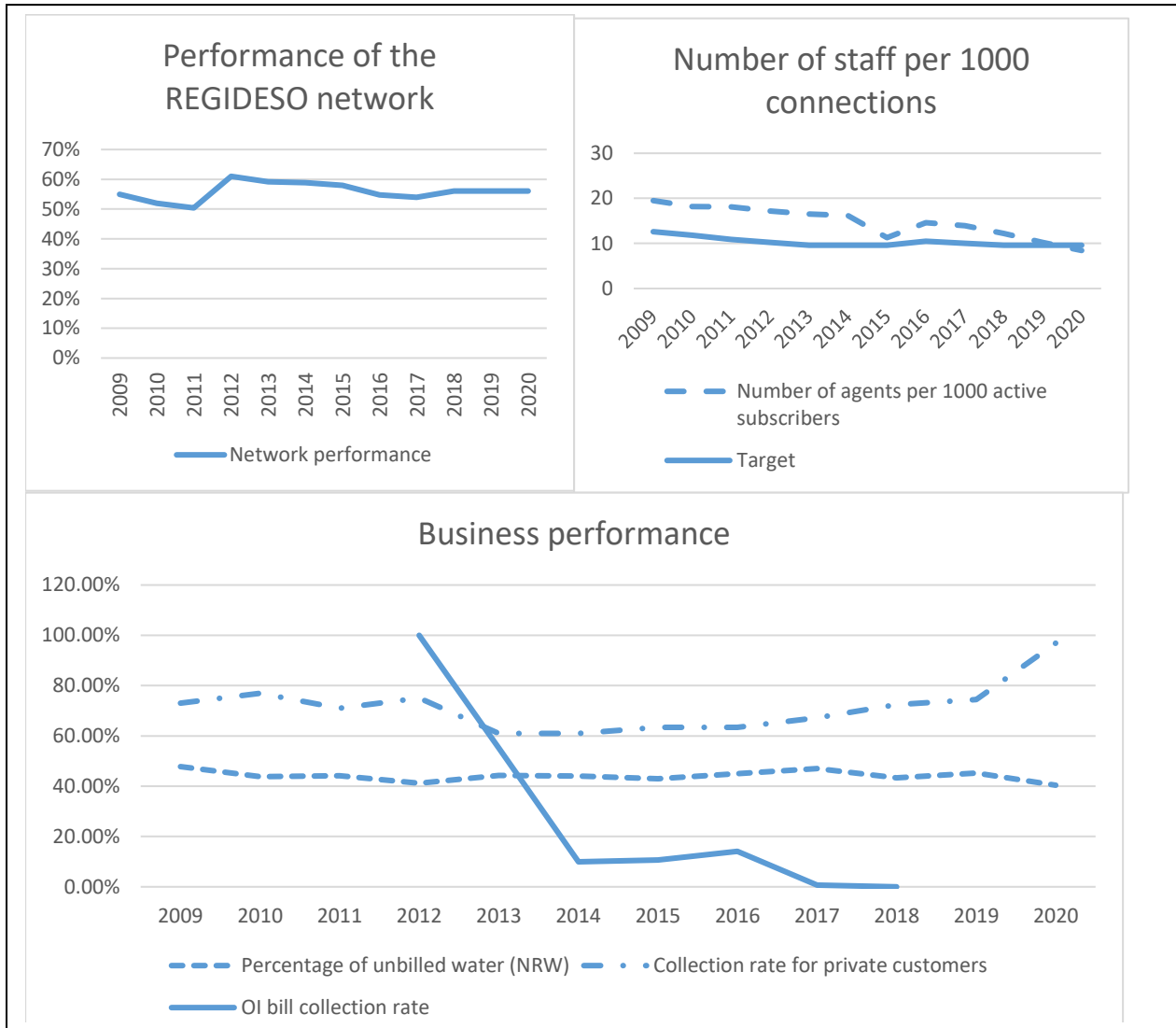
7. The financial analysis aims to evaluate the results of the PEMU on (a) the improvement of REGIDESO's management and administration (i.e., its operational and commercial performances), (b) REGIDESO's financial situation, and (c) the sustainability of REGIDESO's financial viability.

8. **Impacts of PEMU on the operational and commercial performance of REGIDESO.** Several actions under the water reform component were carried out to improve the operational and commercial performance of REGIDESO, including a) the repair, replacement and rehabilitation fund and support for operations, b) the staff optimization plan, c) the communication plan, and d) the implementation of an action plan to reduce and control the consumption of official institutions. All these actions had direct effects on the following indicators: (i) network performance, (ii) percentage of unbilled water, (iii) staff productivity, (iv) rate of collection of bills and debts of IOs, and (v) rate of collection of private bills.

9. **The PEMU did not reduce the non-revenue water (graph 1).** In contrast, the first graph shows that since 2012, there is a tendency to the decrease of network efficiency. However, the number of staff per 1000 connections decreased since the beginning of the project to reach its target in 2020. Unfortunately, this achievement did not reduce the wage bill. The average annual cost per agent of USD 20,155 noted in 2016 increased to USD 20,550 in 2017.



