



Report No: ICR00539

IMPLEMENTATION COMPLETION AND RESULTS REPORT

IDA-D3230, IDA-D6690 and IDA-D9810

ON GRANTS

IN THE AMOUNT OF SDR 97.4 MILLION
(US\$138 MILLION EQUIVALENT)

TO THE
REPUBLIC OF HAITI

FOR THE

HAITI RURAL ACCESSIBILITY & RESILIENCE PROJECT

November 18, 2025

Transport Global Practice
Latin America And Caribbean Region



CURRENCY EQUIVALENTS

(Exchange Rate Effective {May 29, 2025})

Currency Unit = Haitian Gourde

HTG 130.74= US\$1

US\$1 = SDR 0.57813

FISCAL YEAR

January 1 - December 31

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**ABBREVIATIONS AND ACRONYMS**

Acronym	Definition
AF	Additional Financing
AF1	First Additional Financing
AF2	Second Additional Financing
AM	Aide Memoire
BCA	Haiti Center and Artibonite Regional Development Project (<i>Boucle Centre-Artibonite</i>)
CE	Citizen engagement
CERC	Contingent Emergency Response Component
CIAT-es	Inter-Ministerial Committee for Territorial Development (<i>Comité Interministériel d'Aménagement du Territoire</i>)
CPF	Country Partnership Framework
EIRR	Economic Internal Rate of Return
GBV	Gender-Based Violence
GDP	Gross Domestic Product
GoH	Government of Haiti
GRM	Grievance Redress Mechanism
IDA	International Development Association
IPF	Investment Project Financing
ISR	Implementation Status and Results Report
LIW	Labor-Intensive Work
M&E	Monitoring and Evaluation
MEF	Ministry of Economy and Finance (<i>Ministère de l'Economie et des Finances</i>)
MTPTC	Ministry of Public Works, Transportation, and Communications (<i>Ministère des Travaux Publics, Transports et Communications</i>)
NPV	Net Present Value
OP/BP	Operational Policy/Bank Procedure
PDO	Project Development Objectives
PIU	Project Implementation Unit
PSDH	Strategic Development Plan (<i>Plan Stratégique de Développement d'Haïti</i>)
RARP	Rural Accessibility and Resilience Project
RAI	Rural Access Index
RUTAP	Resilient Urban Transport and Accessibility Project
SDR	Special Drawing Rights
SME	Small and Medium Enterprise
ToC	Theory of Change
UCE	Central Execution Unit (<i>Unité Central d'Exécution</i>)
UTE	Technical Execution Unit (<i>Unité Technique d'Exécution</i>)
USD	United States Dollar
WB	World Bank



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

Operation ID P163490	Operation Name Haiti Rural Accessibility & Resilience Project
Product Investment Project Financing (IPF)	Operation Short Name HT Rural Accessibility & Resilience
Operation Status Closed	Approval Fiscal Year 2018
Original EA Category Partial Assessment (B) (Approval package - 31 May 2018)	

CLIENTS

Borrower/Recipient The Republic of Haiti	Implementing Agency Unite Centrale d' Execution of the Ministry of Public Works (UCE), Unite Technique d'Execution
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DEVELOPMENT OBJECTIVE

Original Development Objective (Approved as part of Approval Package on 31-May-2018)

The original Project Development Objectives are as follows: (i) to increase all-weather road access in selected sub-regions; and (ii) to improve the resilience of selected segments of the road network.

Current Development Objective (Approved as part of Additional Financing Package Seq No 1 on 17-Mar-2022)

The Project Development Objectives are to: (i) increase all-weather road access in selected sub-regions; (ii) improve the resilience of selected segments of the road network; and (iii) to provide immediate and effective response to an eligible crisis or emergency.



