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IMPLEMENTATION COMPLETION AND RESULTS REPORT

(IDA D0680-HT AND IDA D-2010-HT)

ON A

GRANT

IN THE AMOUNT OF SDR50.9 MILLION

(IDA D0680, SDR36.3 MILLION; IDA D-2010-HT, SDR14.6 MILLION)

(US\$70 MILLION EQUIVALENT)

TO THE

REPUBLIC OF HAITI

FOR THE

Haiti Sustainable Rural and Small Towns Water and Sanitation Project
October 2, 2023

Water Global Practice
Latin America And Caribbean Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective {March 30, 2023})

Currency Unit = Haitian Gourdes (HTG)

153.5102 HTG = US\$1

0.57813 US\$ = SDR 1

FISCAL YEAR

July 1 – June 30

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ABBREVIATIONS AND ACRONYMS

ACAT	<i>Approche Communautaire pour l'Assainissement Total</i> (Community Approach for Total Sanitation)
ACCPAC	Commercial name of the software, not an acronym
AF	Additional Financing
ARAP	Abbreviated Resettlement Action Plan
BCR	Borrower Completion Report
BPO	<i>Budget Programme par Objective</i> (Program and Budget Process)
CAEPA	<i>Comité d'Approvisionnement en Eau Potable et Assainissement</i> (Drinking Water Supply and Sanitation Committee)
CASECS	<i>Conseil d'Administration de la Section Communale</i> (Board of Communal Administration Sections)
CERC	Contingency Emergency Response Component
CPF	Country Partnership Framework
CTE	Centre technique d'exploitation (Urban Water Operating Units)
DINEPA	<i>Direction Nationale de l'Eau Potable et de l'Assainissement</i> (National Water Supply Directorate)
DR	Dominican Republic
FCV	Fragility, Conflict and Violence
FM	Financial Management
GoH	Government of Haiti
GRM	Grievance Redress Mechanism
GWSP	Global Water and Sustainable Sanitation Partnership
IDA	International Development Association
IFC	International Finance Corporation
M&E	Monitoring and Evaluation
MS	Moderately Satisfactory
MU	Moderately Unsatisfactory
O&M	Operations and Maintenance
OREPA	<i>Office Régional d'Eau Potable et Assainissement</i> (Regional Office for Water and Sanitation)
PDO	Project Development Objectives
PDSH	<i>Plan de Développement Stratégic de Haïti</i> (Haiti Strategic Development Plan)
PIU	Project Implementation Unit
PLR	Performance Learning Review
PO	Professional Operator (Opérateur Professionnel)
POM	Project Operational Manual
PPIAF	Public-Private Infrastructure Advisory Facility
PPP	Public-Private Partnership
RFP	Resettlement Policy Framework
SCD	Strategic Country Diagnostic
SIEPA	Système Intégré pour l'Eau Potable et l'Assainissement (DINEPA's Integrated Water and Sanitation Information System)
TEPAC	Communal Technician
TOC	Theory of Change
TTL	Task Team Leader
UNICEF	United Nations International Children Emergency Fund
UNOPS	United Nations Office for Project Services
URD	<i>Unité Rurale Départementale</i> (Rural Departmental Units)
WASH	Wash, Sanitation and Hygiene
WBG	World Bank Group
WSS	Water Supply and Sanitation

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**DATA SHEET****BASIC INFORMATION****Product Information**

Project ID	Project Name
P148970	Haiti Sustainable Rural and Small Towns Water and Sanitation Project
Country	Financing Instrument
Haiti	Investment Project Financing
Original EA Category	Revised EA Category
Partial Assessment (B)	Partial Assessment (B)

Organizations

Borrower	Implementing Agency
REPUBLIC OF HAITI	DINEPA, Ministry of Economy and Finance, MEF

Project Development Objective (PDO)**Original PDO**

The proposed objectives of the Project are to: (i) increase access to improved water supply and sanitation in targeted rural areas and small towns in zones affected by cholera; (ii) strengthen the Recipient's water and sanitation service delivery mechanism at the deconcentrated level; and (iii) improve the Recipient's capacity to respond promptly and effectively to an Eligible Emergency.



FINANCING

	Original Amount (US\$)	Revised Amount (US\$)	Actual Disbursed (US\$)
World Bank Financing			
IDA-D0680	50,000,000	45,962,900	44,626,034
IDA-D2010	20,000,000	20,000,000	20,398,396
Total	70,000,000	65,962,900	65,024,430
Non-World Bank Financing			
Total	0	0	0
Total Project Cost	70,000,000	65,962,900	65,024,430

KEY DATES

Approval	Effectiveness	MTR Review	Original Closing	Actual Closing
26-May-2015	16-Dec-2015	18-Mar-2019	30-Sep-2021	31-Mar-2023

RESTRUCTURING AND/OR ADDITIONAL FINANCING

Date(s)	Amount Disbursed (US\$M)	Key Revisions
01-Jun-2017	7.31	Additional Financing Change in Results Framework Reallocation between Disbursement Categories Other Change(s)
22-Dec-2020	37.11	Change in Results Framework Change in Components and Cost Reallocation between Disbursement Categories Change in Disbursements Arrangements
12-Jul-2021	44.62	Change in Loan Closing Date(s) Change in Implementation Schedule
30-Sep-2022	58.47	Change in Loan Closing Date(s) Change in Implementation Schedule
31-Mar-2023	61.86	Change in Components and Cost Cancellation of Financing Reallocation between Disbursement Categories


KEY RATINGS

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

RATINGS OF PROJECT PERFORMANCE IN ISRs

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US\$M)
01	06-Sep-2015	Satisfactory	Satisfactory	.60
02	10-Mar-2016	Satisfactory	Satisfactory	1.05
03	21-Oct-2016	Satisfactory	Moderately Satisfactory	5.45
04	15-May-2017	Satisfactory	Moderately Satisfactory	7.31
05	22-Nov-2017	Satisfactory	Moderately Satisfactory	10.91
06	13-Jun-2018	Satisfactory	Moderately Unsatisfactory	13.95
07	25-Sep-2018	Satisfactory	Moderately Unsatisfactory	18.01
08	26-Mar-2019	Satisfactory	Moderately Satisfactory	24.25
09	09-Jun-2019	Satisfactory	Moderately Satisfactory	24.25
10	19-Dec-2019	Moderately Satisfactory	Moderately Satisfactory	26.20
11	28-Jun-2020	Moderately Satisfactory	Moderately Satisfactory	32.72
12	16-Feb-2021	Moderately Satisfactory	Moderately Satisfactory	37.11
13	13-Aug-2021	Moderately Satisfactory	Moderately Satisfactory	47.21
14	02-Feb-2022	Moderately Satisfactory	Moderately Satisfactory	54.78
15	22-Jul-2022	Moderately Satisfactory	Moderately Unsatisfactory	57.52
16	01-Feb-2023	Moderately Satisfactory	Moderately Unsatisfactory	61.13
17	30-Mar-2023	Moderately Satisfactory	Moderately Unsatisfactory	61.86



SECTORS AND THEMES

Sectors

Major Sector/Sector	(%)
Health	1
Health	1
Water, Sanitation and Waste Management	99
Sanitation	31
Water Supply	32
Public Administration - Water, Sanitation and Waste Management	36

Themes

Major Theme/ Theme (Level 2)/ Theme (Level 3)	(%)
Finance	18
Finance for Development	18
Disaster Risk Finance	0
Agriculture Finance	18
Social Development and Protection	100
Fragility, Conflict and Violence	100
Human Development and Gender	1
Disease Control	1
Urban and Rural Development	81
Rural Development	81
Rural Markets	18
Rural Infrastructure and service delivery	63
Disaster Risk Management	0
Disaster Response and Recovery	0
Disaster Risk Reduction	0
Disaster Preparedness	0

**ADM STAFF**

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I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

A. CONTEXT AT APPRAISAL

Context

1. **Country Context.** At Project appraisal (May, 2015), Haiti was both the poorest country in the Americas and a fragile state. Poverty was highest in rural areas where 52 percent of the population and 63 percent of the extremely poor resided. Haiti was also highly exposed to natural disasters-hurricanes, floods and earthquakes. A devastating earthquake struck the country in January 2010, killing 230,000 people. In this fragile environment, cholera broke out in 2010, facilitated by flooding and heavy rain, coupled with limited access to clean water and improved sanitation. The disease spread rapidly through Haiti into the neighboring Dominican Republic (DR).
2. **Sectoral and Institutional Context.** In the long term, eliminating new cholera outbreaks could only be achieved by substantially increasing access to Water Supply and Sanitation (WSS) and health services, underpinned by institutions capable of delivering these services. Access to quality water was a significant challenge in rural and small towns. Rural areas were generally served through water points equipped with handpumps, while small towns were served with gravity-fed systems supplied by spring catchments. A substantial portion of these systems were not operational due to lack of funds for operation and maintenance (O&M) and less than ten percent were equipped with chlorination devices¹. Access to sanitation in rural areas and small towns was also very low. Both urban and rural populations mostly relied on individual on-site sanitation solutions, given that sustainable collection and treatment of sewage were practically non-existent.
3. **The country had initiated reforms in 2009 with a vision to develop the WSS sector and tackle the low level of services; at the time of appraisal, this reform agenda remained unfinished.** The reform also foresaw creation of the National Water and Sanitation Directorate (DINEPA) and its Regional Offices for Water and Sanitation (OREPAs) and the professionalization of WSS service provisions. Monitoring WSS services in rural areas and small towns was limited, and no consolidated baseline existed, hampering efficient prioritization and programming of investments. Deconcentration² was not yet effective, and overall capacity (including fiduciary) was practically non-existent.
4. **Development of WSS services was heavily dependent on external financing, as was the functioning of sector actors;** 61 percent of DINEPA's operating expenditures and 95 percent of investments costs were financed by financial and technical partners. Only 13 percent of DINEPA's central level operating costs were covered by the domestic budget. Even in urban areas, only 54 percent of operating expenditures (excluding depreciation) for urban water operating units (*centre technique d'exploitation*) were covered by water revenues.³

Theory of Change (Results Chain)

5. The Theory of Change (TOC) diagram below (Figure 1) is an ex-post reconstruction based on the PAD. Such diagrams were not required at the time of the Project preparation. The logic of the intervention was to support the WSS

¹ Direction Nationale de l'Eau Potable et Assainissement (DINEPA), National Water and Sanitation Directorate.

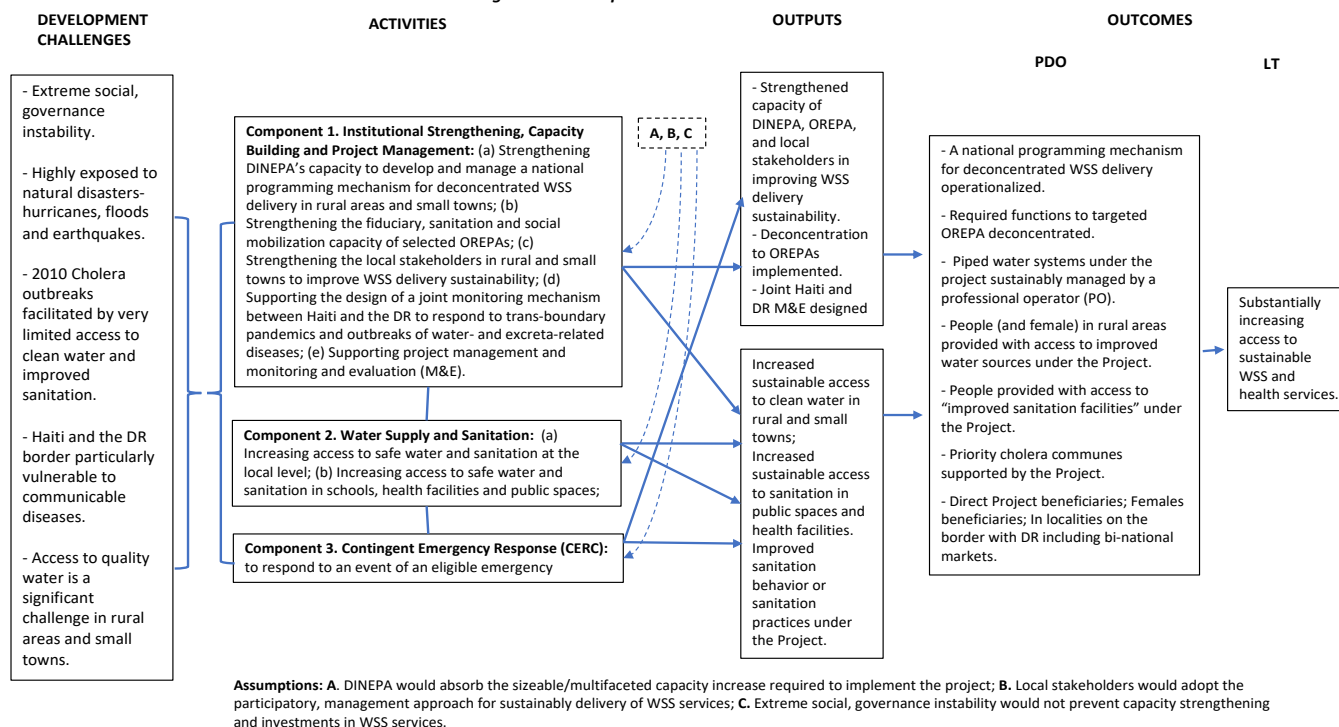
² Deconcentration was the process by which responsibility for specified functions were relocated and geographically dispersed to lower levels of the same administrative structure.