Graph 1. REGIDESO operational performances during the PEMU implementation



10. **REGIDESO's commercial performance.** The graph 1 shows that the commercial performances are penalized by the almost constant weight of the volume of unbilled water, combined with a strong propensity of the official institutions (*Instances Officielles IO in french*, meaning the public customers) to accumulate very important payment arrears. The balance of these arrears amounts to USD 239 million. This situation inhibits the efforts made by REGIDESO to redress the collection rate of private connection, which rose from 61% in 2013 to 96.20% in December 2020.

11. **The impact of PEMU on the financial management of REGIDESO.** This impact is assessed based on the elements of the operating account and the cash flow account contained in REGIDESO's financial statements. The data in Table 1 for the period 2015-2019 update the forecasts made on REGIDESO's financial management during



the additional financing phase and presented in the interim completion report<sup>19</sup>. The table 1 shows the relevant parameters of REGIDESO's financial management and highlights the annual values of the working capital and the financing requirement that best reflect the fragility of REGIDESO's cash flow.

Table 1: financial data and some indicators over the project period. (Unit in billion FC, current price)

Parameters	2009	2012	2013	2014	2015	2016	2017	2018	2019
Operating cost	121.3	138.3	141.9	162.9	139.0	160.1	221.0	249.4	231.2
Disbursed operating expenses	161.9	120.2	127.4	130.1	156.4	132.4	190.6	197.4	258.7
Of which, staff costs	31.9	45.5	50.7	50.9	59.3	66.1	81.3	101.9	116.7
Operatinf expenses	188.6	170.4	180.6	173.8	201.3	182.5	259.5	255.0	306.2
<b>Operating results</b>	- 67.3 -	32.2 -	38.8 -	10.9 -	17.0	10.7	7.1	- 18.3 -	52.9
Net result	- 95.4 -	32.7 -	40.6 -	11.4 -	30.4	- 20.2 -	22.9 -	21.5 -	60.5
shareholders' equity					1,200.8	1,296.6	1,802.3	1,890.1	1,916.7
Working capital					26.6	52.9	65.9	61.6	44.2
working capital requirement					- 33.0	- 59.5 -	72.8 -	76.3 -	68.7
<b>Net cash flow</b>	<b>7.63 -</b>	<b>4.64 -</b>	<b>3.87</b>	<b>0.09 -</b>	<b>6.32</b>	<b>- 6.58 -</b>	<b>6.96 -</b>	<b>14.70 -</b>	<b>24.57</b>
<b>Indicators</b>									
Operating expense rate	64.3	81.1	78.5	93.7	<b>77.71</b>	<b>72.54</b>	<b>73.45</b>	<b>77.40</b>	<b>84.48</b>
Share of labour costs	16.9	26.7	28.1	29.3	29.5	36.2	31.3	40.0	38.1

Sources: period 2009 to 2014 (without 2011 and 2012), taken from the AF (§11, table 5.5) period 2015 to 2019 update based on REGIDESO's financial statements.

12. **The revenue situation.** REGIDESO's revenue situation was gradually consolidated under the combined effect of the increase in the volumes of water sold and the continuous increase in the average price of water (private), which rose from 819.02 FC/m<sup>3</sup> (0.41 USD/m<sup>3</sup>) in 2016 to 1139 FC/m<sup>3</sup> (0.57 USD/m<sup>3</sup>) in 2017. In 2019, the average water price stands at 1286.11 FC/m<sup>3</sup> (0.65 USD/m<sup>3</sup>) with a stronger increase in the average water price at the standpipe level than at the private connection level.

13. **The situation of expenses.** The incompressible expenses of REGIDESO remain very important and support the structural deficit noted at the level of the operating result of the company. These expenses represent over the period 2015-2019, 77% of the total operating expenses of which 36.4% of the expenses are attributable to personnel costs.

14. **The net result.** The series of deficits recorded over the entire project period shows an average value of -33.6 billion FC (-16.8 million USD) per year, this average increases to -31.3 billion FC (-15.6 million USD) per year over the period of the project additional financing. This slight positive evolution remains insufficient to make a real recovery of the financial viability of REGIDESO.

15. **Net cash flow.** The financial resources released each year by REGIDESO to finance its short-term activities are insufficient. In fact, from 2015 to 2019, REGIDESO's financing needs averaged 62.1 billion FC (31.2 million USD) against an average working capital of 50.2 billion FC (25.2 million USD). The cash balance evaluated on average at 11.82 billion FC (59.2 million USD) constitutes a gap covered by recourse to bank loans. REGIDESO's net financial debt stands at 146.4 billion FC (73.5 million USD) in 2019.

16. **The significant contribution of IO receivables.** From 2013 to 2015, the cumulative receivables of the IOs amounted to 220.814 billion FC (110.8 million USD), i.e., an average of 44.16 billion FC (22.2 million USD) per

<sup>19</sup> Table 17 of the interim completion report of the client, in French: *Elaboration du Rapport d'achèvement de l'emprunteur (RAE) – Projet d'alimentation en eau potable en milieu rural (PEMU). Ministère de l'Énergie et des Ressources Halieutiques République Démocratique du Congo. 65p – Juillet 2019*



year. This amount mainly covers (i.e., 3.7 times) the average gap in REGIDESO's net cash position. Consequently, it is undeniable that the current situation of unpaid IO invoices cancels out and jeopardizes REGIDESO's solvency.