FINANCING

Financing Source	Original Amount (US\$)	Revised Amount (US\$)	Actual Disbursed (US\$)
World Bank Financing	138,000,000.00	130,594,989.63	130,593,636.44
IDA-D9810	30,000,000.00	29,469,208.23	28,549,221.96
IDA-D3230	75,000,000.00	69,472,190.87	69,941,792.47
IDA-D6690	33,000,000.00	31,653,590.53	32,102,622.01
Total	138,000,000.00	130,594,989.63	130,593,636.44

RESTRUCTURING AND/OR ADDITIONAL FINANCING

Date(s)	Type	Amount Disbursed (US\$M)	Key Revisions
30-May-2025	Portal	131.12	• Results • Disbursement Estimates • Loan Cancellations • Reallocations

KEY DATES

Key Events	Planned Date	Actual Date
Concept Review	21-Jul-2017	21-Jul-2017
Decision Review	26-Mar-2018	26-Mar-2018
Authorize Negotiations	09-Apr-2018	11-Apr-2018
Approval	31-May-2018	31-May-2018
Signing	06-Jun-2018	06-Jun-2018
Effectiveness	04-Sep-2018	04-Sep-2018
Additional Financing Sequence.02	Not Applicable	18-Jun-2020
Additional Financing Sequence.01	Not Applicable	17-Mar-2022
Restructuring Sequence.01	Not Applicable	30-May-2025
ICR Sequence.01 (Interim)	--	18-Nov-2025
Mid-Term Review No. 01	25-Oct-2021	22-Nov-2021



Operation Closing/Cancellation	30-May-2025	Automatically populated from Loans System
ICR/NCO	30-Nov-2025	--

RATINGS SUMMARY

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

ISR RATINGS

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US\$M)
01	24-Oct-2018	Satisfactory	Satisfactory	0.00
02	22-Apr-2019	Satisfactory	Satisfactory	3.00
03	01-Nov-2019	Satisfactory	Satisfactory	3.00
04	21-May-2020	Satisfactory	Satisfactory	12.15
05	16-Dec-2020	Satisfactory	Satisfactory	14.03
06	17-Jun-2021	Satisfactory	Satisfactory	26.20
07	24-Dec-2021	Satisfactory	Satisfactory	51.42
08	30-Jun-2022	Satisfactory	Satisfactory	91.88
09	22-Dec-2022	Satisfactory	Satisfactory	100.51
10	21-Jun-2023	Satisfactory	Satisfactory	111.02
11	08-Jan-2024	Satisfactory	Satisfactory	125.15
12	18-Jul-2024	Satisfactory	Satisfactory	130.35
13	05-Mar-2025	Satisfactory	Satisfactory	130.80

SECTORS AND THEMES**Sectors**



Major Sector	Sector	%	Adaptation Co-benefits (%)	Mitigation Co-benefits (%)
FY17 - Transportation	FY17 - Public Administration - Transportation	9	44	0
	FY17 - Rural and Inter-Urban Roads	91	56	0

Themes

Major Theme	Theme (Level 2)	Theme (Level 3)	%
FY17 - Environment and Natural Resource Management	FY17 - Climate change	FY17 - Adaptation	55
FY17 - Human Development and Gender	FY17 - Gender		66
FY17 - Urban and Rural Development	FY17 - Disaster Risk Management	FY17 - Flood and Drought Risk Management	96
	FY17 - Rural Development	FY17 - Rural Infrastructure and service delivery	100
	FY17 - Urban Development	FY17 - Public Transport	9

**ADM STAFF**

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I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