³ 2013/14 DINEPA Budget.



sector to increase access to services in targeted rural areas and small towns, increase service sustainability and improve capacity at the institutions involved at the central and deconcentrated levels.

Figure 1: TOC ex-post reconstruction based on the PAD



Project Development Objectives (PDOs)

6. (a) Increase access to improved water supply and sanitation in targeted rural areas and small towns in zones affected by cholera, (b) strengthen the Recipient's water and sanitation service delivery mechanism at the deconcentrated level, and (c) improve the Recipient's capacity to respond promptly and effectively to an Eligible Emergency.⁴

Key Expected Outcomes and Outcome Indicators

7. The expected PDO objectives/outcomes and PDO outcome indicators at appraisal were:

Objective 1: Increase access to improved water supply in targeted rural and small towns in zones affected by cholera⁵: (1) People provided with access to "improved water sources" under the Project – rural, disaggregated by sex. (Number, Custom); (2) Priority cholera communes targeted under the Project. (Number, Custom); (3) Project beneficiaries in localities on the border with the DR including by-national markets. (Number, Sub-type breakdown)

Objective 2: Increase access to improved sanitation in targeted rural and small towns in zones affected by cholera⁶: (1) People provided with access to "improved sanitation facilities" – rural, disaggregate by sex. (Number, Custom)

⁴ PDOs as defined in both the PAD dated May 7, 2015 and the Financing Agreement dated July 21, 2015. The numbering (a), (b), and (c) is as in the Financial Agreement.

⁵ The part of the PDO "Rural and small towns" was interpreted as a single PDO Outcome because the term "rural and small towns" falls under a broad definition of "rural areas" adopted in Haiti.

⁶ Same as in footnote 5.



Objective 3: Strengthen the Recipient's water and sanitation service delivery mechanism at the deconcentrated level⁷: (1) A national programming mechanism for deconcentrated WSS service delivery is operationalized, as evidenced by tools in place. (Number); (2) Required functions deconcentrated to targeted OREPAs (Number, Custom); (3) Piped water systems managed sustainably by a Professional Operator (PO) under the Project. (Number)

Objective 4: Improve the Recipient's capacity to respond promptly and efficiently to an Eligible Emergency⁸. No PDO indicator was assigned to Objective 4 in the PAD.

8. **Project Beneficiaries.** At appraisal, the Project expected to reach an estimated 300,000 direct beneficiaries; this includes 150,000 with new access to improved water sources through household connections and kiosks, 50,000 who would benefit from improved sanitation through community-led total sanitation campaigns, sanitation marketing and the construction of latrines in institutions and public spaces, and 100,000 to benefit from small repairs and expansions⁹. Beneficiaries would be selected from: (i) priority communes that have posted the highest cholera incidence in the last three dry seasons, as well as communes along the border with the DR, with specific focus on the Centre department; and, (ii) communes of the South Region in which the previous project¹⁰ intervened.

Components (PAD)

9. **Component 1 - Institutional Strengthening, Capacity Building and Project Management (estimate, US\$17.35 million),** including: (a) Strengthening DINEPA's capacity to develop and manage a national programming mechanism for deconcentrated WSS service delivery in rural areas and small towns; (b) Strengthening the fiduciary, sanitation and social mobilization capacity of selected OREPAs; (c) Strengthening local stakeholders in rural and small towns to improve WSS services delivery sustainability; (d) Supporting design of a joint monitoring mechanism between Haiti and the DR to respond to trans-boundary pandemics and water- and excreta-related disease outbreaks as part of an island-wide strategy; and, (e) Supporting project management, monitoring and evaluation.

10. **Component 2 - Water Supply and Sanitation (estimate, US\$31.65 million).** This component would leverage US\$19.00 million from the Regional IDA allocation for the construction and rehabilitation of water supply systems, as well as household and institutional sanitation activities in selected priority communities focused on cross-border areas. The component included: (a) Increasing access to safe water and sanitation at the local level; and, (b) Increasing access to safe water and sanitation in schools, health facilities and public spaces (including bi-national markets in selected communes).

11. **Component 3 - Contingent Emergency Response (estimate, US\$1.0 million).** This component was included to respond to a Government request in the event of an eligible emergency given the high risk of a catastrophic event.

B. SIGNIFICANT CHANGES DURING IMPLEMENTATION (IF APPLICABLE)

Revised PDOs and Outcome Targets

12. The PDO was not revised. Changes to outcome targets reflected additional funds from the US\$20 million 29-06-2017 Additional Financing (AF), which was approved in the context of a Bank-wide response to Hurricane Matthew. It scaled up Project activities under Component 1 and 2 and added activities in the areas affected by Hurricane Matthew, significantly increasing the number of Project beneficiaries.

⁷ Objective 3 addresses the WSS sector as a whole, in consequence it was interpreted as a single objective.

⁸ The part of the PDO "respond promptly and efficiently to Eligible Emergency" was interpreted as a single PDO Outcome, in line with the interpretation for most of CERC lines in PDOs.

⁹ See Annex 8: Beneficiaries' definition as presented in the PAD

¹⁰ Previous project: Rural Water and Sanitation Project (P089839, IDA; P114936 State and Peacebuilding Fund (SPC); US\$10 million total financing, implemented from 2007 to 2013).



Revised PDO Indicators

13. The PDO indicators were slightly revised by both the 29-06-2017 AF and the 12-02-2020 Restructuring. These changes reflected additional activities and targets supported by the AF, along with improvements to streamline and reduce the complexity of the Results Framework (RF). The revised PDO indicators (12-20-2020 Restructuring) were:

Objective 1: Increase access to improved water supply in targeted rural and small towns in zones affected by cholera: (1) People in rural areas provided with access to improved water sources under the Project - Female. (Number, Custom) (Revised); (1.1) People in rural areas provided with access to improved water sources under the Project except in the areas affected by Hurricane Mathew. (Number, Custom) (New); (1.2) People in rural areas provided with access to improved water sources in zones affected by Hurricane Mathew. (Number, Custom) (Revised); (1.3) Project beneficiaries of small repairs of water systems in the context of COVID-19 emergency (Number, Custom) (New). (2) Priority cholera communes targeted under the Project. (Number, Custom) (Revised).

Objective 2: Increase access to improved sanitation in targeted rural and small towns in zones affected by cholera. (1) People in rural areas provided with access to “improved sanitation facilities”—female. (Number, Custom) (Revised).

Objective 3: Strengthen the Recipient’s water and sanitation service delivery mechanism at the deconcentrated level. (1) Required functions deconcentrated to targeted OREPAs (Number, Custom) (Unchanged); (2) Piped water systems managed sustainably by a Professional Operator (PO)¹¹ under the Project (Revised). (Number); (2.1) Piped water systems managed sustainably by a PO in zones affected by Hurricane Matthew. (Number) (New).

Objective 4: Improve the Recipient’s capacity to respond promptly and efficiently to an Eligible Emergency. (1) DINEPA’s system in place to respond to major emergencies. (Yes/No, Custom) (New).

Revised Components

14. Changes to the components mostly reflected the additional activities funded by the AF. Revised components:

Component 1 - Institutional Strengthening, Capacity Building and Project Management: The AF added US\$2 million to support additional activities, including: (i) hydrogeological studies to inform system rehabilitation designs for more robust and resilient solutions; (ii) strengthened sector planning and deconcentration capacity in priority areas, such as in the case of natural disasters; (iii) piloting innovative approaches for conserving and restoring watersheds that supply water to small towns benefiting from Project activities.

Component 2 – Water Supply and Sanitation. The AF added US\$14 million to support additional activities, including: (i) expanding the Project area and works to zones affected by Hurricane Matthew, focusing on small repairs to bring water supply systems back into operation; (ii) construction and rehabilitation of additional latrine blocks for public institutions or spaces; and, (iii) responding to DINEPA’s chlorine needs for small town water supply systems across the country and supporting consolidation of its procurement and distribution.

Component 3 – Contingency Emergency Response. The AF added US\$4 million to support additional activities, including: (i) further strengthening DINEPA’s ability to rapidly respond in the event of an eligible emergency; (ii) finance needs identified by DINEPA’s following the passage of Hurricane Matthew.

Other Changes

15. **AF (dated 06-01-2017):** Added an equivalent of US\$20 million funded by the Crisis Response Window Resources, financed the changes to components described above (para 14), and doubled the number of beneficiaries.

¹¹ PO: Small scale domestic operators, who are generally private individuals from the respective community or a local committee.



16. Changes introduced by Restructurings (all Level 2 Restructurings):

RES36558, 12-22-2020: (i) Streamlined the RF to reduce complexity; (ii) Reallocated funds between disbursement categories; (iii) Authorized use of funds for land acquisition as part of resettlement expenditures.

RES46598, 07-12-2021: (i) Extended the Project closing date by 12 months from September 30, 2021 to September 30, 2022; (ii) Modified disbursement estimates; and (iii) Modified the implementation schedule.

RES53206, 09-30-2022: Extended the closing date by six months from September 30, 2022 to March 31, 2023.

RES55388, 03-31-2023: Cancelled XDR3,000,000.00 to allow uncommitted funds to be returned to the IDA country envelop and reallocated for other Government priorities.

17. Changes in Project costs by component (Table 1).

Table 1. Project Costs by Component (US\$ million)

Components	Estimates			Canceled at Closing	Actual Disbursed ¹²
	PAD	AF	Res36558 (12-22-2020)		
1. Institutional strengthening, Capacity Building and Project Management	17.35	19.35	17.00	-	16.00
2. Water Supply and Sanitation	31.65	45.65	50.00	4.04	46.07
3. Contingent Emergency Response	1.00	5.00	3.00	-	2.95
TOTAL	50.00	70.00	70.00	4.04	65.03

Rationale for Changes and Their Implication on the Original Theory of Change

18. The rationale for Project changes was to increase capacity to (i) respond to additional eligible emergency events and (ii) support implementation and achievement of the PDO. The changes made had no implications on the original Theory of Change (see para 5).

II. OUTCOME

A. RELEVANCE OF PDOs

Assessment of Relevance of PDOs and Rating

19. **Relevance of the PDOs is High.**

20. **At closing, the Project remained closely aligned with WBG's Haiti Country Partnership Framework (CPF Report No. 98132-HT)** for the FY16-21 period, discussed by the Board of Executive Directors on September 29, 2015, and updated during the Performance Learning Review (PLR, Report No. 124812) dated June 27, 2018. This includes Area of Focus 2: Human Capital, objective (3) to control cholera in priority communes and Area of Focus 3: Resilience, objectives (1) to strengthen natural disaster preparedness and (2) to improve disaster prevention and strengthen climate resilience. Under the Priority Area "Preserving Basic services and Human Capital", improving access to water and sanitation was identified as a priority spending area. The Project was also aligned with lessons from the PLR such as the need to continue to include Contingent Emergency Response Components (CERCs) in investment projects.

21. **The Project also remains aligned with the WBG's 2022 Systematic Country Diagnostic Update (SCD)¹³** which highlights the need for flexible approaches in volatile and fragile environments to protect development gains and

¹² As of August 8, 2023.

¹³ World Bank Group 2022. Haiti - Pathways to responding to recurrent crisis and chronic fragility, June 2022. Systematic Country Diagnostic Update. Washington, DC: World Bank Group.



strengthen resilience while preparing the ground for transformational institutional reform. The Project supported SCD priority area 1 “Restoring macroeconomic stability and strengthening core governance systems” and priority area 2 “Restore and maintain basic services to preserve human capital” by improving access to drinking water and sanitation, inclusion of persons with disabilities, strengthening governance systems, and post-earthquake reconstruction. The Project constituted a fundamental engagement with the WSS sector, which was considered a priority requiring continuous support. It also led to development of a follow-on project that is already effective.¹⁴

22. **The Project is also aligned with the World Bank Fragility, Conflict, and Violence (FCV) Strategy (2020-2025).** It supported Haiti in tackling unprecedented threats posed by the COVID-19 crisis, addressed the crisis and transition to recovery through a combination of saving lives threatened by the pandemic, protecting the poor and vulnerable, and strengthening policies and institutions for resilience based on transparent, sustainable debt and investments.

23. **By closing, the Project remained aligned with relevant laws and strategies of the Government of Haiti (GoH):** (i) Law of 2009-001, which defined DINEPA’s organization and main service provision principles; (ii) the Strategic Development Plan of Haiti (*Plan de Développement Stratégique d’Haïti* (PDSH)), Mai 2012, which prioritizes improving WSS services as a major axis to promote social, economic and political integration; and, (iii) the DINEPA Water and Sanitation Strategy (*Stratégie D’Assainissement de la DINEPA - 2014 – 2018, Ministère des Travaux Publics, Transport et Communications (MTPTC)*) which emphasizes the importance of encouraging behavior changes in sanitation practices.

B. ACHIEVEMENT OF PDOs (EFFICACY)

Assessment of Achievement of Each Objective/Outcome

24. **The overall efficacy rating is Substantial**, combining significant and modest achievements of the PDO.