17. **The PEMU and the financial viability of REGIDESO.** The PEMU was implemented in a very difficult context where the operational and commercial performances as well as the self-financing capacity of REGIDESO were structurally degraded by an inefficient productive capital, disproportionate operating costs, an approximate control of the water market (supply, consumption, price, collection) and an environment that did not allow the public power to be empowered. All these things limited the impact of the project on the financial viability of REGIDESO despite the progress made.

### **C – Economic analysis**

18. The Economic Analysis section of aims to update the cost-benefit analysis carried out for the original project and for the additional financing by taking into account the actual implementation of the PEMU at the completion date and the impact of its activities.

19. **Methodology.** The cost-benefit analysis has been updated to assess the IRR and NPV of all activities under the original project and the additional financing. The methodology used in the PAD was applied and complemented by the identification of the benefits brought by the project. Calculations are made over a 20-year period and the NPV is calculated at a rate of 12% (see PAD, page 104, §4.) to allow comparison with the results contained in the PAD and additional financing. Benefits include “increased water consumption”, “consumer surplus”, which corresponds to beneficiaries that have shifted from other non-potable water sources to connections or standpipes, and “cost savings” resulting to improved operational performance. The analysis also includes the avoided cost in time related to the reduction of water collection as a positive impact of the project. Project costs include capital costs composed of 100% of the costs of the initial project activities and the AF, incremental operating costs (energy and chemical costs, commercial costs related to new customers and maintenance costs) and renewal costs.

20. Updated baseline assumptions. The baseline assumptions (Parent project and AF) are updated to reflect the project outcome with respect to current values of per capita consumption, average water revenues (for REGIDESO) and prices (at the consumer level), and operating costs, contained in Table 2.



Table 1- Water Consumption, Prices and Operating Costs

Water consumption and prices			
Income	Number of people served	Specific consumption (L/pers./day)	Average price (FC/m3) [US\$/m3]
<b>With the project</b>			
Regular connection	30	40	458 [0.23]
Social connection	30	40	458 [0.23]
Standpipes	300	15	500 [0.25]
<b>Without the project</b>			
Standpipes		15	500 [0.25]
Resellers		10	1000 [0.50]
Operating cost			
	Kinshasa	Lubumbashi	Matadi
<b>Energy consumption</b>			
kWh/m3 produced	0.405	0.304	1
FC/m3 produced	63.6	47.7	156.6
[US\$/m3]	0.032	0.024	0.079
<b>Chemicals</b>			
FC/m3 produced	15.7	5	24.3
[US\$/m3]	0.0079	0.0025	0.012
<b>Commercial cost</b>			
Operating connection (FC/connection)			277,500.00
[US\$/connection]			139.29
Social connection (FC/connection)			46,250.00
[US\$/connection]			23.21

21. **REGIDESO's performance indicators.** The revenues and additional costs of the PEMU were adjusted by considering the overall performance of REGIDESO, which is the beneficiary of the investments. In this sense, the following three main indicators were used, namely indicators relating to the overall performance of REGIDESO, its commercial performance and the overall productivity of its personnel.

Table 3: REGIDESO performance indicators

	2009	2010	2011	2012	2013	2014
Percentage of Non-Revenue Water (NRW)	47.80%	43.80%	44.20%	41.20%	44.30%	44.00%
Private connection bills collection rate	73.00%	77.00%	71.00%	75.00%	61.00%	61.00%
Number of staff/1000 connections	19.5	18.2	18.1	17.2	16.5	16.2
	2015	2016	2017	2018	2019	2020
Percentage of Non-Revenue Water (NRW)	43.00%	45.00%	47.00%	43.30%	45.28%	40.39%
Private connection bills collection rate	63.40%	63.40%	67.20%	72.49%	74.50%	96.90%
Number of staff/1000 connections	11.3	14.6	13.9	12.2	10.25	8.43



22. **The contribution of PEMU to the reduction of water collection.** Survey results from the PILAEP 2 project<sup>20</sup> showed that without the project, the time to collect water is estimated at 142.7 minutes for a quantity of 83 liters of water collected. With the project, the same amount of water is collected in less than 30 minutes. The Avoided Time Cost (ATC) is calculated based on the shadow water price differential of US\$0.05 before the project and US\$0.0003 after the project, with the time savings valued at the opportunity cost of ordinary labor (US\$0.027 per hour).

23. **Overall economic profitability of the PEMU.** The results of the updated and completed analysis clearly indicate that the PEMU is an economically profitable project with an IRR of 28.7% and an NPV of USD 70.9 million. The significant benefits are distributed among REGIDESO, which increases its productive capital and business volume, the beneficiary households, which improve their access to drinking water and generate surplus water consumption, and the State, which saves substantially on health costs.

**Table 4: Cost-effectiveness indicators for the PEMU**

Economic profitability of water centers targeted in the PEMU project		
Center	Net Present Value (NPV) @12% (M\$)	Internal Return Rate (IRR) (%)
Kinshasa	58.5	37.2
Lubumbashi	7.7	19.8
Matadi	4.7	17.7
Total	70.9	28.7

24. **Economic profitability by center.** The investments were more massive and diversified in Kinshasa which presents a more satisfactory IRR of 37.2%, its NPV contributes to 82.5% of the overall NPV of the PEMU. The two other centers which respectively show an IRR of 19.8% in Lubumbashi and 17.7% in Matadi also have very interesting returns because they are higher than the discount rate of 12%. The allocation of resources to these centers is economically relevant.