A. CONTEXT AT APPRAISAL

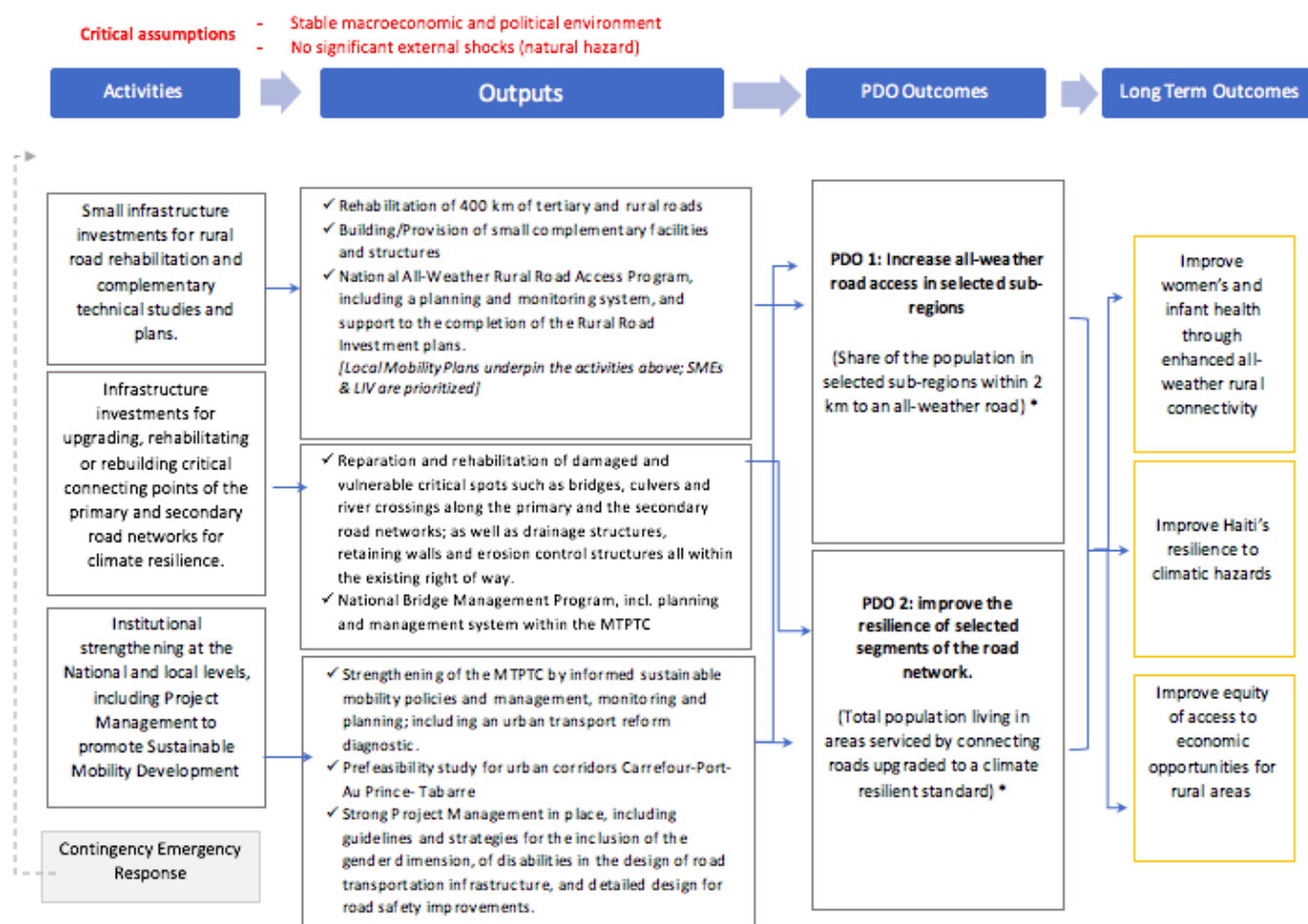
Context

1. **At appraisal, Haiti had the lowest income in the Western Hemisphere, marked by widespread poverty and inequality, but a sense of optimism after years of relative stability.** In 2016, Gross Domestic Product (GDP) per capita stood at US\$739.60, and Haiti ranked 163rd of 188 countries on the Human Development Index. Although extreme poverty declined from 31 percent to 24 percent between 2000 and 2012, inequality remained high. Most gains were concentrated in urban areas, mainly Port-au-Prince, while the Gini coefficient reached 0.64, the highest in the Latin America and the Caribbean region. It was also among the most hazard-prone countries globally, with 96 percent of Haiti's population living in areas identified as at hazard-prone, and with Haiti's economy experiencing frequent natural disasters that impacted economic growth. Despite these challenges, backed by the United Nations Stabilization Mission in Haiti, the decade preceding appraisal saw three presidents elected and peaceful transfer of power between opposition parties, with the government outlining Haiti's aspiration, in its 2013 Strategic Development Plan (PSDH), to become an emerging economy by 2030.
2. **Regional connectivity, rural accessibility and climate resilient infrastructure were key priorities for Haiti's development vision and World Bank (WB) support.** In 2015, only 39 percent of Haitians lived within 2 km of an all-weather road, with most rural roads in poor condition. The transport infrastructure was highly vulnerable to natural disasters and climate events, with limited coverage and poor maintenance, especially in rural areas, that hindered access to agricultural markets, leading to post-harvest losses of up to 30 percent. In 2016, Hurricane Matthew demonstrated again its vulnerability by destroying roads and bridges that isolated 1.2 million people from emergency aid. To