25. **The Project scaled up World Bank support to the WSS sector in Haiti**, building upon a previous and smaller operation (Haiti Rural Water and Sanitation Project, 2010-2015, US\$10 million (P089839 and P114936)), and with a more ambitious scope to eliminate the 2010 cholera outbreak. The AF significantly expanded the Project scope and impact by scaling up activities, increasing the geographical reach, nearly doubling the number of beneficiaries. Despite this increase in scope, the Project required only an eighteen month extension to conclude implementation. The Project design was also conducive to making adjustments needed given the constant changing reality in Haiti and unanticipated risks that arose during implementation.

26. **Despite operating in an extremely fragile and volatile context, the Project aimed to develop institutional capacity** at the national level (strengthening DINEPA’s capacity for regulation, control, planning and implementing the Project), and sub-national capacity (making deconcentration effective by strengthening OREPAs’ capacity for social mobilization, along with supporting technical and fiduciary aspects and effectively transferring responsibilities). The Project also aimed to improve access to quality water supply (by investing in rehabilitation and expansion of piped systems supplied by spring catchments, construction or repair of boreholes, and protection of water sources), as well as to improved sanitation (by promoting sanitation and constructing and rehabilitating sanitation facilities in schools, health facilities and public markets). As such, the Project responded to a core development challenge in the country. Additionally, the Project first enabled a response to the cholera outbreak, then was able to adapt to damages caused by Hurricane Matthew, the COVID-19 pandemic, and finally the 2021 earthquake in the South. In addition, the Project addressed sustainability of water supply services by supporting the PO arrangement, as tested by previous project (see para 25).

27. **The Project was successful in achieving most of its objectives, particularly given the difficult context faced during most of implementation.** The Project provided a solid support to the implementation of the 2009 sector reform to improve

¹⁴ Decentralized Sustainable and Resilient Rural Water and Sanitation Project (P178188); Approved on May 17, 2023; Effective on July 10, 2023.



the water and sanitation service delivery, in particular through supporting the materialization of the deconcentration process, the strengthening of CAEPAs, professionalization of WSS service provision, development and encouragement of private sector participation, development of tools and mechanisms to regulate and support WSS service operators. The more specific support the Project provided included: (a) On capacity building: the strategic tools supported for WSS sector regulation, control and planning were developed and effectively used by DINEPA. These tools were also instrumental to support coordination of assistance provided by development partners. Also, the Project enabled effective implementation of deconcentration: OREPA capacity (technical, fiduciary, monitoring) was created, and DINEPA transferred responsibilities to a number of OREPAs which were able to procure and manage smaller contracts; (b) On access to WSS services: nearly 200 interventions on expansion and rehabilitation of water supply solutions were financed across Haiti (concentrated in the Center and South regions and dispersed in 8 of the 10 administrative regions). 51 latrines blocks were also constructed, along with support for relevant training (over 300 hundred masons trained on latrine construction) and sanitation promotion campaigns, among other important activities. However, the Project faced significant challenges to fully reach the pursued results regarding activities to strengthen the service delivery mechanism at the deconcentrated level. These challenges were sizeable, multifaceted (see paras 56 and 58), and required intense, continuous, and lengthy activities which were difficult for the Project to ensure. It is reasonable to infer that most of these difficulties were derived from the challenging implementation context.

28. Despite the difficulties, the Project benefited a total of 601,518 people, reaching 97 percent of the target through water and sanitation investments on water supply and sanitation in targeted localities, including bi-national markets. The Project also benefited approximately 27,500 people along the DR border, reaching 79 percent of the target. See Annex 1 B for detailed information on the Project outputs.

29. Assessment of Achievements of Each Objective/Outcome. The presentation below disaggregates the PDO by objectives/outcomes using the PDO Outcome and Intermediate Indicators. Evidence beyond targeted and achieved indicator values is limited. The country's turmoil and subsequent challenging implementation conditions prevented the Project from conducting any type of evaluation study that could have produced additional evidence. Also, starting in 2019, the Bank team was only able to conduct virtual missions (there was one in-person mission in 2022), and no field missions were possible. No field trips or surveys at the local level were possible. Although the client completion report provided additional anecdotal evidence, this ICR has not included this evidence since it could not be validated.

30. PDO Objectives and PDO indicators achievements are organized in tables 2 to 5. The ICR team did not consider a split rating necessary given that: (i) the PDO remained unchanged during implementation; (ii) there were no major changes in the PDO indicator definitions or values, also, changes made were linked first to the AF and later to efforts to streamline the Results Framework in the 2020 Restructuring (see annex 6); (iii) disbursement during the two years (2015, 2016) before the AF reached only 14 percent, in line with implementation efforts to conclude technical designs and procure works; and, (iv) as a result of point (iii), no PDO indicator targets were achieved prior to the AF, which prevents this ICR from assessing achievements at that stage.

PDO OBJECTIVE 1 - Increased access to improved water supply in targeted rural areas and small towns in zones affected by cholera. This objective was substantially achieved.

Table 2. PDO and Intermediate Indicators achievements linked to PDO Objective 1

PDO Indicators	Achievement
- Number of people in rural areas and small towns provided with access to improved water sources under the Project	Target: 588,000 Substantially achieved: 534,364 (97 percent)
- Number of people in rural areas and small towns provided with access to improved water sources under the Project except in the areas affected by Hurricane Matthew	Target: 197,000 Substantially achieved: 152,319 (77 percent)
- Number of people in rural areas and small towns provided with access to improved water sources under the Project in zones affected by Hurricane Matthew.	Target: 320,000 Overachieved: 342,339 (107 percent)



- Project beneficiaries of small repairs of water systems in the context of COVID-19 emergency.	Target: 75,000 Overachieved: 75,900 (107 percent)
Intermediate Indicators	Achievement
- New piped household water connection that are resulting from the Project intervention.	Target: 7,750 Substantially achieved: 6,576 (85 percent)
- Improved community water points constructed or rehabilitated under the Project.	Target: 135 Substantially achieved: 133 (98 percent)

31. **Achievements in increasing access to improved water supply were substantial: two PDO indicators were overachieved while the two others were almost fully achieved.** Original targets will be fully achieved once the Lascahobas intervention is completed under the follow-up project (see footnote 14), which was not completed under the Project due to time constraints.

PDO OBJECTIVE 2 - Increased access to improved sanitation in targeted rural areas and small towns in zones affected by cholera. This objective was fully achieved.

Table 3. PDO and Intermediate Indicators achievements linked to PDO OBJECTIVE 2

PDO Indicators	Achievement
- People provided with access to “improved sanitation facilities” under the Project (and Females)	Target: 30,000 Overachieved: 30,960 (103 percent)
Intermediate Indicators	Achievement
- Households with latrines built during Project implementation and of which use is verified	Target: 1,900; Overachieved: 5,449 (286 percent)
- Latrine blocks for public institutions or spaces constructed or rehabilitated with management and maintenance arrangements in place under the project	Target: 70; Substantially achieved: 51 (72 percent)

32. **The Project was successful in conducting innovative activities to promote sanitation improvements and leverage additional resources.** The implemented activities provided some of the knowledge and tools that can support sustained long-term sanitation improvements. The main outputs included: (a) Awareness-raising campaigns, based on a participatory community approach (*Approche Communautaire pour l’Assainissement Total – ACAT*) all over Haiti, in collaboration with the Ministry of Public Health and UNICEF. These campaigns promoted the benefits of sanitation and financed the training of 300 personnel at involved entities; (b) A hydrogeological study defining a zoning plan for sanitation interventions, laying out appropriate sanitation infrastructure solutions by zone and helping to transfer knowledge to local actors; (c) Training of 300 masons in latrine construction, operation and maintenance, complementing the ACAT effort, creating job opportunities, and facilitating the construction of latrines and sanitation improvements; (d) Training of latrine emptiers and support to their professional association; (e) Works and operation of a wastewater treatment plant in the south region, complemented by providing a truck to support the latrine emptier’s association and ensuring safe disposal of fecal sludge in the plant.

PDO OBJECTIVES/OUTCOME 3 - Strengthen the Recipient’s water and sanitation service delivery mechanism at the deconcentrated level. This objective was substantially achieved.

Table 4. PDO Indicators achievements linked to PDO OBJECTIVE 3

PDO Indicators	Achievement
- Piped water systems managed sustainably by a Professional Operator (PO) under the Project	Target: 24 Substantially achieved: 17 (71 percent)
- Required functions deconcentrated to targeted OREPA	Target: 6 Fully achieved: 6 (100 percent)
Intermediate Indicators	Achievement
- Departments covered by WSS baseline information	Target: 10 Fully achieved: 10 (100 percent)
- DINEPA conducts an annual joint Government/partner sector review	Target: Yes



	Fully achieved: Yes (100 percent)
- A national programming mechanism for deconcentrated WSS service delivery is operationalized, as evidenced by tools in place.	Target: 5 Fully achieved: 5 (100 percent)
- Number of OREPAs among four existing ones, using the baseline developed under the Project to prioritize.	Target: 4 Fully achieved: 4 (100 percent)
- CAEPAs that include at least 20 percent female representation in Project area.	Target: 70 Overachieved: 129 (128 percent)

33. **Piped water systems management solutions.** The 30 percent gap in achieving the target established for POs managing water systems can be attributed to delays in concluding work, which delayed PO recruitment and subsequent launch of commercial activities (see para 58). The POs in place (which include individuals and the Drinking Water Supply and Sanitation Committees (CAEPAs)) have been managing water systems, for which construction concluded earlier during implementation; these POs have also received the required OREPA training.

34. **Functions deconcentrated to OREPAs.** Procurement and financial management, two key functions, were transferred to the OREPA level, as well as payroll control for both the Rural Departmental Units (*Unité Rurale Départementale* (URD)) and communal technicians. This allowed¹⁵ most Project contracts to be procured and managed at the OREPA level. Another deconcentrated function was reporting by each OREPA on implementation of the region's CAEPAs/POs management contracts. At Project close the latter was in progress, with initial reporting from OREPAs on technical and operational issues and financial management well advanced.

35. **Several activities promoting key institutional strengthening were implemented, and additional financial and technical resources mobilized.** The list of activities completed is extensive (see Annex 7) and translates the Project's solid support to strengthening the WSS sector in Haiti, focusing on two main areas: WSS sector reform consolidation and WSS monitoring and technical support. Under the first area, a multiyear Program and Budget Process (*Budget Programme par Objective* (PBO)), including a pricing system, was developed and adopted by DINEPA, becoming a key tool in the high-level dialogue between donors supporting the WSS sector in Haiti. Under the second area, the Integrated Water and Sanitation Information System (*Système Intégré pour l'Eau Potable et l'Assainissement* (SIEPA)) was developed and operationalized, as well as the new computerizing accounting system (ACCPAC¹⁶). The Groundwater Management System was also configured, training was provided to DINEPA technicians, and data was collected.

PDO OBJECTIVE/OUTCOME 4 - Improve the Recipient's capacity to respond promptly and effectively to an Eligible Emergency. The objective was fully achieved.

Table 5. PDO Indicators achievements linked to PDO OBJECTIVE 4

PDO Indicator	Achievement
- DINEPA's system in place to respond to major emergencies.	Target: 1 Achieved: 1 (100 percent)

36. **The Project supported the GoH's emergency response capacity through the creation of an Emergency Response Directorate directly overseen by DINEPA's General Directorate.** Managers involved in this Directorate are focal points tasked with representing DINEPA in the inter-ministerial Emergency Unit set to coordinate emergency interventions in response to natural disasters. This project helped strengthen natural disaster response capacity that was later mobilized in the aftermath of Hurricane Matthew to carry out rehabilitation of 85 water systems. Institutional capacity developed under this project also proved useful following the August 2021 earthquake; authorities were able to coordinate and contribute to national earthquake recovery efforts, especially in informing the national damage and cost assessment with greater accuracy

¹⁵ Through a Memorandum formally agreed between DINEPA and OREPAs in 2019.

¹⁶ ACCPAC is the commercial name, not an acronym.



and efficiency than had been possible in previous emergencies. Institutions supported by this project also played an important role in overseeing coordination with other water and sanitation partners involved in post-disaster recovery efforts.

Justification of Overall Efficacy Rating

37. **The overall efficacy rating is Substantial.** The operation achieved most of its objectives, in particular those related to improving access to water supply and sanitation and institutional strengthening although there were moderate shortcomings in the achievement of objectives related to strengthening the Recipient's water and sanitation service delivery mechanism at the deconcentrated level.

C. EFFICIENCY

38. **Efficiency is rated Substantial.**

39. Based on an economic and financial analysis to assess the project's economic efficiency, the Net Present Value (NPV) is estimated to be US\$94.2 million at a 12 percent discount rate with an Economic Rate of Return (ERR) of 41 percent over a twenty-year period. This ERR based on the economic ex-post assessment is significantly higher than the ERR of 11 percent calculated at appraisal. The analysis clearly highlights the value for money of the project investments, especially given the fragile environment in which implementation occurred. This ERR has been achieved despite Haiti's fragile environment, major losses associated with Hurricane Matthew, and delays due to the COVID-19 pandemic.