25. **The PAD and additional funding forecasts.** The table 5 extracted from the additional financing PAD of the PEMU shows that the assumptions used at the beginning of the project were very optimistic and that those used at the time of the additional financing were also reducing because the impacts of the project were not sufficiently visible to be integrated in the analysis. At the end of the project, the profitability indicators are between the two analyses with an NPV representing 53% of that obtained in the PAD and 3.35 times that retained in the additional financing.

<sup>20</sup> PILAEP = *Promotion de modalités Innovantes pour L'Accès à l'Eau Potable* in French. A project funded by French Development Agency to set up sustainable drinking water supply systems for the populations of the peri-urban areas of Kinshasa and Bas Congo not served by the national water distribution company (REGIDESO)





Table 5: NPV and EIRR forecasts and actuals values

	Unit	Original project and results	Original Project and AF (updated results)
Net Present Value (NPV) @ 12%	US\$	132.0	20.9
Economic internal rate of return (EIRR)	%	41.0	13.7

26. **The economic results of the PEMU are very robust.** A sensitivity test was carried out on the profitability indicators to assess separately the effects of a 10% change in network efficiency, a 10% change in recovery rate and a 10% increase in average water price. The results in table 6 indicate that the economic indicators are more sensitive to water price, followed by collection rate performance and then network efficiency. However, the overall results remain broadly stable with IRRs around 29% and NPV evolving in a narrow range from USD 73.5 million to USD 75.4 million.

Table 6: Sensitivity testing of profitability indicators

Centers	Sensibility test					
	Network efficiency improved at 10%		Private connections bills collection rate improved at 10%		Average water price increased at 10%	
	NPV @ 12%	IRR %	NPV @ 12%	IRR	NPV @ 12%	IRR
Kinshasa	60.9	38.2	60.6	38.2	61.6	38.2
Lubumbashi	7.3	19.5	8.4	20.5	8.36	20.6
Matadi	5.3	18.4	5.1	18.2	5.2	18.3
<b>Total</b>	<b>73.5</b>	<b>29.2</b>	<b>74.1</b>	<b>29.5</b>	<b>75.4</b>	<b>29.5</b>

27. **The project results become more important** if a lower discount rate (10% or 6%) is used, which is generally recommended for WSS projects. Indeed, if the discount rate used is 10%, the NPV of the project increases from USD 70.9 million to USD 98.5 million. The NPV rises to a very significant 189.1 million USD if the discount rate is increased to 6%.



## ANNEX 5. BORROWER, CO-FINANCIER AND OTHER PARTNER/STAKEHOLDER COMMENTS

The 7 attached pages present the comments made by the project implementation unit (CEP-O) on the completion report. The client also prepared an ICR at an earlier stage in the project (before the final extensions were granted). This version of the Borrower ICR does not reflect all of the final achievement of the project, but is included given the context, storyline, and other details are all relevant to the final evaluation of the project.

In light of the received comments, the following clarifications are provided:

- **On the General Observation** : The realization of the ICR took place during the period of sanitary restrictions related to the COVID-19 so that all work for the ICR was completed virtually. The main author of the ICR conducted an introductory meeting to present the objectives of the ICR to CEP-O; participated in the last virtual supervision mission of the project (November 9-20, 2020) during which a session was dedicated to the ICR; and conducted focus group meetings with the fiduciary, safeguard and monitoring-evaluation teams respectively. Apart from these formal meetings, additional communication with CEP-O was ongoing particularly with the monitoring-evaluation team, to obtain the necessary data for the project evaluation.
- **On the observation related to the efficacy rating** : Before sharing the ICR report with the Client, a meeting was held to present the results of the report, including the split-rating methodology that led to the project efficacy rating. It should be recalled here that the final outcomes rating of the project's is not based on an average of the ISR ratings, but on the split-rate, in accordance with the World Bank's guideline for ICR.
- **On the comment 3 regarding the PDO2 indicators.** We decided to retain the PDO level Indicator 2 (i.e. Operating cost coverage ratio in utilities targeted by the project) for the efficacy rating assessment because this indicator was consistently reported using the same methodology throughout the project. In addition, despite the eight restructurings that took place during the project, none of them called into question the reliability of this indicator. The others intermediate indicators mentioned by CEP-O are mainly expected to contribute to the improvement of the operating cost coverage ratio (see TOC in para 4)



République Démocratique du Congo

MINISTRE DES RESSOURCES HYDRAULIQUES ET ELECTRICITE  
CEP-O / REGIDESO

**CELLULE D'EXECUTION DES PROJETS-EAU DE LA REGIDESO S.A.**

**Transmis copie pour information à:**

- Son Excellence Monsieur le Ministre des Ressources Hydrauliques et Electricité ;
- Monsieur le Directeur Général de la REGIDESO ;
- Cellule de Suivi des Projets et Programmes/Ministère des Finances.  
(Tous) à **Kinshasa/Gombe**

A l'attention de Madame Yeli Mariam  
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CEP-O/PEMU/ *MB* /2022

Kinshasa, le 11 février 2022

Madame la Consultante,

Concerne : P091092 – PEMU/REGIDESO DRC – DONS IDA N°H4350 et D1020

- Transmission des observations sur le rapport d'achèvement du projet PEMU

Nous accusons réception de votre mail du 09 février 2022 par lequel vous avez transmis le rapport d'achèvement du Projet bien identifié en concerne et vous en remercions.