address these issues, the Haitian government prioritized, under its PSDH, climate resilience—including all-weather roads—aiming to construct 4,000 km of roads by 2021 to improve intercity and rural connectivity. In support of these efforts, and aligned with both the World Bank's (WB) Systematic Country Diagnostic (Report No. 97341) and the Haiti Country Partnership Framework (CPF, Report No. 98132) for FY2016-2019, the Rural Accessibility and Resilience Project was designed to assist the Government of Haiti (GoH) in enhancing rural connectivity, improving climate resilience, and strengthening institutional capacity for road infrastructure planning and maintenance.

Theory of Change (Results Chain)

3. The project's theory of change (TOC) is presented in Figure 1.

Figure 1: TOC at approval



Project Development Objectives (PDO)

4. The original PDO, as stated in the Financial Agreement approved on June 6, 2018 is to: (a) increase all-weather road access in selected sub-regions; and (b) improve the resiliency of selected segments of the road network.¹

Key Expected Outcomes and Outcome Indicators

5. The two-part PDO was measured by two outcome indicators see Table 1.

Table 1. Outcome indicators at appraisal

Outcome (PDO)	Outcome indicator (PDO-level results indicator)
(a) increase all-weather road access in selected sub-regions	(i) Share of rural population in selected sub-regions with access within 2 km of an all-weather road (percentage)
(b) improve the resiliency of selected segments of the road network	(ii) Total population living in areas serviced by connecting roads upgraded to a climate resilient standard (number)

¹ The PDO outlined in the Financing Agreement closely aligns with that presented in the project Appraisal Document, which states: "The project Development Objectives are to: (i) increase all-weather road access in selected sub-regions; and (ii) improve the resilience of selected segments of the road network."