40. The ICR analysis is based on total disbursements under Component 2 of US\$46.07 million, equivalent to 71 percent of the full project value. Activities under Components 1 and 3 have not been included since they consist primarily of studies, technical assistance, and capacity building; while such investments are expected to improve operations and planning for the water and sanitation across the country, their results are difficult to precisely identify and quantify. All investments undertaken as part of Components 1 and 3 were, however, subject to extensive consultations and review. While extensive social benefits under the training and capacity building activities (e.g., time and money saved due to improved access to water, local investments based on better planning, better planning for natural disasters and climate change, better O&M provisions, and improved response time to crises, etc.) should be strongly noted, the efficiency analysis of this ICR focuses only on the direct investments under Component 2. In addition to the aforementioned improved access to water and reductions in water borne diseases, the project investments are also likely to spur positive externalities for the 601,518 beneficiaries. Such externalities include increased economic and trading activity and employment due to time and cost savings in procuring water and improved overall health. While data on these wider economic impacts is not available, each case of cholera and other water-borne diseases represents an economic loss in terms of the cost of treatment and lost productivity. Social benefits are likely to be magnified through the continued support to be provided under the Decentralized Sustainable and Resilient Rural Water and Sanitation Project.

41. The original PAD calculated an ERR of 11 percent based on the consumer surplus associated with better access to clean water. Since this calculation did not quantify the impact of reduced morbidity related to water borne diseases, the original ERR estimate vastly undervalued the impact of the project. In 2011, 2,927 deaths were recorded due to cholera, with only 3 deaths recorded in 2019. Until 2022, cholera was virtually eliminated, with a minimal number of cases now reported—a vast reduction compared to cholera rates at project appraisal. Additionally, it is worth noting that the project investments not only reduce cholera rates, but also those of diarrhea and other water borne diseases. As such, the ICR analysis estimates a 5 percent reduction in morbidity associated with water borne diseases amongst the project beneficiaries. In reality, this reduction is likely to be much higher due to the improved access to clean water and sanitation facilities. As noted above, for cholera alone, Haiti saw a 99 percent reduction in deaths between 2011 and 2019—far more than the 5 percent morbidity reduction assumed by this analysis. Additionally, morbidity rates underestimate the cost of water borne diseases for individuals that recover but are unable to work due to their illness.

42. Despite socioeconomic and political turmoil, Hurricane Matthew and the COVID-19 pandemic, the project



demonstrated operational efficiency in adjusting successfully to this difficult environment. The original closing date was planned for September, 2021, and was extended to March, 2023, adding only 18 months despite the additional financing and difficulties of implementation in a fragile environment and succession of unanticipated crises.

43. The project also demonstrated allocative efficiency, which will help support sustainability of the project investments. It financed capacity building activities to strengthen administrative and operational capacity to deliver improved water supply and sanitation services, along with improving DINEPA's ability to respond to emergencies. With the continued support of the newly approved, and already effective, Decentralized Sustainable and Resilient Rural Water and Sanitation Project (see footnote 15), these activities will help to ensure sustainability of the project investments. This will also help streamline deployment of future funds for water and sanitation service delivery and ensure customer satisfaction.

Assessment of Efficiency and Rating

44. **Considering the factors described above, Efficiency is rated as Substantial.** As discussed, the Project demonstrated strong, higher than appraisal-stage economic returns from the water and sanitation investments under Component 2. The project also helped improve the investment planning and O&M processes for water and sanitation service delivery. The Project was operational and efficient with only 18 months extension despite and AF and multiple challenges (COVID, Hurricane Matthew, 2021 earthquake, political turmoil and security situation).

D. JUSTIFICATION OF OVERALL OUTCOME RATING

43. **Overall outcome is rated Moderately Satisfactory: High Relevance** of the PDO based on its sustained alignment with the Bank strategy documents and the GoH's policies priorities; **Substantial** rating for Efficacy, taking into account a mix of strong and modest achievement its PDO; and, **Substantial** rating for Efficiency deriving from the strong returns from the water and sanitation investments.

E. OTHER OUTCOMES AND IMPACTS (IF ANY)

Gender

45. **The Project made a concerted effort to include gender in its activities and reached significant results, including:**

- **A gender diagnostic was conducted in 2018 and 2019** to assess DINEPA's capacity to address systemic gender issues, including in Water, Sanitation and Hygiene (WASH). An action plan was formulated, but limitations resulting from the COVID-19 and the worsening turmoil in the country did not allow the plan to be implemented.
- **Female participation in CAEPAs.** CAEPAs' statute requires the participation of at least two women in its board. The Project supported activities strengthening the participation of women in CAEPAs' boards and overall participation of women in activities related to the water and sanitation investments, in particular at the local level.
- **Women participation in school hygiene committees.** Through a US\$2 million contract with the United Nations International Children Emergency Fund (UNICEF), 25 schools and 5 health centers were evaluated, 204 teachers (including 44 women) were trained in water, hygiene, and sanitation, with particular emphasis on menstrual hygiene management. 140 parents, including 59 women, were integrated into school hygiene committees comprising parents and teachers. These committees, trained in school hygiene, menstrual hygiene management and infrastructure management and maintenance, are responsible for ensuring dissemination of awareness messages, good hygiene practices and maintenance of school hygiene infrastructures. It has been found that women's participation contributes enormously to changing behavior and ending open defecation.



Institutional Strengthening

46. Additional institutional strengthening provided:

- Support to DINEPA in holding its first National Meeting of Potable Water and Sanitation on March 22-24, 2022. The meeting was an opportunity to create a high-level dialogue around strategic development of the sector by 2030. At this occasion, the BPO was presented to stakeholders as well as the progress on the SIEPA.
- Lessons learned from project implementation were integrated into the 2022-2032 DINEPA's strategy with Bank support when articulating its long-term vision, objectives, strategies, activities, and results indicators to accelerate and sustain delivery of resilient water and sanitation services in the country.
- Technical tools developed under the Project (see annex 7) are instrumental at the local level as planning tools for Mayors and community associations.¹⁷
- The National Institute of Vocational Training adopted the Project-financed training and accreditation activities to strengthen fecal sludge management and availability of qualified mason targeting masons (see para 25) by including in the regular institution's curriculum.

Mobilizing Private Sector Financing

47. The Project leveraged support from the Public-Private Infrastructure Advisory Facility (PPIAF) to enable private-sector participation in water supply service delivery in rural areas and small towns. This supported allowed for technical studies for piloting a public-private partnership (PPP) scheme in at least one city, the strengthening and the identification of innovative approaches to supporting POs. Products delivered include: (i) Template for a PO Annual Report (including performance indicators); (ii) DINEPA's monitoring system focusing on POs management; (iii) Initial studies and prioritization of potential pilot sites for a PPP arrangement, which brought International Finance Corporation (IFC) support to DINEPA in developing a PPP arrangement in Lascahobas (support which is planned to resume under the follow-up operation, see footnote 14); (iv) Consultations and a report on the various PO schemes developed under the Project and the previous operation, as well as technical assistance to DINEPA focused on the provision of customized support of CAEPAs in commercial operations.

Poverty Reduction and Shared Prosperity

48. The Project targeted areas that are poorer to enable access to better WSS improves health and livelihood. By increasing access to improved water supply and sanitation services in these more vulnerable areas, the Project contributed to the World Bank Group (WBG) twin goals of ending extreme poverty and promoting shared prosperity for the population living in rural areas and small towns, including women, girls, and person with disabilities.

Other Unintended Outcomes and Impacts

49. Additional outcomes:

Accessibility for persons with disabilities. Designs of all sanitation work financed by the Project include appropriate solutions ensuring accessibility for persons with disabilities, and these solutions were properly executed by the contractors.

Renewable energy sources. Designs of offices and non-gravity water supply systems adopted as solar as their energy source. The necessary equipment was adequately purchased and installed.

Integrated water management and knowledge on water resources. The Project financed a pilot intervention combining watershed protection and community participation, in particular farmers, which was a relevant experience for DINEPA in designing and implementing investments aimed at water resource management. In parallel DINEPA worked with the University of Haiti to improve knowledge of hydrogeologic resources to inform planning of future

¹⁷ Refers to the Board of the Communal Administration Sections (CASECs)



water resources investments.

III. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

A. KEY FACTORS DURING PREPARATION

50. **The Project scaled up WB support to the WSS sector in Haiti building on the lessons from the previous operation (see para 21).** It focused on scale-up support and continuity to address the issue of performance of piped water schemes.

51. **Key factors taken into account included:** (i) the strong focus of the international community on reducing or eliminating the cholera outbreak; (ii) solid coordination with other donors allowing for a division of labor, such as a focus on urban and rural areas; (iii) successful experiences in implementing joint work between the water and health sectors; and (iii) the positive assessment of the previous project and its focus in rural areas.

52. **Readiness, Monitoring and Evaluation (M&E).** Implementation readiness was found appropriate, taking advantage of existing engineering designs financed under the previous operation. These designs needed an update and would allow infrastructure delivery in the first and second years of implementation.

53. **Risks:** The balancing of ambition and realism in the PAD was found appropriate and commended.

B. KEY FACTORS DURING IMPLEMENTATION

54. **The AF doubled the number of beneficiaries and shifted geographic priorities** by including areas affected by Hurricane Matthew which struck the country in 2016. Activities under all components were scaled up and the Project scope was expanded to include areas affected by the hurricane, mostly in the south region. Cases of cholera had also sharply increased as a result of hurricane damage. It was estimated that nearly 90 of the 130 existing water supply systems, water catchments, kiosks, and clarification systems were affected, ranging from the need to reconnect pipes and chlorinators or protect sources to the need of full rehabilitation. Many rural communities suffered from long distances to water sources, requiring new solutions such as on-site boreholes. Weakness in procuring and distributing chlorine across Haiti emerged as a major issue.

55. **Trust Fund resources were used strategically to increase project impact and maintain a strong WB presence in-country.** In 2018, based on a matrix of sector indicators, Haiti was identified as one of the “Block C” countries under the Global Water and Sustainable Sanitation Partnership (GWSP), that is a group of countries expected to see large-scale World Bank engagement in the next five years and were thus primed for investing GWSP resources in an investigative manner. This allowed the Project to unlock large additional TA resources and maintain a TTL based in country during much of implementation.

56. **Project implementation was complicated as significant and unanticipated risks materialized.** By the third year of implementation, the socioeconomic and political turmoil had rapidly increased, reaching extremely high levels of violence, insecurity and severely disrupting activities in the country, later worsened by the COVID-19 pandemic. Even though insecurity was felt most acutely in the capital Port-au-Prince, the deteriorating situation had pronounced spillovers that negatively affected implementation in the regions and rural areas. For long periods only virtual supervision was possible, delays significantly increased as activities were partially implemented or canceled, and access to the beneficiary communities and construction work sites was severely restricted. Shortages of construction supplies and significantly higher fuel prices and shortages also affected implementation with the fuel crisis making it difficult for the Project Implementation Unit (PIU) to access the office or travel to the regions.



57. **Implementation arrangements faced difficulties.** The implementation capacity created with the PIU was effectively embedded into DINEPA's organizational structure although this resulted in implementation being subject to DINEPA's time-consuming internal processing. As OREPA involvement in implementation gradually grew, additional challenges emerged. Partial delegation of fiduciary processes made the decision-making process and flow of information more complex, particularly in terms of financial management reporting and withdrawal applications to the WB. Initiatives to improve DINEPA's internal processing included recruitment of the United Nations Officer for Project Services (UNOPS) for a limited period (2019 to 2020). UNOPS created a special task force within DINEPA to speed up internal procurement processing as well as taking steps to bundle works contracts to reduce procurement processes, increasing autonomy of the PIU, and facilitating communication.

58. **Implementation of the PO managing model faced challenges, exacerbated by the country turmoil.** The Project pursued different actions to strengthen capacity of the POs, including strengthening DINEPA's social team by engaging consulting services providing multi-skills teams to carry out social mobilization of communities related to PO arrangements. Some POs were selected while the works were ongoing, allowing observation of the works as part of the training process. As works concluded, activities were launched to support the PO setting up management arrangements. Difficulties included: (i) the country turmoil; (ii) social engineering firms' deficiencies; (iii) delays in concluding works jeopardizing the launch of commercial activities and monitoring; (iv) local authorities and population reluctance in accepting basic principles of payment for water services or of volumetric billing. Implementation constraints also led to prioritization of the works part of the investment cycle, diminishing focus and time to the post-construction management part of the cycle. It is also worth highlighting that in addition to the difficulties the social mobilization teams faced in reaching communities, the country turmoil exacerbated social tensions at the local community level. This created an adverse environment for the community to adhere to the proposed management and service payment approaches.

IV. BANK PERFORMANCE, COMPLIANCE ISSUES, AND RISK TO DEVELOPMENT OUTCOME

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

M&E Design

59. **The technical strategy was conceptually logical as explained in the PAD.** The indicators were well defined in the PAD, while estimation of the number of beneficiaries was a task assigned to the design phase of investments. The overall responsibility for M&E was assigned to the DINEPA Technical Department, which would consolidate reports based on information provided by DINEPA's departments and OREPAs,¹⁸ which in turn would consolidate information provided by other actors within their respective area. DINEPA had also developed two monitoring systems¹⁹ which were going to be used under the Project. The M&E system operationalization was presented in the POM, and it included two beneficiary surveys (mid-term and by the project closing).