Après examen dudit rapport, nous vous transmettons en annexe de la présente nos observations.

Nous vous en souhaitons bonne réception et vous prions d'agréer, Madame la Consultante, l'assurance de notre considération distinguée.

Philippe LUMÉKA DIT ALUA  
Coordonnateur



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## Commentaires de la CEP-O/REGIDESO au rapport d'achèvement du projet PEMU

### 1. Observations d'ordre général

- Le rapport d'achèvement a été élaboré à distance, le Consultant n'a pas eu à rencontrer physiquement tous les acteurs qui ont contribué à la mise en œuvre du Projet pour discuter avec eux de façon détaillée, ce qui conduirait certes à des résultats d'évaluation un peu plus objectifs.
- Il est à signaler aussi que les indicateurs de performance du Projet ont été établis en perspective d'un contrat de gestion avec un Opérateur Privé suivant un partenariat public privé, avec obligation des résultats. Pendant la mise en œuvre du projet, étant donné que cet appel d'offres avait été déclaré infructueux, une autre stratégie avait été adoptée, celle de la signature de trois (03) contrats suivants :
  - Un contrat de services d'assistance technique signé en 2013, avec une firme sans obligation de résultats. Contrat clôturé en 2018 ;
  - Un contrat de performance signé entre l'Etat et la REGIDESO SA ;
  - Un contrat d'audit technique et financier de deux (02) contrats précédents.

### 2. Observations d'ordre spécifique

- Pages 3&4 de 69 : Notation de la performance des projets dans les EIS

Les différentes notations des missions de supervision ne cadrent pas avec la notation attribuée au projet par l'ICR. En effet, sur 46 notations, on a : 12 « *satisfaisants* », 25 « *Modérément satisfaisants* » et 9 « *Modérément insatisfaisants* » ; la combinaison de toutes ces notations ne peut conduire que sur une notation globale : « *Modérément satisfaisant* »



#	Rapport	Observations de la CEP-O
1	<p><b>Paragraphe 19 :</b> Pour la composante B, (la réforme du secteur) l'appel d'offres du CM n'a pas réussi à attirer des opérateurs qualifiés. Ce processus d'appel d'offres à haut risque s'est produit dans un contexte de fragmentation institutionnelle et de mauvaise gouvernance du secteur qui a entravé la réforme de l'eau en RDC. Après l'échec de l'appel d'offres, les objectifs du contrat de gestion ont été transférés à la REGIDESO par le biais d'un contrat de performance signé avec le gouvernement de la RDC. Un contrat de service (CS) de trois ans a également été signé avec un opérateur privé pour aider la REGIDESO à atteindre ses objectifs dans le cadre du contrat de performance. Comme mentionné ci-dessus, plusieurs changements ont été apportés aux indicateurs intermédiaires du projet et à certaines de ses composantes afin de refléter l'évolution des réalités observées pendant la mise en œuvre.</p>	<p>Pour mieux tirer les leçons découlant de la préparation et de l'exécution du projet PEMU, il convient de préciser, s'agissant du contrat de gestion, que les résultats de la consultation menée auprès des opérateurs privés internationaux opérant dans le secteur de l'eau ont indiqué que ces derniers n'étaient pas intéressés par un contrat de gestion qui couvre l'ensemble du périmètre de la REGIDESO (94 centres d'exploitation, dont 60 en activité et 34 à l'arrêt), compte tenu de l'ampleur des problèmes à résoudre et des moyens limités mobilisés par la Banque Mondiale et le Gouvernement qui ne couvraient que trois villes. Aussi, les opérateurs privés ont souhaité offrir leurs prestations dans des périmètres très limités, avec des objectifs opérationnels et financiers limités à ces périmètres et non sur l'ensemble du périmètre de la REGIDESO.</p>
2	<p><b>Paragraphe 20 :</b> Le champ d'application du contrat de service est resté le même que pour le contrat de gestion, avec deux séries d'activités : (i) un certain nombre d'évaluations et de plans d'action visant à améliorer les performances commerciales, techniques et les ressources humaines de la REGIDESO, ainsi que la préparation d'une étude tarifaire ; et (ii) une assistance à la gestion, y compris la formulation de stratégies, la production et la distribution d'eau, la gestion commerciale, et la gestion des ressources humaines et financières. Cependant, l'opérateur privé n'assumait pas toutes les responsabilités de gestion. Il n'assume ni les prises de décision ni les responsabilités fiduciaires de la société de distribution d'eau. La société est restée exclusivement sous la direction de l'équipe existante</p>	<p>Sur ce point, il convient de préciser que dans le premier contrat de service (2013), les experts mis à la disposition de la REGIDESO ont occupé les postes suivants :</p> <ul style="list-style-type: none"><li>▪ Directeur Central clientèle et marketing ;</li><li>▪ Directeur central finance et comptabilité ;</li><li>▪ Directeur central des ressources humaines ;</li><li>▪ Directeur central développement et réhabilitation ;</li><li>▪ Expert réseau ;</li><li>▪ Expert en Exploitation.</li></ul> <p>Dans le deuxième contrat de services, ciblé sur un appui plus important à l'exploitation technique et commerciale (2016), les experts extérieurs ont occupé les postes de responsabilité suivants à la REGIDESO :</p> <ul style="list-style-type: none"><li>▪ Directeur Central clientèle et marketing ;</li></ul>