Components

6. **Component 1: Enhancing Rural Connectivity (US\$45.0 million, actual US\$90.0 million)** aimed to improve reliable, all-weather road access to essential services and markets for rural populations, with a focus on the South, South-East, and Nippes departments. The activities financed under this component included: (i) rehabilitation works of tertiary and rural road network (400 km), (ii) the building of small complementary facilities and structures, including lighting, bus stops, and other safety structures, in inhabited areas, near schools and around water kiosks and health centers, (iii) technical assistance, training, and developing technical guidelines for Haiti's national all-weather rural road access program; (iv) the preparation and financing of local mobility plans; and (v) coastal protection and slope stabilization.
7. **Component 2: Improving Resilience of Transport Connecting Infrastructure (US\$22.0 million, actual US\$3.2 million)** aimed to strengthen the resilience of Haiti's primary and secondary road networks against climate change and extreme weather events. The focus was on protecting critical points to prevent disruptions in the movement of people and goods. Key activities included: (i) protection and rehabilitation of existing bridges situated on selected segments; (ii) reinforcement of coastal protection, hydraulic protection for bridges, and slope stabilization works; (iii) a vulnerability study of the national primary and secondary road network and the identification of critical points (which would be used to identify and prioritize works to be financed under the component); (iv) a National Bridge Management Program; (v) a Roadmap to improve the resilience of the primary network by 2030; and (vi) a Planning and Bridge Assessment and Management System.
8. **Component 3: Promoting Sustainable Mobility Development (US\$3.0 million, actual US\$1.0 million)** aimed to strengthen the institutional capacity of the Ministry of Public Works, Transport and Communication (MTPTC), through technical assistance, training, and the provision of goods. It was designed to enhance: (i) institutional sustainability, through continued assistance to MTPTC on resilient transport and road asset management; and (ii) sustainable urban transport policies and management, through improved investment strategy and planning.
9. **Component 4: Contingent Emergency Response Component (US\$1.0 million, actual US\$30.3 million)** was included to provide immediate assistance during an eligible emergency due to the high risk of a catastrophic events in Haiti. This component was triggered after damage from the earthquake on August 14, 2021.
10. **Component 5: Project Management (US\$4.0 million, actual US\$6.0 million)** to support the MTPTC and its Central Execution Unit (Unité Centrale d'Execution – UCE) through the provision of goods, consultants' services, training and operating costs. It financed key project staff, operation costs, and equipment for the project Implementation Unit (PIU), and provided support for social and environmental safeguards, identification and mitigation of gender disparities, and citizens engagement (CE).

B. SIGNIFICANT CHANGES DURING IMPLEMENTATION

Revised PDOs and Outcome Targets

11. **The project's PDO was revised in 2022 through a second Additional Financing (AF2) to account for a CERC activation response.** The new PDO was revised as follows: (a) increase all-weather road access in selected sub-regions (*unchanged*); (b) improve the resilience of selected segments of the road network (*unchanged*); and (c) provide an immediate and effective response to an eligible crisis or emergency (*new*).

Revised PDO Indicators

12. **An additional PDO indicator was included to address the CERC activities related to earthquake response efforts:** "People with restored access to the road network (Number)" was introduced with an end target of 407,000 people.

Revised Components



13. **Component 1 was modified to include subcomponent 1.3 through the first Additional Financing (AF1) in 2020.** This subcomponent incorporated activities² from the Haiti Center and Artibonite Regional Development Project (BCA, P133352). This integration unified similar efforts under both projects to enhance resilience and access to all-weather roads, supporting portfolio consolidation in Haiti. The Results Framework (RF) was revised to reflect the new activities.
14. **Component 4 was revised in the AF2 in 2022 to reflect the activities financed under the emergency response.** Additionally, AF2 was used to replenish the financing for Components 1 and 2 (category 1), through the Crisis Response Window, that had been reallocated to the CERC component to finance the emergency response.
15. **Component 1 was modified through the third restructuring (AF3) in May 2025,** by removing the following project activities: one market, one maintenance center, and two bridges; cancelling its respective funds and revising relevant indicators.
16. Table 2 summarizes actual estimated costs at appraisal and total expenditures related to each component.

Table 2: Project Components and cost at appraisal and at closing

Component	Estimated cost at appraisal (US\$ M)	AF1 (2020)	AF2 (2022)	3rd Restructuring (Cancellation)	Revised Estimated cost	Actual disbursed at closing (US\$ M) ³
1	45.0	30	0	0	75	90
2	22.0	0	0	0	22	3.2
3	3.0	1	0	-2.9	1.2	1
4	1.0	-1	30	0	30	30.3
5	4.0	3	0		7	6
Total	75.0	33	30	2.9	135.2	130.6