M&E Implementation

60. **The M&E data was collected and analyzed based on an M&E design that was adjusted during implementation without major changes to the Results Framework.** The two existing monitoring systems mentioned in the PAD were not mentioned in supervision documents, primarily because they included updated information on larger, urban systems. A monitoring master file was developed to follow up on the Project's quantitative indicators focusing particularly on the

¹⁸ OREPAs consolidated information collected by the Drinking Water Supply and Sanitation Committees (CAEPAs), the Rural Department Units (URDs), the communal technicians (TEPACs), the POs, Non-governmental Organizations (NGOs), independent consultants.

¹⁹ The SIP and the SISKLOR systems respectively monitor performance indicators and water quality; they were incorporated into SIEPA over the course of the Project



works, locations, and number of beneficiaries. Despite the team effort, there were some difficulties in keeping the master file updated.

61. At the DINEPA level, a national water and sanitation platform (SIEPA) was progressively developed, with support from the Project and other donors, to follow up on the WSS sector indicators, and it was kept reasonably updated. Improving the frequency of updates was difficult due to the lack of people on the ground to regularly collect information and/or people to enter the updated information on the system. However, the large number of works (see Annex 1 B) dispersed in a large territory posed challenges to improve the information collection frequency.

M&E Utilization

62. The M&E system was a relevant tool in the Project implementation, providing key information to the investment planning phase and also contributed to monitor implementation progress. The lack of accuracy in detailed information was factored and mitigated by DINEPA and OREPA personnel based on their practical experience. The two surveys planned in the PAD could not occur mainly due to security and travel limitations.

Justification of Overall Rating of Quality of M&E

63. **The overall rating of quality of M&E is Substantial.** There were moderate shortcomings in the M&E design, implementation and utilization. However, adjustments made during implementation were generally sufficient to assess achievement of the objectives even though the absence of the surveys planned in the PAD prevented stronger substantiation of the achievement of objectives.

B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE

Environmental and Social Safeguards

64. **The Project was processed under OP 10.00, para 12 and BP 10.00, para 53** (Exceptional Arrangements in Situations of Urgent Need of Assistance Capacity Constraints), allowing for compliance with applicable social and environmental requirements to be deferred to the implementation stage, when localities to benefit from WSS infrastructure were defined. An Environmental and Social Management Framework (ESMF) and a Resettlement Policy Framework (RPF) were developed for the project to manage environmental and social risks during implementation.

65. **Safeguards performance was rated Moderately Satisfactory most of the implementation. The rating was downgraded to Unsatisfactory before closing,** for which an Action Plan was agreed due to concerns over unfinished works, which was complied with prior to closing. To appease potential social tensions given that the Lascahobas water supply system was not concluded by closing, DINEPA restored services to pre-project level and launched a communication campaign to explain that the works stop was temporary. Emergency works were planned to ensure community health and safety around the unfinished work sites. In addition, the Lascahobas unfinished works were included in the follow-up project (see footnote 14) and such works contract, including required safeguards provisions, received the Bank no-objection on July 11, 2023.

66. **17 Abbreviated Resettlement Action Plans (ARAPs) were prepared and implemented during project implementation.** The ARAPs addressed the related-resettlement impacts associated with the construction works. As evidenced by the ARAPs Final Implementation Report submitted on May 5, 2023, a total of 226 Project Affected People (PAPs) were compensated for losses in agriculture cultures; three PAPs were compensated for losses of a portion of land; and all compensations were paid by DINEPA. Total compensation payments amounted to HTG 4,185,357 (approximately US\$ 30,000), all related to economic displacement. The project did not induce any physical displacement.

67. **Grievance Redress Mechanism (GRM).** A GRM constituting of a hotline was put in place early in implementation



for customers to report water supply service-related issues and complaints. Also, a project-specific GRM was established. As per this mechanism, social development specialists hired under the Project ensured citizen engagement in the localities where the Project was intervening. These specialists were also responsible for recording the grievances received, channeling them through relevant sources and tracking actions taken for their resolution. A total of 101 grievances were received, mostly related to loss of crops, and all were addressed during implementation.

Procurement

68. **Procurement performance was rated Moderately Satisfactory (MS) most of implementation. It was downgraded to Moderately Unsatisfactory (MU) prior to closing** given the risk that a few ongoing contracts would not be concluded in due time and numerous pending updates in the STEP system. But all contracts were concluded except one, the large contract for Lascahobas. During implementation, there were delays affecting procurement processes, turnover of procurement specialists and weakness in the processes. To increase capacity, UNOPS was recruited for a short period (2019-2020) to provide specific support on technical validation and preparation of bidding documents and to participate in the evaluation committees. Overall, despite these limited capacities, DINEPA managed an important number of contracts, and successfully transferred small contracts (below US\$1 million for works) to OREPAs. The transfer did not occur without difficulty, but the contracts were de facto managed at the local level, and no no-compliance issues were observed. In 2017, the Project moved to the new Procurement Regulations and adjusted well to the new processes and requirements. As the Project was closing, the procurement risk was rated Low.

Financial Management (FM)

69. **The Project FM rating was MS during most of implementation. At closing, it was downgraded to MU** due to persistent deficiencies in the internal control system which undermined the ability to efficiently monitor budget execution, prepare accurate financial and treasury reports, document expenditures and advances made by DINEPA to OREPAs, submit the audit report on time, and caused delays in documenting expenditures in Client Connection. OREPA delays in providing expense documentation also affected DINEPA's capacity to follow and monitor advances and capacity to detect and address issues. As a result, shortly before closing, fund advances that were still to be documented accounted for over US\$4 million. Configuration of the new accounting software was completed in the OREPA South, but not fully in the Center primarily due to security restrictions and connectivity issues. In both OREPAs, staff were trained with the new system but the effort was undermined by staff turnover. At Project closing, FM risk was rated Substantial.

70. **Audit.** Unaudited IFRs and audit reports were mostly delivered on time. All IFRs were considered acceptable, and all annual audits expressed unqualified/unmodified opinions. Ineligible expenditures identified were regularized. The Project's final audit is pending and expected to be delivered after the end of the grace period.

C. BANK PERFORMANCE

Quality at Entry

71. **The Project as designed was strategic, relevant and informed by the experience gained in the previous rural water and sanitation project** which tested the PO model and approaches to increase sustainable access to WSS services. On balance, the project approach and design were appropriate and effective. Operating at increased scale, the Project enabled deeper integration into DINEPA structure, which increased the scope for institutional capacity development in the WSS sector but sometimes contributed to implementation difficulties. The risk level was rated substantial.

Quality of Supervision



72. The Project was closely supervised, and prompt technical support was provided to the Government team to address implementation issues, including challenges deriving from the turmoil in the country. An AF was prepared to support the Government in addressing the impact of Hurricane Matthew in 2016. The Project also mobilized support for the COVID-19 and 2021 earthquake responses. Additional technical and financial resources were mobilized, making available the GWSP strategic support, which proved a critical factor (with two consecutive Advisory Services and Analytical (ASA) developed) to enhancing Project's institutional strengthening efforts. The PPIAF and IFC were also mobilized, providing complementary institutional strengthening activities that focused on private sector participation and sustainable provision of WSS services. Four project restructurings were carried out to adjust the design to the reality on the ground. This flexibility in the Project design (AF, provisions to respond to emergencies, additional financing sources, restructurings) were appropriate responses to the local reality, where changes were often and constant.

73. M&E implementation faced shortcomings that were addressed with the exception of the planned surveys, which could not be completed due to the security situation. Furthermore, adequate supervision support was ensured as follows: (i) the Project Task Team Leader (TTL) (an international staff – GG level) was based in Port au Prince from 2016 to 2021 (about 60 percent of the implementation period), ensuring close and intense supervision support; (ii) STCs first, and local staff complemented the Bank team based in Haiti from 2019 onwards; and (iii) virtual supervision missions became the norm during the COVID period and were held up to twice a month once high insecurity levels prevented travels to Haiti. In addition to direct support from staff based in Haiti, a total of 12 implementation support missions took place (8 physical and 4 virtual). Within the last 18 months of implementation, 12 virtual implementation support missions were held, for which emails, Action Plans and reminders were produced in lieu of formal aide-memoires). A physical mission could not take place for ICR preparation due to safety issues.

Justification of Overall Rating of Bank Performance

74. **The overall rating of Bank performance is Moderately Satisfactory.** There were moderate shortcomings in the quality of entry, complemented by sustained and effective supervision despite local insecurity and travel restrictions.

D. RISK TO DEVELOPMENT OUTCOME

75. **The risk to development outcome is significant.** The main risk has two parts: (i) on the operational side, that users are not willing to pay for water, leading to a deterioration of services; and, (ii) on the institutional side, that DINEPA cannot maintain its overall institutional structure and functions (technical assistance, investment, regulation, etc.) at a national level given its reliance on external financing. This risk is related to PDO3.

76. Despite the Project's major efforts, commercial activities of the WSS investment cycle could not be fully consolidated, especially for larger systems that were delivered toward the end of the project, mostly as a result of the difficult implementation conditions. However, it is known in the sector that when customers can finally experience running water (even in rural areas and when people are not used to paying for water services), they appreciate the service and are more open to paying. The presence of OREPAs, URDs, and TEPACs at the local community level, is likely to contribute to the operational and commercial support needed by the operators.

77. Risk to development outcome in terms of sector sustainability will remain a structural issue, largely beyond the Project scope as long as DINEPA remains highly dependent on external financing for both sector development investments and operational expenditures.

78. These risks are somewhat mitigated with the approval in May 2023 of a new WSS operation for Haiti (see footnote 14). The new intervention will continue providing support to the sector to help prepare the proposed transition toward commercial operations. The new project will introduce performance-based conditions given the need to encourage continued improvement in DINEPA's institutional performance and capabilities.



V. LESSONS AND RECOMMENDATIONS

79. **Implementation of numerous activities dispersed in a large territory, combined with weak institutional capacity, is extremely challenging and requires carefully tailored implementation arrangements.** The Project financed a large number of activities (including some 200 water and sanitation investments) implemented in eight out of the 10 administrative regions in the country. Most activities were of small size, many of difficult access and requiring similar level of implementation efforts as a large one. These implementation arrangements involved numerous actors of weak capacity, increasing implementation difficulties and adding more activities to support these actors to fulfill their roles. Even without the additional difficulties resulting from the country turmoil, implementation challenges were immense. At preparation, Projects facing similar situations must thoroughly and frankly assess expected implementation challenges to ensure realistic technical solutions and institutional arrangements are identified and adopted.

80. **Sustainability of WSS investments requires implementation of intense and multifaceted activities before, during and after conclusion of works.** These activities were part of the Project implementation strategy and were partially implemented; however, as difficulties in meeting deadlines increased, a focus on concluding the works prevailed. As a result, although the Project concluded most of the investments in water and sanitation systems and facilities, there was limited evidence to indicate sustainability. It is recommended that implementation arrangements of similar projects clearly demonstrate that the full range of activities required to support sustainability is assured.

81. **Flexibility and adaptive implementation mechanisms (AF, emergency response, additional technical and financial support, restructurings) were instrumental to support the project in responding to emergencies.**²⁰ In Haiti's context of high fragility, resulting in constant changes, operationalization of adaptable implementation mechanisms was key to adjust to changing circumstances and needs. In addition to an emergency component to respond rapidly in an eligible emergency, it is critical to mobilize alternative delivery mechanisms such as support from UN agencies with strong local credibility and experience. This lesson was well taken in the design of the new operation.

82. **Sustainable service delivery cannot be achieved without sector planning and financing mechanisms to provide stability for sector institutions and strategic decision-making.** The project dedicated considerable support (component 1) to sector strengthening, including paying for salaries and operational costs (part of DINEPA's and its regional and local technicians). This is quite an exception for Bank projects to allow direct financing of salaries beyond PIU staff and was much discussed during the preparation of the new operation. The answer was that this was needed, otherwise the institution would collapse, but should be controlled with specific mechanisms. These mechanisms include stronger coordination with other DINEPA donors, increasing performance of urban operators to generate revenues at a scale that is not possible in the rural sector; this would therefore increase DINEPA's own revenues and ensure DINEPA/the sector become stronger, thus allowing for better support in rural areas. Hence the importance of the continuing support (Project and TF) for sector monitoring and planning tools, which will help DINEPA become a more solid and "credible" stakeholder in discussions with donors and with the Government/Ministry of Finance.

83. **Achieving results in fragile countries, where shifting realities is a constant, requires larger technical support from the Bank team and commensurate budget allocations, which can realistically only come from Trust Funds.** This was possible through a well-balanced combination of appropriate supervision budget and availability of trust funds, which allowed for the high intensity of technical support needed.

84. **Strengthened collaboration of the water and health sectors was fundamental to bring in coordinated, innovative support.** The Project benefited from joint work of WB practices – primarily water and health, but also education and energy, especially during crises that needed rapid responses on various fronts. Early in the project, a

²⁰ This lesson was well taken under the new operation with introduction of different ways of intervention, for instance, part of the investments will be implemented by DINEPA, but a share of the investments will be implemented by United Nations agencies.



joint response to cholera outbreaks was replicated in a project in Yemen. During implementation, the WB water team worked with the education team on the design of school latrines. In the last months of the Project, a health project incorporated WSS activities due to a new cholera outbreak. Flexibility in design is conducive to innovative practices, especially during a crisis response.



ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS

A. RESULTS INDICATORS

A.1 PDO Indicators

Objective/Outcome: PDO Indicators by Objectives/Outcomes

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Direct project beneficiaries	Number	0.00 30-Sep-2015	300,000.00 30-Sep-2021	618,000.00 30-Sep-2021	601,518.00 31-Mar-2023
Female beneficiaries	Percentage	0.00	50.00	50.00	50.00
Project beneficiaries in localities on the border with the DR including bi-national markets	Number	0.00 30-Sep-2015	75,000.00 30-Sep-2021	34,000.00 30-Sep-2021	39,665.00 31-Mar-2023

Comments (achievements against targets):



Achieved: 97 percent. Included direct beneficiaries from water supply and sanitation interventions, including household and institutional sanitation. Although the implementation difficulties, just one of the investments (rehabilitation of the Lascahobas, a major Water Supply System benefiting 26,000 people) was not concluded before Project closing. The rehabilitation of the Lascahobas SAEP will be financed under the already approved follow-up project.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of people in rural areas and small towns provided with access to Improved Water Sources under the project	Number	0.00 30-Sep-2015	235,000.00 30-Sep-2021	588,000.00 31-Mar-2023	570,558.00 31-Mar-2023
Number of people provided with access to improved water sources under the project except in the areas affected by Hurricane Matthew	Number	0.00 30-Sep-2015	197,000.00 30-Sep-2021	197,000.00 31-Mar-2023	152,319.00 31-Mar-2023
Number of people in rural areas provided with access to Improved Water Sources in zones affected by Hurricane Matthew	Number	0.00 14-Jun-2017	320,000.00 30-Sep-2021	320,000.00 31-Mar-2023	342,339.00 31-Mar-2023
Project beneficiaries of	Number	0.00	71,000.00	71,000.00	75,900.00



small repairs of water systems in the context of COVID-19 emergency		09-Mar-2020	30-Sep-2021	31-Mar-2023	15-Mar-2023
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Comments (achievements against targets):

Achieved: 97 percent. This resulted from the works executed in different regions of the country. The achievement breakdown is presented under each respective indicator.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Piped water systems managed sustainably by a Professional Operator (PO) under the project	Number	0.00 30-Sep-2015	25.00 30-Sep-2021	24.00 30-Sep-2021	17.00 15-Mar-2023

Comments (achievements against targets):

Achieved: 71 percent. The partial achievement resulted from the delays in completing ongoing works of additional systems and subsequent launch of commercial operations. A total of 17 functioning systems constructed under the Project were managed by trained water committees (CAEPA) or other operators, as informed by the national monitoring system SIEPA and the regional offices. Effective delegation contracts between DINEPA and CAEPAs/POs and agreed criteria will continue to be monitored by DINEPA and OREPAs which will increase in the short term, but beyond the Project closing, the number of piped water systems sustainably managed by an operator. The PO model shows signs indicating that it is susceptible of constituting a suitable SAEP arrangement. However, there were still pending activities related to the 17 operators in place under the Project, such as the signing of delegation contracts and opening of bank accounts. The lack of elements, especially limited time in commercial operation under the project due to delayed in works, did not allow to infer with respect to cost recovery for operation and maintenance. Yet, there were indications that a reasonable tariff has been agreed with in most of the SAEPs, which might lead to an acceptable level of cost recovery. Nevertheless, only the gravitational systems provided a high certainty of continuity of services.



Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Required functions deconcentrated to targeted OREPA	Number	0.00 30-Sep-2015	5.00 30-Sep-2021	6.00 30-Sep-2021	6.00 15-Mar-2023
Comments (achievements against targets): Achieved: 100 percent. Deconcentration to the OREPAs has resulted in the following: i. Two key functions of procurement and financial management have been transferred to the OREPA level; ii. Payroll for both the departmental units (URD) and communal technicians (TEPAC) are now managed at OREPA level; iii. With DINEPA only in charge of the largest works contracts above a certain threshold defined in the Memorandum between DINEPA and OREPAs, most of the project contracts were procured and managed at the OREPA level. COVID emergency activities and related contracts were entirely managed by OREPAs. The function to be deconcentrated relates to the reporting, by each OREPA, on the region's CAEPAs/POs management contracts was ongoing with the support of technical assistance on operational, technical and financial management.					

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
People provided with access to "improved sanitation facilities" under the proj.	Number	0.00 30-Sep-2015	30,000.00 30-Sep-2021	30,000.00 31-Mar-2023	30,960.00 15-Mar-2023
People in rural areas provided with access to "improved sanitation facilities" - female	Number	0.00 30-Sep-2015	15,000.00 31-Mar-2023	15,000.00 31-Mar-2023	15,480.00 31-Mar-2023
Comments (achievements against targets):					



Overachieved: 103 percent. The achievement results from the implementation of household-level sanitation activities through the ACAT and FDAL approaches, which were successful tools in promoting behavior changes and personal latrines construction.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Priority cholera communes targeted under the project	Number	0.00 30-Sep-2015	6.00 30-Sep-2021	7.00 31-Mar-2023	7.00 15-Mar-2023

Comments (achievements against targets):

Achieved: 100 percent. The 7 priority cholera communities targeted by the Project were: Cerca la Source, Lascahobas, Hinche, Mirebalais, Jeremie, Barradere and Gonaives

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
DINEPA's system in place to respond to major emergencies	Yes/No	No 30-Sep-2015	Yes 30-Sep-2021	Yes 31-Mar-2023	Yes 15-Mar-2023

Comments (achievements against targets):

Achieved: 100 percent. The Project activities have supported the Government of Haiti's emergency response capacity through DINEPA's Emergency Response Directorate. In particular, it was used in the aftermath of Hurricane Matthew to carry rehabilitation on 68 water systems.



A.2 Intermediate Results Indicators

Component: Institutional Strengthening, Capacity Building and Project Management

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Departments covered by WSS baseline information	Number	0.00	10.00	10.00	10.00
		30-Sep-2015	30-Sep-2021	31-Mar-2023	15-Mar-2023

Comments (achievements against targets):

Achieved: 100 percent. The WSS baseline information was collected in 2016-17 covering the 10 regions in the country and the data collected informed the WSS national monitoring system SIEPA.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
DINEPA conducts an annual joint Government/ partners sector review	Yes/No	No	Yes	Yes	Yes
		30-Sep-2015	30-Sep-2021	31-Mar-2023	15-Mar-2023

Comments (achievements against targets):

Achieved: 100 percent. DINEPA hosted the first Joint Sector Review on March 24, 2022, as part of its “Water Fair” during the week of the World Water Day. Several Ministers, technical and financial partners participated and discussed the state of the sector and DINEPA’s vision towards 2030. DINEPA planned to



carry out a forum on water and sanitation as part of the world water day during March 2023. However, the forum was postponed due to the continuing turmoil in the country.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
A national programming mechanism for deconcentrated WSS service delivery is operationalized, as evidenced by tools in place	Number	0.00 30-Sep-2015	5.00 30-Sep-2021	5.00 31-Mar-2023	5.00 15-Mar-2023
Number of OREPAs among the 4 existing ones, using the baseline developed under the project to prioritize.	Number	0.00 30-Sep-2015	4.00 30-Sep-2021	4.00 31-Mar-2023	4.00 31-Mar-2023
Number of OREPAs among the 4 existing ones that have installed an accounting system which facilitates the consolidation of financial information at the central level.	Number	0.00 30-Sep-2015	1.00 30-Sep-2021	2.00 30-Sep-2021	1.00 15-Mar-2023

Comments (achievements against targets):



Achieved: 100 percent. The five targeted tools were in place: i. The national WSS baseline; ii. A roadmap for universal WSS coverage by 2030; iii. A Medium-Term Expenditure Framework (MTEF) for the sector; iv. First 3-year rolling consolidated Program-Budget; and v. an annual Sector Review, which first edition took place on March 24, 2022, and a forum was planned to 2023.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
CAEPAs that include at least 20 percent female representation in project area	Percentage	0.00 30-Sep-2015	70.00 30-Sep-2021	70.00 31-Mar-2023	129.00 15-Mar-2023

Comments (achievements against targets):

Overachieved: 184 percent. The social mobilization activities included as part of the Project overall methodology to promote sustainable WSS services to rural and small towns communities was very successful in stimulating and maintaining women's interest in joining the CAEPAs.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
A fecal sludge management service chain for rural areas and small towns is defined	Yes/No	No 30-Sep-2015	Yes 30-Sep-2021	Yes 31-Mar-2023	Yes 15-Mar-2023

Comments (achievements against targets):



Achieved: 100 percent. This included the whole sanitation chain starting from the awareness campaign (ACAT) to build household latrine, support to public institution (public schools and markets to build and manage public sanitation block latrines. Also included the masons training (capture and containment), the emptier latrines training and support (emptying and transportation) and the fecal sludge treatment plan for treatment and valorization of fecal sludge.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Grievances registered related to delivery of project benefits addressed (%)	Percentage	0.00 30-Sep-2015	80.00 30-Sep-2021	100.00 30-Sep-2021	100.00 15-Mar-2023

Comments (achievements against targets):

Achieved: 100 percent. The total number of complaints received reached 101, which all them have been addressed. The GRM created and implemented by the Project, and benefitting from fully engagement from the social mobilization and supervision teams, was properly designed and adequately responded to the requirements.

Component: Water Supply and Sanitation

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 30-Sep-2015	6,750.00 30-Sep-2021	7,750.00 30-Sep-2021	6,576.00 31-Mar-2023



Comments (achievements against targets):

Achieved: 85 percent. Modification of design during the implementation reduced the total number of household connections. The continuous monitoring of implementation by DINEPA result an increase in the number of connections. A total of 6576 meters have been installed (Center, 700; North, 54; South, 5,822) by project end. However, in most cases, the fixe tariff is still generally adopted, given that difficulties in accepting the volumetric tariff.

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	135.00	135.00	133.00
		30-Sep-2015	30-Sep-2021	31-Mar-2023	31-Mar-2023

Comments (achievements against targets):

Achieved: 98 percent. The difficulties in reaching some of the area cased significant delays and also prevented the execution of some works.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
People trained to improve hygiene behavior/sanitation practices under the project	Number	0.00	75,000.00	95,000.00	981,255.00
		22-Nov-2019	30-Sep-2021	30-Sep-2021	15-Mar-2023
Communities where DINEPA and MSPP local structures have jointly been trained or collaborated in	Number	0.00	20.00	23.00	23.00
		30-Sep-2015	30-Sep-2021	31-Mar-2023	15-Mar-2023



water supply, hygiene
promotion and sanitation
themes and activities

Comments (achievements against targets):

Overachieved: 1,033 percent. In the context of COVID-19 response, a large campaign dedicated to awareness, handwashing and hygiene was organized and implemented by UNICEF, OREPA South, and Center. The campaign included the installation of handwashing facilities supplied with water and soap and training on good behavior

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Students and teachers benefitting from improved sanitation facilities in public schools under the project	Number	0.00	20,000.00	30,000.00	19,351.00
		30-Sep-2015	30-Sep-2021	31-Mar-2023	15-Mar-2023

Comments (achievements against targets):

Achieved: 65 percent. A total of 19,351 students and teachers benefited from the construction of sanitary blocks. Implementation delays and financing restrictions limited the number of sanitary blocks constructions.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Latrine blocks for public	Number	0.00	60.00	70.00	51.00



institutions or spaces constructed or rehabilitated with management and maintenance arrangements in place under the project		30-Sep-2015	30-Sep-2021	31-Mar-2023	15-Mar-2023
Comments (achievements against targets): Achieved: 72 percent. A total of 51 sanitation blocks were built in public spaces (Center, 5; South, 38; North 8). OBS: This Intermediate Results Indicator is also linked to Component 3: Contingency Emergency Response					
Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Households with latrine built during project implementation and of which use is verified	Number	0.00 30-Sep-2015	1,900.00 30-Sep-2021	1,900.00 31-Mar-2023	5,449.00 15-Mar-2023
Comments (achievements against targets): Overachieved: 286 percent. Sensibilization to ACAT conducted by TEPAC and through the contract with UNICEF proved very successful at increasing the number of households with latrines built during the Project (72 percent of them under the UNICEF intervention). Exchanges with UNICEF should enable DINEPA to continue monitoring these achievements and the use of the latrines.					
Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion



Number of handwashing facilities built in the context of COVID-19 awareness campaign	Number	0.00 09-Mar-2020	995.00 30-Sep-2021	995.00 31-Mar-2023	1,095.00 15-Mar-2023
Comments (achievements against targets): Overachieved: 110 percent. The handwashing facilities were installed by OREPA South, North and Center, as well as by UNICEF (installed 76 percent of the 1,095 handwashing facilities) in strategic points of public market and places, border posts, health centers, and other strategic places. OBS: This Intermediate Results Indicator is also linked to Component 3: Contingency Emergency Response					
Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of hospitals and health centers whose water supply system was repaired under the COVID-19 emergency	Number	0.00 09-Mar-2020	15.00 30-Sep-2021	15.00 31-Mar-2023	7.00 15-Mar-2023
Comments (achievements against targets): Achieved: 46 percent. The activity was established during the COVID-19 pandemic in a context of uncertainty. Various factors including accessibility to the sites, coordination with other partners and prioritization of other infrastructure led DINEPA to limit those interventions. OBS: This Intermediate Results Indicator is also linked to Component 3: Contingency Emergency Response					



Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
DINEPA acknowledged a gender action plan	Yes/No	No 01-Jan-2019	Yes 30-Sep-2021	Yes 31-Mar-2023	Yes 15-Mar-2023
Comments (achievements against targets): Achieved: 100 percent. In December 2018 and January 2019, the Project supported a Gender Analysis to inform design changes in the Project, as well as an organizational Gender Audit of DINEPA, to assess the capacity of their staff to address systematic gender issues. Finding from the Gender Analysis supported the development of a Gender Action Plan designed by DINEPA's staff during a two-day Gender Action Planning Workshop conducted in May, 2019. The exercise was a premiere for DINEPA. The idea of taking gender into account in DINEPA's internal training curriculum, but also in the recruitment plan, particularly at the OREPA level, was one of the recommended priority actions. It also disseminated knowledge and understanding of gender matters in WASH. DINEPA commitment to gender strategy was not yet fully institutionalized.					