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	<p>avant le contrat de service. Cette approche a permis au projet d'attirer des entreprises qualifiées mais a limité la portée des améliorations qui pouvaient être réalisées par le biais du CS.</p>	<ul style="list-style-type: none"><li>▪ Directeur central finance et comptabilité ;</li><li>▪ Directeur central exploitation ;</li><li>▪ Directeur central développement et réhabilitation ;</li><li>▪ Directeur provincial adjoint de Kinshasa ;</li><li>▪ Directeur Urbaine de Kinshasa Centre;</li><li>▪ Directeur Urbaine de Kinshasa Ouest ;</li><li>▪ Directeur de la distribution de Kinshasa.</li></ul>
3	<p><b>Paragraphe 32:</b> OD2 : Améliorer la performance opérationnelle et la viabilité de l'entité de mise en œuvre du projet (c'est-à-dire la REGIDESO). Cet OD2 comprend deux résultats qui doivent être évalués : (i) la réduction des pertes et l'augmentation de la productivité et (ii) l'amélioration de la situation financière de la REGIDESO. Cependant, il n'y a qu'un seul indicateur d'impact : " le taux de recouvrement des charges d'exploitation ", qui évalue le second résultat lié à la situation financière de la REGIDESO. Par conséquent, pour évaluer le premier résultat, trois indicateurs intermédiaires ont été utilisés : L'eau non facturée (pour évaluer la réduction des pertes), la production d'eau supplémentaire, et le taux de disponibilité de la production d'eau (pour évaluer l'augmentation de la productivité).</p>	<p>Il faudrait compléter ce point en indiquant que l'amélioration des performances opérationnelles et la restauration de la viabilité de la REGIDESO devaient se traduire par l'atteinte des objectifs de rétablissement de l'équilibre financier et de l'équilibre d'exploitation de la REGIDESO.</p> <p>Ces résultats devaient se manifester par (i) l'augmentation des recettes d'exploitation et (ii) la réduction des charges d'exploitation de la REGIDESO. L'augmentation des recettes passe notamment par le paiement régulier des consommations d'eau de l'Etat et l'augmentation du taux de recouvrement des abonnés privés.</p> <p>La réduction des charges passe notamment par la réduction des charges d'exploitation à travers la révision de la convention collective et du règlement interne de gestion des cadres de direction de la REGIDESO.</p> <p>Les principaux indicateurs qui avaient été retenus pour évaluer ces résultats sont :</p> <ol style="list-style-type: none"><li>1) Le rendement réseau ;</li><li>2) Le taux de comptage en distribution ;</li><li>3) Le taux de recouvrement ;</li><li>4) Le taux de récupération des points de vente inactifs.</li></ol> <p>Aussi, pour les indicateurs qui ont conduit à l'évaluation de l'OD, il sied de noter ce qui suit :</p>



	<p>- <b>Pourcentage d'eau non facturée</b></p> <p>L'amélioration de cet indicateur est liée à l'activité de réhabilitation des conduites ainsi que les actions de réparation des fuites sur le réseau. Tout en sachant que l'intervention du PEMU, en ce qui concerne la réhabilitation des conduites, n'a concerné que quelques zones de chacune des villes ciblées compte tenu du budget disponible alloué au projet. C'est ainsi que pour la ville de Lubumbashi par exemple, le schéma directeur d'AEP avait prévu en 2011, pour assurer une desserte à 100% à l'horizon 2020, 150 millions de dollars américains alors que l'ensemble des investissements consentis dans cette ville est chiffré à environ 45 millions de dollars américains.</p> <p>- <b>Taux de recouvrement des charges d'exploitation</b></p> <p>Cet indicateur a connu des problèmes de calcul au point où, le projet s'est retrouvé avec plusieurs méthodes de calcul émanant de :</p> <ul style="list-style-type: none"><li>▪ La REGIDESO SA suivant la méthode habituellement utilisée ;</li><li>▪ L'Auditeur titulaire du contrat d'audit des contrats de performance et de services, suivant la méthode définie dans le contrat de performance ;</li><li>▪ La Banque mondiale, à travers ses multiples missions de supervision du projet sur recommandation de ses consultants.</li></ul> <p>Jusqu'à l'achèvement du projet, aucun consensus n'avait été trouvé pour la formule idéale à utiliser.</p>
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<p>4 <b>Paragraphe 61 :</b> La REGIDESO s'est peu appropriée la réforme et l'amélioration des performances opérationnelles et financières, ce qui a eu un impact négatif sur la réalisation globale de l'OD2. Les efforts de réforme ont également été entravés par une série de prolongations à court terme de la date de clôture du projet. Les prolongations de six mois étaient motivées par la longue durée du projet et par des facteurs externes, mais cette approche a limité le type et le nombre d'actions qui pouvaient être entreprises pour soutenir le programme de réforme de la REGIDESO.</p>	<p>Sur ce point, il conviendrait de préciser que la REGIDESO a mis en place une structure interne pour le pilotage du plan d'action pour l'amélioration des performances opérationnelles et financières de la société, mais cette structure a eu du mal à fonctionner faute de temps et des moyens.</p>
<p>5 <b>5. LECONS ET RECOMMANDATIONS :</b> <b>De paragraphes 86 à 88.</b></p>	<p>Aux leçons qui sont reprises aux paragraphes susmentionnés, il faudrait ajouter les leçons suivantes :</p> <p>Une analyse approfondie de la situation de la REGIDESO amenant à la conclusion qu'un contrat de gestion ou un contrat de service ne sont pas adaptés à la situation de cette entreprise qui est confrontée notamment :</p> <ol style="list-style-type: none"><li>1) A un déséquilibre structurel de sa situation financière et de ses ressources humaines ;</li><li>2) A un vieillissement de ses ressources humaines spécialisées dans le métier de production et de distribution d'eau potable, dont les possibilités de remplacement sont limitées ;</li><li>3) A une dégradation avancée de ses infrastructures, particulièrement de son réseau de distribution qui date de plus de cinquante ans et ;</li><li>4) A la taille de son périmètre d'exploitation qui dépasse ses capacités humaines, financières et matérielles.</li></ol> <p>Il faudrait une formule de partenariat permettant (i) une gestion de proximité du service de l'eau potable, (ii) un apport de</p>