Other Changes

17. The Additional Financings and Restructurings over the life of the project included:

Table 3. Summary of Restructurings Changes

Restructuring	Date Approved	Effective	Grant	Funding	Revised Closing Date	Main changes
AF-1	June 20, 2020	August 7, 2020	D669-HT	SDR 24.2 million (US\$33 million)	June 28, 2024	- Expand the scope: new Subcomponent 1.3 - Reallocation of funds - Extend closing date - Revise RF
AF-2	March 17, 2022	June 15, 2022	D981-HT	SDR 21.6 million (US\$30 million)	May 30, 2025	- Reallocation of funds - Extend closing date - Revise RF
Restructuring (Level II)	May 30, 2025			Cancel SDR 2.2 million (US\$2.9 million)		- Revise RF - Cancellation

² These activities includes: (i) construction of four climate-resilient bridges, (ii) targeted improvements on key roads such as culvert installation, slope stabilization, and maintenance or repair of 80 km of roads, (iii) building a culvert on River Bretelle, (iv) construction or rehabilitation of two road maintenance centers, and (v) training for 200 community members in rural road maintenance, (vi) building or rehabilitating four local markets and the Saint-Michel regional market, (vii) developing climate-informed urban plans for Saint-Raphaël and Saint-Michel, and (viii) creating a regional development dashboard.

³ Component 1 reports a higher amount than component 2 due to a shortcomings in Financial management reporting, see note in Annex 3.



18. **Implementation arrangements.** AF1 revised implementation arrangements to include the Unité Technique d'Exécution (UTE) of the Ministry of Economy and Finance (MEF) as an implementing partner and the Executive Secretariat of the Inter-Ministerial Committee for Territorial Development (CIAT-es) as a technical partner. UCE-MTPTC continued to oversee overall coordination and original activities, while UTE-MEF continued its responsibility for: (i) constructing or rehabilitating four markets (Fonds Bruns, Domond, Nan Poste, and Saint-Raphaël); (ii) constructing the Saint-Michel regional market; (iii) developing climate-informed urban plans for Saint-Raphaël and Saint-Michel; and (iv) creating a dashboard tool to track development indicators and investments at the regional level.
19. **Closing date extension.** The project closing date was extended twice, for a total duration of 23 months. AF1 provided a 12-month extension, changing the deadline from June 30, 2023, to June 28, 2024. AF2 further extended the closing date by 11 months, resulting in a new final deadline of May 30, 2025.
20. **Reallocation between categories.** AF1 reallocated SDR 600,000 from Category 2, emergency expenditures, to Category 1 for the provision of technical assistance, and AF2 reallocated SDR 21,600,000 million from Category 1 to Category 2 to finance earthquake response support.
21. **Cancellation of funds.** On May 20, 2025, the GoH requested cancellation of undisbursed grant balances totaling SDR 2,155,561.06 (US\$2,934,184.07), which was processed in a third restructuring on May 28, 2025. This action cancelled funds from the three Grants (IDA-D323-HT, IDA-D669-HT, and IDA-D981-HT) and updated select RF indicators accordingly.
22. **Intermediate indicators.** Through its restructurings, new intermediate outcome indicators were introduced, and some original indicators were revised to ensure a more accurate representation of project activities. AF1 introduced eight new indicators and changed the end targets for two indicators. AF2 introduced two new intermediate indicators. The third restructuring changed the end targets for three indicators. Further details are in Annex 1.