Component: Contingent Emergency Response

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Latrine blocks for public institutions or spaces constructed or rehabilitated with management and maintenance arrangements in place in zones affected by Hurricane Matthew	Number	0.00 14-Jun-2017	20.00 30-Sep-2021		24.00 15-Mar-2023
Comments (achievements against targets):					



Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
People benefitting from consolidation work (small repairs and expansions) in zones affected by Hurricane Matthew	Number	0.00	300,000.00	270,000.00	270,019.00
		14-Jun-2017	30-Sep-2021	30-Sep-2021	15-Mar-2023
Comments (achievements against targets): Achieved: 100 percent. These beneficiaries from CERC interventions are included in the number of people who gained access to improved water sources under the Project. OBS: This Intermediate Results Indicator is also linked to Component 3: Contingency Emergency Response					

**B. KEY OUTPUTS BY COMPONENT**

Objective/Outcome 1: Increase access to improved water supply in targeted rural and small towns in zones affected by cholera.																																																																						
Outcome Indicators	1. People in rural areas provided with access to improved water sources under the Project. (Number, Custom) 1.1. People in rural areas provided with access to improved water sources under the Project except in the areas affected by Hurricane Matthew. (Number, Custom) 1.2. People in rural areas provided with access to improved water sources in zones affected by Hurricane Mathew. (Number, Custom) 1.3. Project beneficiaries of small repairs of water systems in the context of COVID-19 emergency (Number, Custom) 2. Priority cholera communes targeted under the Project. (Number, Custom)																																																																					
Intermediate Results Indicators	Component 2: Water Supply and Sanitation 1. New piped household water connection that are resulting from the project intervention. (Number, Custom) 2. Improved community water points constructed or rehabilitated under the project. (Number, Custom) 3. Number of hospitals and health centers whose water supply system was repaired under the COVID-19 emergency. (Number, Custom)																																																																					
Key Outputs by Component (linked to the achievements of Objective/Outcome 1)	1. Table 1 below presents the water supply outputs by type and zones Table 1: Water supply outputs by type and zones <table><tr><th></th><th colspan="3">Water supply systems Construction/Rehabilitation/Extension</th><th colspan="3">Spring water point improvement – Boreholes</th><th rowspan="2">Total</th></tr><tr><th>Zones</th><th>Except Mathew</th><th>Mathew</th><th>Covid-19</th><th>Except Mathieu</th><th>Mathieu</th><th>Covid-19</th></tr><tr><td>West</td><td>2</td><td></td><td></td><td>1</td><td></td><td></td><td>3</td></tr><tr><td>North</td><td>2</td><td>8</td><td>3</td><td>8</td><td></td><td>5</td><td>26</td></tr><tr><td>Center</td><td>10</td><td></td><td>6</td><td>6</td><td></td><td>23</td><td>45</td></tr><tr><td>South</td><td>6</td><td>77</td><td>7</td><td>16</td><td></td><td>11</td><td>117</td></tr><tr><td></td><td>20</td><td>85</td><td>16</td><td>31</td><td>0</td><td>39</td><td>191</td></tr><tr><td>TOTAL</td><td colspan="3">121 SAEs rehabilitated or constructed (rehabilitation/construction magnitude: 20 sizeable; 101 small (Mathew/Covid-19))</td><td colspan="3">70 spring water points improvements</td><td></td></tr></table> 2. Awareness-building activities on tariffs targeting users, CAEPAs’ team, and local authorities carried out by specialized teams								Water supply systems Construction/Rehabilitation/Extension			Spring water point improvement – Boreholes			Total	Zones	Except Mathew	Mathew	Covid-19	Except Mathieu	Mathieu	Covid-19	West	2			1			3	North	2	8	3	8		5	26	Center	10		6	6		23	45	South	6	77	7	16		11	117		20	85	16	31	0	39	191	TOTAL	121 SAEs rehabilitated or constructed (rehabilitation/construction magnitude: 20 sizeable; 101 small (Mathew/Covid-19))			70 spring water points improvements			
	Water supply systems Construction/Rehabilitation/Extension			Spring water point improvement – Boreholes			Total																																																															
Zones	Except Mathew	Mathew	Covid-19	Except Mathieu	Mathieu	Covid-19																																																																
West	2			1			3																																																															
North	2	8	3	8		5	26																																																															
Center	10		6	6		23	45																																																															
South	6	77	7	16		11	117																																																															
	20	85	16	31	0	39	191																																																															
TOTAL	121 SAEs rehabilitated or constructed (rehabilitation/construction magnitude: 20 sizeable; 101 small (Mathew/Covid-19))			70 spring water points improvements																																																																		



	included in consulting services delivered by social engineering firms. 3. CAEPAs buildings renew, restoring works.
Objective/Outcome 2: Increase access to improved sanitation in targeted rural and small towns in zones affected by cholera.	
Outcome Indicators	1. People provided with access to “improved sanitation facilities” – female. (Number, Custom) 1.1. People in rural areas provided with access to “improved sanitation facilities” – female. (Number, Custom Breakdown)
Intermediate Results Indicators	Component 2: Water Supply and Sanitation. 1. Students and teachers benefiting from improved sanitation facilities in public schools under the project. (Number, Custom) 2. Latrine blocks for public institutions or spaces constructed or rehabilitated with management and maintenance arrangements in place under the project. (Number, Custom) 3. Households with latrine built during project implementation and of which use is verified. (Number, Custom) 4. People trained to improve hygiene behavior/sanitation practices under the project. (Number, Custom) 4.1. Communities where DINEPA and MSPP local structures have jointly been trained or collaborated in water supply, hygiene promotion and sanitation themes and activities. (Number, Custom Breakdown) 5. Number of handwashing facilities built in the context of COVID-19 awareness campaign. (Number, Custom)
Key Outputs by Component (linked to the achievements of Objective/Outcome 2)	1. 51 Latrines blocks constructed (regions: South, Grand-Anse, Center, Ile de la Gonâve). 2. Over 300 masons trained on latrines construction. 3. Training of latrine emptier and setup of an association of emptier (Les Cayes) 4. Radio outreach programs. 5. Students’ notebooks containing sanitation awareness information produced and distributed. 6. Sanitation awareness campaigns in schools developed and implemented. 7. Training on sanitary blocks management for schools developed and implemented. 8. Support to reduce COVID-19. 9. Community development activities to promote the Community Approach to Total Sanitation (ACAT).
Objective/Outcome 3: Strengthen the Recipient’s water and sanitation service delivery mechanism at the deconcentrated level	
Outcome Indicators	1. A national programming mechanism for deconcentrated WSS delivery is operationalized, as evidenced tool in place. (Number) 2. Required functions deconcentrated to targeted OREPA. (Number) 3. Piped water system managed sustainably by a PO under the Project. (Number) 3.1. Piped water system managed sustainably by a PO in zones affected by Hurricane Matthew. (Number)
Intermediate Results Indicators	Component 1. Institutional Strengthening, Capacity Building and Project Management 1. Departments covered by WSS baseline information. (Number, Custom) 2. DINEPA conducts an annual joint Government/partner’s sector review. (Yes/No, Custom)



	3. A national programming mechanism for deconcentrated WSS service delivery is operationalized, as evidenced by tools in place. (Number, Custom) 4. Number of OREPAs among the 4 existing ones, using the baseline developed under the project to prioritize. (Number, Custom Breakdown) 5. Number of OREPAs among the 4 existing ones that have installed an accounting system which facilitates the consolidation of financial information at the central level. (Number, Custom Breakdown) 6. CAEPAs that include at least 20 percent of female representation in project area. (Percentage, Custom) 7. A fecal sludge management service chain for rural areas and small towns in defined. (Yes/No, Custom) 8. Grievances registered related to delivery of project benefits addressed. (Percentage, Custom)
Key Outputs by Component (linked to the achievements of Objective/Outcome 3)	1. Technical assistance to develop and implement the database. 2. Support to the SIEPA implementation/ Use of SIEPA to provide information related to key sector indicators 3. BPO toolbox developed (excel version, digital version), BPO approach implemented. 4. Technical assistance to improve the delegated management arrangement: 5. Template for service contract delegation revised, draft template for simplified business plans for water operators developed, 6. Awareness-building activities on tariffs for CAEPAs and local authorities by social engineering firms 7. Water sources and flows inventory. 8. Financial support (personnel salary and operational costs) to DINEPA, OREPAs North, Center, and South. 9. DINEPA acknowledged a gender action plan. (Yes/No, Custom) 10. Acquisition of 15 vehicles and 118 motorbikes - OREPA personnel training on water metering calibrate, reading, repairs. 11. DINEPA and OREPAs financial diagnostic carried out. 12. UNOPs technical assistance to improve DINEPA and OREPAs internal procedures required for the Project implementation. 13. Development of the digital database of hydrogeologic information (SIGES) in partnership with the Sciences Faculty (<i>Faculté des Sciences de l'Université d'État de l'Haïti</i>). 14. Pilot project to protect water supply sources. 15. Optimization of the impact of water and sanitation interventions in public schools already included in the World Bank's education operation, which aims to provide management support to the institution. 16. Social mobilization units within DINEPA
Objective/Outcome 4: Improve the Recipient's capacity to respond promptly and efficiently to an Eligible Emergency.	
Outcome Indicators	1. DINEPA's system in place to respond to major emergencies.
Intermediate Results Indicators	1. Latrine blocks for public institutions or spaces constructed or rehabilitated with management and maintenance arrangements in place in zones affected by Hurricane Matthew. (Number, Custom) (This indicator is also included under Objective/Outcome 1)



	2. People benefitting from consolidation works (small repairs and expansions) in zones affected by Hurricane Matthew. (Number, Custom) (This indicator is also included under Objective/Outcome 1)
Key Outputs by Component (linked to the achievements of Objective/Outcome 4)	1. Use of SIEPA to map damages and plan and monitor post-earthquake water and sanitation interventions in the framework of the post-disaster needs assessment and the government's recovery plan (2021)



ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION

A. TASK TEAM MEMBERS

Name	Role
Preparation	
Jean-Martin Brault	Task Team Leader(s)
Prosper Nindorera	Procurement Specialist(s)
Fabienne Mroccka	Financial Management Specialist
Stefano P. Pagiola	Team Member
Aboubacar Magassouba	Team Member
Andrew Sunil Rajkumar	Team Member
Grant Milne	Team Member
Victor Manuel Ordonez Conde	Team Member
Nyaneba E. Nkrumah	Social Specialist
Raghava Neti	Team Member
Sophia Guerrier-Gray	Team Member
Christophe Prevost	Team Member
Sylvain Adokpo Migan	Team Member
Felipe Jacome	Social Specialist
Peter F. B. A. Lafere	Social Specialist
Jacqueline Devine	Team Member
Eleonora Del Valle Cavagnero	Team Member
Ramiro Ignacio Jauregui-Zabalaga	Counsel
Zael Sanz Uriarte	Team Member
Josue Akre	Team Member
Barbara Minguez Garcia	Team Member
Rose Caline Desruisseaux-Cadet	Team Member
Ndeye Awa Diagne	Team Member
Alejandro Neira Zavala	Team Member
Supervision/ICR	
Veronique Verdeil	Task Team Leader(s)
Vladimir Mathieu, Khadija Faridi	Procurement Specialist(s)
Lucas Carrer	Financial Management Specialist
Farah Altagracia Dorval	Team Member
Maria Cristina Rosa Lucia Villani	Procurement Team
Maria Luisa Duran Fargas	Team Member
Nathalie Mihajloski Zivkovic	Team Member
Maria Laettitia Antoine	Procurement Team



Kevin McCall	Environmental Specialist
Khaled Mohamed Ben Brahim	Team Member
Maryerly Rueda Gomez	Team Member
Matthieu Louis Bonvoisin	Counsel
Beth Wanjeri Mwangi	Team Member
Felipe Goya	Team Member
Adjalou Celestin Niamien	Team Member
Bruce MacPhail	Social Specialist
Ingrid Sandra Milord	Procurement Team
Angela Nyawira Khaminwa	Safeguards Advisor/ESSA
Andrianirina Michel Eric Ranjeva	Team Member
Jacqueline Beatriz Veloz Lockward	Counsel
Carl Christian Gyde Jacobsen	Team Member
Christophe Prevost	Team Member
Rahmoune Essalhi	Procurement Team
Sophia Guerrier-Gray	Team Member
Victor Manuel Ordenez Conde	Team Member

B. STAFF TIME AND COST

Stage of Project Cycle	Staff Time and Cost	
	No. of staff weeks	US\$ (including travel and consultant costs)
Preparation		
FY14	7.972	94,311.77
FY15	67.218	235,551.03
Total	75.19	329,862.80
Supervision/ICR		
FY16	47.952	170,451.45
FY17	15.098	133,021.69
FY18	20.164	150,335.60
FY19	30.029	139,061.94
FY20	26.296	135,352.29
FY21	65.065	271,521.27



FY22	32.626	148,246.66
FY23	33.562	134,544.32
FY24	2.100	9,438.60
Total	272.89	1,291,973.82

**ANNEX 3. PROJECT COST BY COMPONENT**

Components	Amount at Approval (i) (US\$M)	Actual at Project Closing (ii) (US\$M)	Percentage of Approval (US\$M)
Institutional Strengthening, Capacity Building and Project Management	17.00	16.00	94.11
Water Supply and Sanitation	50.00	46.07	92.14
Contingent Emergency Response	3.00	2.95	98.33
Total	70.00	65.03	92.90

(i) Amounts as by the Res36558 (12-22-2022) (see Table 1, para 18)

(ii) Actual disbursed as of August 8, 2023.