	<p>capitaux frais pour réaliser des investissements nouveaux avec (iii) un ciblage des périmètres à exploiter sur la base des plans d'investissement et des plans opérationnels adaptés.</p> <p>Parmi les leçons à tirer des faibles résultats du Projet, il faudrait aussi épinglez le manque d'implication de l'Etat dans le redressement de la REGIDESO (non paiement des consommations des instances officielles et ayants-droits, absence de financements publics du secteur de l'eau).</p>
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**ANNEX 6. SUPPORTING DOCUMENTS (IF ANY)**

Table I: Summary of changes on the result framework

		<b>Original (PAD)</b>	<b>Restructuring of July 2012</b>	<b>Restructuring of February 2016</b>	<b>Restructuring of December 2018</b>
PDO		to increase sustainable access to water in selected urban areas and improve the efficiency of the Project Implementing Entity		<i>[Revised]</i> increase access to sustainable water services in selected urban areas, and to improve the operational performances and viability of the Project Implementing Entity	
<b>Component A - Water supply services in major urban centers</b>					
Objective 1		increase sustainable access to water in selected urban areas			
Outcome 1.1		greater access to basic water supply services, mainly through household connections and standposts			
Outcome 1.1 indicator [baseline; EOPT]		the percentage of people in the targeted cities with access to potable water [42% - 55%]	<i>[Revised]</i> Number of people in urban areas provided with access to "Improved Water Sources" under the project [0 – <b>1,205,000</b> ]	<i>[Ind + EOPT Revised]</i> people provided with access to "Improved Water Sources" under the project [0 – <b>2,600,000</b> ]	
Outputs 1.1 indicators [baseline; EOPT]	1.1.1	Km of secondary and tertiary water network constructed		<i>[EOPT Revised]</i> secondary and tertiary water network Constructed under the	<i>[EOPT Revised]</i> secondary and tertiary water network Constructed under the



		[0 – 651]		project [0 – 1390]	project [0 – 1100]
	1.1.2	Additional number of functioning stand posts [0 – 400]	<i>[Revised]</i> Improved community water points constructed or rehabilitated under the project [0 – 400]	<i>[EOPT Revised]</i> Improved community water points constructed or rehabilitated under the project [- - 450]	
	1.1.3	Additional number of households with new piped water connections [0 -41,000]	<i>[Revised]</i> New piped household water connections that are resulting from the project intervention [0 -41,000]	<i>[EOPT revised]</i> household water connections that are resulting from the project intervention [- -87,000]	<i>[EOPT revised]</i> household water connections that are resulting from the project intervention [0 -73,500]
	1.1.4			[New] Piped household water connections that are benefiting from rehabilitation works undertaken by the project [- -110,000]	
	1.1.5			[New] Direct project beneficiaries [0 – 2,600,000]	
	1.1.6			[New] Direct female project beneficiaries [0 – 1,300,000]	
Outcome 1.2		Reduced losses and higher productivity			
Outcome 1.2 indicator		- Not available -	- Not available -	- Not available -	- Not available -
Outputs 1.2 indicators		- Not available -	- Not available -	[New] Water production capacity installed under the project m3/day [- -179,000]	<i>[EOPT revised]</i> Water production capacity installed under the project m3/day [0 -69,000]
<b>Component B - Support to sector reform, capacity building, and improved governance</b>					



Objective 2		Improve the efficiency of the Project Implementing Entity			
Outcome 2.1		Improved financial position of REGIDESO			
Outcome 2.1 indicator		percentage of annual REGIDESO Operation & Maintenance cost covered by revenues [88% - 104%]			
Outputs 2.1 indicators [baseline; EOPT]	2.1.1	A five-year Management Contract, is bid, signed and under implementation [NA – effective]	<i>[Revised]</i> Services contract is bid, signed and under implementation [No – Yes]		
	2.1.2	Percentage of non-revenue Water [45%-29%]		[Revised] Non-revenue water in targeted cities [45%-29%]	
	2.1.3	Bill collection rate from private connections [90% - 98%]		Bill collection from private connections in targeted cities [73% - 97%]	
	2.1.4	Index of network losses m3/d/km [29-25]			
	2.1.5	Preparation of water sanitation strategies and program in project cities [1 – 3]		<i>[EOPT revised]</i> preparation of water sanitation strategies and program in project cities [1 – 4]	
	2.1.6	Rate of inactive connections per city [46% - 20%]		<i>[Baseline updated]</i> Inactive connections in targeted cities	



				[36% - 20%]	
	2.1.7	Metering rate per city [43% - 88%]	<i>Dropped</i>	[Baseline and EOPT updated] Metered connections in targeted cities [33% - 90%]	
	2.1.8	Proportion of bills owed by IO (Instances Officielles) [42% - 20%]	[Revised] Proportion of sales billed to IO/ Instances Officielles [42% - 20%]	Share of IO in total billing [42% - 20%]	
	2.1.9	Number of staff/1000 active connections (after severance plan) [13.5-9.6]		[EOPT REVISED] Number of staff/1000 active connections (after severance plan) [17.7-9.6]	
	2.1.10	Rate of labor costs vs. operational costs [35% - 27%]	<i>Dropped</i>	Share of labor costs in O&M costs [40% - 27%]	
	2.1.11	Qualitative Staff Management (a) Capacity building strategy [No – Yes] (b) Evaluation system for Managers [No – Yes] (c) Reward and recognition Program [No – Yes] (d) Ability to recruit and dismiss staff [No – Yes]	<i>Dropped</i>		
	2.1.12	Submission of previous years' audit reports to	<i>Dropped</i>		



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		clients by May 15 of following year. [NA – Yes]			
	2.1.13		[New] Availability of chemicals to ensure proper water treatment and continued water services [Yes – No]		
	2.1.14			[New] Citizen engagement: satisfactory complaints resolution by REGIDESO [26% - 56%]	
	2.1.15			[New] Citizen engagement: surveyed beneficiaries who know at least two of their responsibilities regarding their access to water [- - 75%]	
	2.1.16			[new] Number of water utilities that the project is supporting [- -1]	
	2.1.17			[new] Number of other water service providers that the project is supporting [- - 0]	
	2.1.18			<i>[mentioned as dropped]</i> Proportion of volumes consumed by IO in total water consumption	
	2.1.19			[New] Payment arrears on water bills of IO 9 months of billing [- - 6]	

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Table II : Overall outcome rating through split rate of efficacy

	Baseline	Target	Achievement value	Achievement percentage	From effectiveness in November 2009 to July 2012 (original targets)	Baseline	Target	Achievement value	Achievement percentage	From July 2012 to December 2015 (Targets of July 2012 restructuring)
<b>PDO1. increase access to sustainable water services in selected urban areas</b>										
<i>PDO1. Ind. Number of people in urban areas provided with access to Improved Water Sources under the project</i>	42	55	0	0	Negligible	0	1205000	1653060	137.2	High
<i>PDO1 rating</i>	<b>Negligible</b>					<b>High</b>				
<b>PDO2. Improve the operational performances and viability of the Project Implementing Entity (percent)</b>										
<i>PDO2. Ind. Operating cost coverage ratio in utilities targeted by the project</i>	88	104	88	0	Negligible	88	104	101.2	82.5	High



<i>Water production capacity installed under the project m3/day</i>	202231	277757	0	0	Negligible	NA	NA	NA	NA	NA		
<i>Availability rate of water production plants %</i>	87.6	94	NA	NA	NA	87.6	94	96	131.3	High		
<i>Non-revenue water in targeted cities (percent)</i>	45	30	44	6.7	Negligible	45	29	43	12.5	Negligible		
<b>PDO rating 2</b>						<b>Negligible</b>						<b>Modest</b>
<b>Efficacy (PDO)</b>						<b>Negligible</b>						<b>Substantial</b>

	Baseline	Target	Achievement value	Achievement percentage	From February 2016 to December 2018 (targets of February 2016 restructuring)	Baseline	Target	Achievement value	Achievement percentage	From January 2019 to June 2021 end of project (targets of December 2018 restructuring)
<b>PDO1. increase access to sustainable water services in selected urban areas</b>										
<b><i>PDO1. Ind. Number of people in urban areas provided with access to Improved Water Sources under the project</i></b>	<b>0</b>	<b>2600000</b>	<b>1893630</b>	<b>72.8</b>	<b>Substantial</b>	<b>0</b>	<b>2600000</b>	<b>3071430</b>	<b>118.1</b>	<b>High</b>





<i><b>PDO1 rating</b></i>	<b>Substantial</b>					<b>High</b>				
<b>PDO2. Improve the operational performances and viability of the Project Implementing Entity (percent)</b>										
<i><b>PDO2. Ind. Operating cost coverage ratio in utilities targeted by the project</b></i>	<b>88</b>	<b>104</b>	<b>60.0</b>	<b>-175.0</b>	<b>Negligible</b>	<b>88</b>	<b>104</b>	<b>42.22</b>	<b>-286.1</b>	<b>Negligible</b>
<i>Water production capacity installed under the project m3/day</i>	0	17900 0	64000	35.8	Modest	0	69000	85920	124.5	High
<i>Availability rate of water production plants %</i>	87.6	94	98.2	165.6	High	87.3	94	94.6	109.0	High
<i>Non-revenue water in targeted cities (percent)</i>	45	29	43.2	11.3	Negligible	45	29	45.72	-4.5	Negligible
<i><b>PDO2 rating</b></i>	<b>Negligible</b>					<b>Negligible</b>				
<b>Efficacy (PDO)</b>	<b>Negligible</b>					<b>Modest</b>				