ANNEX 4. EFFICIENCY ANALYSIS

1. As part of the efficiency analysis for this ICR, the task team conducted an economic and financial analysis (EFA) for this Project. This annex describes the methodology for that analysis. To the extent possible, the ICR analysis is based on actual data gathered as part of the M&E efforts of the program. Because the quantitative benefits of capacity building and training activities are difficult to estimate, our calculation focuses on the road investments under both Components 1 and 2.
2. The total ERR for all investments under Component 2 is estimated at 41 percent based on the consumer surplus associated with better access to water and reductions in morbidity due to cholera and other water-borne diseases over a twenty-year period including the time period of Project implementation. The NPV is estimated at US\$94.2 million at a 12 percent discount rate, and US\$183.3 million at a 6 percent discount rate.
3. The original PAD calculated an ERR of 11 percent based on the consumer surplus associated with better access to clean water. Since this calculation did not quantify the impact of reduced morbidity related to water borne diseases, the original ERR estimate vastly undervalued the impact of the project. In 2011, 2,927 deaths were recorded due to cholera, with only 3 deaths recorded in 2019. Until 2022, cholera was virtually eliminated, with a minimal number of cases now reported—a vast reduction compared to cholera rates at project appraisal. Additionally, it is worth noting that the project investments not only reduce cholera rates, but also those of diarrhea and other water borne diseases. As such, the ICR analysis estimates a 5 percent reduction in morbidity associated with water borne diseases amongst the project beneficiaries. In reality, this reduction is likely to be much higher due to the improved access to clean water and sanitation facilities. As noted above, for cholera alone, Haiti saw a 99 percent reduction in deaths between 2011 and 2019—far more than the 5 percent morbidity reduction assumed by this analysis. Additionally, morbidity rates underestimate the cost of water borne diseases for individuals that recover but are unable to work due to their illness.
4. As mentioned above, the economic analysis is based on the consumer surplus associated with better access to water and the monetized value of reduced morbidity due to water-borne diseases. For the purpose of this analysis, we consider these economic benefits as the income of the project investments—therein applying the discounted cash flow model for financial analysis of private investments within the context of a World Bank project. Key variables used as assumptions in this analysis have been tested for sensitivity to ensure robustness of the overall analysis and the potential project interventions.
5. Additional spillover effects and growth nearby project investments is likely to amplify the impact of project investments. This amplified impact will essentially create a multiplier effect related to the investments under this project. However, this multiplier effect has not been included in the project economic analysis for several reasons: i) for the sake of conservatism; ii) difficulties in attribution and measurement associated with using a sweeping multiplier; and iii) difficulties in determining the correct size and timing of the multiplier effect. Given this exclusion, the impacts from this Project, especially social benefit spillovers, will likely be underestimated in the analysis here.



6. These social benefits include time and money saved due to improved access to water, local investments based on better planning, better planning for natural disasters and climate change, better O&M provisions, and improved response time to crises.
7. The economic analysis is based on the following channels of impact. Each of these has been tested for sensitivity.
 - Consumer surplus for water: As included in the original project analysis, the analysis uses the assumptions noted below, multiplied by price elasticity of 0.5. This calculates an annual consumer surplus of US\$15.55 per household

	Unit	Without project	With project
Average monthly cost	HTG	535	219 to 438 (Avg estimated at 304)
HH monthly consumption	m ³	3.65	6.08
Cost per m ³	HTG	147	50
Monthly surplus	HTG		176.25
Annual surplus	HTG		2,115

- Reduction in morbidity of water-borne diseases: Water and sanitation investments result in reduced morbidity from diarrhea and other waterborne diseases, along with time and cost savings for local households to access water. The total number of beneficiaries is 601,518, as noted in the Results Framework. The analysis assumes a 5 percent reduction in the morbidity associated with water-borne diseases and unsafe water from a baseline of 23.8 percent.²¹
8. Additional assumptions used in the analysis include:
 - Value of a statistical life: USD 2,394.²²
 - Operations and maintenance (O&M) costs: O&M costs for water systems vary widely. These costs include treatment and staff costs, along with maintenance of the physical infrastructure and energy costs. Water investments under the project are either gravity fed or powered by a solar pump, meaning that energy costs vary considerably. As such, the analysis uses a conservative assumption of 5 percent of the investment costs for annual O&M.
 9. The results of our analysis are summarized in the table below:

NPV (12 percent discount rate)	US\$94.2 million
NPV (6 percent discount rate)	US\$183.3 million
ERR (percent)	41

²¹ Based on WHO data, 2016 to estimate the morbidity rate at the outset of the project.

²² Kip Viscusi, W., and Clayton J. Masterman. "Income Elasticities and Global Values of a Statistical Life." https://law.vanderbilt.edu/phd/faculty/w-kip-viscusi/355_Income_Elasticities_and_Global_VSL.pdf.



10. The results of our sensitivity analysis are summarized below:

Sensitivity condition	ERR (percent)
50 percent increase in O&M costs	40
50 percent decrease in O&M costs	42
Two-year lag in benefits	25
Morbidity benefits reduced by 50 percent	22



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

On September 22, 2023, DINEPA informed the Bank, via e-mail, that it had reviewed the draft ICR and did not have comments that would modify the report structure. Also, it highlighted that the Efficacy, Efficiency and M&E mechanisms were considered substantial. In addition, DINEPA suggested that the report could include Lessons Learned #4 and #5 that were presented in the Client's Completion Report. The translation from French to English of Lessons #4 and #5 is presented below.

Lesson Learned 4: The strong involvement of stakeholders and improved communications constitute an efficiency factor for the Project. The lack of clear procedures established, validated by senior management, and agreed upon by all operators leaves an open door for all type of interpretations, leading to delays in the processing of certain tasks and generation of conflicts within the structure, and even to the abandonment of some of them although they were considered a priority.

Lesson Learned 5: An organizational structure based on a centralized coordination, appropriate control and accountability tools, availability of information, and reliability of the management and coordination mechanisms, constitute a guarantee of an efficient management and coordination. Another missing aspect that was identified is that a project coordination unit supported by competences/functions shared with other entities, cannot achieve an efficient management without ensuring appropriate synergy and complementarity, or putting in place layers of control. For instance, a lack of coordination between the Technical Directorate and the PIU on certain technical aspects such as validation of execution plans, service orders, review of technical documents, etc., without the involvement of the PIU, have generated difficulties in terms of contract management that were detrimental to the coordination of related sub-projects. The absence of a quality assurance plan as a mechanism for validating services according to objectively verifiable criteria based on the type, scale and scope of the service provided, was a relevant factor to explain the delays in planning and the abandonment of certain sub-projects. A case in point is the lower cost of contract amendments when studies were of good quality compared to those stemming from studies of lower quality. The lack of systematic monitoring of certain aspects of contract performance, such as the monitoring of guarantees and contract regularization, or even changes in the terms of payment, has put the project and DINEPA as a whole at a disadvantage vis-à-vis some firms.



ANNEX 6. CHANGES IN PDO INDICATORS

Table 1 presents all the changes in PDO Indicators.

Table 1: Changes in PDO Indicators					
PAD		AF		Restructuring ²³ 12-22-2020	
Outcome	Target	Outcome	Target	Outcome	Target
A national programming mechanism for deconcentrated WSS services delivery is operationalized, as evidenced by tools in place.	5			Deleted: Moved to Intermediate Results Indicators under Component 1.	
Required functions deconcentrated to targeted OREPA	6				6
Piped water systems managed sustainably by a professional operator (OP) under the Project	20		Changed to: 25		Changed to: 24
		New: Piped water systems managed sustainably by an OP in zones affected by Hurricane Matthew	5	Deleted: Found redundant	
Number of people provided with access to “improved water sources” under the Project – rural disaggregated by sex.	150,000		Changed to: 235,000 Female: 117,500	Changed: Number of people in rural areas and small towns provided with access to improved water sources under the project. Female breakdown deleted.	Changed to: 588,000
		New: People in rural areas provided with access to improved water sources affected by Hurricane Matthew	85,000		Changed to: 320,000
				New: Number of people provided with access to improved water sources under the Project except in the areas affected by Hurricane Matthew	197,000
People provided with access	30,000			Changed to: (i) Rural	30,000

²³ Out of the Project’s four Restructurings, only the 12-22-2022 Restructuring changed PDO Indicators and targets.



to “improved sanitation facilities” under the Project – rural, female (50%).				breakdown deleted as it was a repetition; (ii) Percentage of females to be revised based on survey	
Priority cholera communes supported by the Project.	6		6		Changed to: 7
Direct Project beneficiaries – Females (50%).	300,000		Changed to: 685,000		Changed to: 618,000
		New: Project beneficiaries of small repairs and rehabilitation works following the passage of Hurricane Matthew.	385,000		
				New: Project beneficiaries of small repairs of water systems in the context of COVID-19	71,000
Project beneficiaries in localities on the border with the DR including bi-national markets.	75,000	No change			Changed to: 34,500
				New: DINEPA’s system in place to respond to major emergencies	Yes/No



ANNEX 7. COMPLETE LIST OF OUTPUTS PROMOTING INSTITUTIONAL STRENGTHENING

WSS sector reform consolidation support:

Annual reviews and conferences for the sector where high level dialogue take place between donors, government to share global vision of the sector and define strategies to reach their goals.

Design and introduction of a multiyear program and budget process – the Budget Programme Par Objective (BPO). The BPO design intended to support the process of shifting the sector from a project-based approach to a more strategic, programmatic approach that would allow DINEPA to have a global vision of the sector and take decisions on financing needs and budget allocations based on progress made.

A unit pricing system study for budgeting works in rural areas and small towns

A WASH gender diagnostic to assess DINEPA's capacity to address systemic gender issues, including knowledge and understanding of gender issues in WASH

A study of the acceptance of potential innovative sanitation solutions, such as CBS, which could become part of the range of options for improving sanitation in rural areas, strengthening implementation of the national sanitation strategy, and improving access to sanitation.

Private sector participation in WSS services delivery in rural and small towns: piloting a public-private partnership scheme, strengthening the performance of POs, identification of innovative approaches for POs.

A financial sustainability assessment focused on drinking water supply systems and volumetric billing to support operational management.

WSS monitoring and technical support:

The establishment of the Integrated Water and Sanitation Information System (SIEPA in French). In coordination and with contributions of the main donors in the sector (IDB, AECID, UNICEF, USAID), a digital platform, The SIEPA, has been designed as a sector-wide monitoring tool of progress in access to water and sanitation services. The SIEPA platform became a national reference and represent a good example of work coordination between financial and technical partners of the Water and Sanitation Sector in Haiti.

Design and introduction of the new computerized accounting system (ACCPAC). The new accounting system would allow DINEPA to harmonize financial data and ensure better reporting in line with the requirements of the different donors. The ACCPAC software has been installed and training has been provided for DINEPA's regional and central accountants

The appropriation of the BPO. Joint works with have been conducted to feed the toolbox and integrated the tool into existing work processes. The appropriation the BPO is still in progress.

Configuration of the Groundwater Management Information System in partnership with the National University to improve and share sector's groundwater knowledge.

Improvement and training of DINEPA technicians in data collection and tool use.



ANNEX 8. SUPPORTING DOCUMENTS (IF ANY)

1. Sustainable Rural and Small Towns Water and Sanitation Project.

- Project Appraisal Document (PAD), May 7, 2015
- Proposed Additional Grant and Restructuring, June 1, 2017
- Financing Agreement, July 21, 2015
- Additional Financing. Financing Agreement, June 29, 2017
- Implementation Status & Results Reports (ISRs) 1 – 17
- Aide Memoires from implementation support missions (in person and virtual)
- Notes from virtual implementation support missions
- Borrower Completion Report (BCR), March 31, 2023
- UNOPs, Diagnostic Back-on-Track du projet EPARD mis en œuvre para la DINEPA, Rapport de diagnostic, 2020-02-03

2. Decentralized Sustainable and Resilient Rural Water and Sanitation Project (P178188). PAD.