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

23. **In February 2020, the project increased its scope by absorbing activities from the BCA project.** As results of implementation constraints, the BCA project was restructured leading to a reduction in scope, with remaining activities under implementation transferred to the Project prior to August 31, 2020, BCA's closing date. This transfer, rather than extending the BCA closing date, facilitated portfolio consolidation, and allowed additional time for completion of activities under the project. Similarly, towards the end of the project implementation period, in May 2025, the execution of some planned works under Component 1 was unfeasible due to elevated security risks in the BCA area. These activities were transferred under AF3 to the Resilient Urban Transport and Accessibility Project (RUTAP, P177210) to ensure its completion.
24. **On August 23, 2021, the government formally requested activation of the CERC to facilitate post-earthquake emergency response efforts, reallocating US\$30 million to the CERC and expanding the project scope.** The August 14, 2021, earthquake damaged over 850km of roads in three southern departments, isolating more than 450,000 people and causing up to US\$160 million in transport sector losses. US\$30 million was reallocated from Components 1 and 2 to the CERC for emergency response. The WB approved this activation on September 21, 2021, with the following objectives: (i) restore accessibility and rural connectivity through the repair and clearance of critical road segments; (ii) reestablish access to Grand'Anse via the construction of an emergency bridge in Jeremie; (iii) support building assessment activities led by the Technical Building Office (Bureau Technique du Bâtiment, BTB) of the MTPTC; and (iv) assist in the rehabilitation of essential infrastructure, including irrigation canals and water supply systems, in the affected regions.
25. **All restructurings were aligned with the original TOC and the original outcomes.** While the first two restructurings significantly increased the overall project scope, all activities and changes were in line with the original TOC. Aside from adding a new PDO indicator to better reflect the expanded scope, intermediate outcomes were revised to reflect



the expanded scope of AF1, the inclusion of CERC activities in AF2, and the revisions in component 1 and partial fund cancellation under the third restructuring.

II. OUTCOME

A. RELEVANCE OF PDO

Assessment of Relevance of PDOs and Rating

26. The relevance of the PDO is rated High. At approval the project directly contributed to CPF FY16-19, in the achievement of its Pillars 1 “Inclusive Growth” by improving infrastructure in rural areas and its Pillar 3 “Resilience” by reducing Haiti’s vulnerability to natural disasters and climate shocks. Furthermore, the project was aligned with the WB’s global priorities on climate change and gender, supporting targets under the *WB Climate Action Plan 2016-2020* and the *Gender Strategy 2016 – 2023*, which introduced targets of 28 percent climate-related financing and closing gender gaps as core development objectives. At closing, the PDO remained aligned with the WB’s CPF for Haiti FY25-FY29 (Report No: 181213-HT). Specifically, the project advanced the CPF’s pillar of “Building Resilience and Preserving Human Capital” by investing in climate-resilient rural infrastructure and improving road connectivity, which facilitates access to essential services such as health and education for vulnerable populations. The Project also contributed to the pillar of “Strengthening Economic Governance and Creating Job Opportunities” by enabling greater market access and supporting local employment through infrastructure works. Additionally, the project reinforced the CPF’s focus on “Institutional Strengthening” by enhancing the capacity of the MTPTC in disaster preparedness and infrastructure management. These targeted interventions collectively supported the Government’s Action Plan 2017-2020 to improve transport connectivity and its rural road network in Haiti’s most underserved regions.

B. ACHIEVEMENT OF PDOs (EFFICACY)

Assessment of Achievement of Each Objective/Outcome

27. To assess the project’s efficacy, the PDO outcomes indicators are summarized in Table 4:

Table 4. PDO outcomes indicators at Project Close versus End Targets

PDO and Indicator name	Baseline	End Target	Actual
PDO (a): Increase all-weather road access in selected sub-regions			
“Share of rural population in selected sub-regions with access within 2 km of an all-weather road (percentage)”	36	55	63
PDO (b): Improve the resilience of selected segments of the road network			
“Total population living in areas serviced by connecting roads upgraded to a climate resilient standard (number)”	0	700,000	902,267
PDO (c): Provide an immediate and effective response to an eligible crisis or emergency			
“People with restored access to the road network (Number)”	0	407,000	422,337

PDO (a): Increase all-weather road access in selected sub-regions.

28. Outcome Indicator: “Share of rural population in selected sub-regions with access within 2 km of an all-weather road (percentage)”, which had a target of 55 percent, was successfully achieved. Physical infrastructure investments were robust and exceeded planned outputs, directly supporting improved access. The project rehabilitated 554 km of roads (115 percent of the target), including 499 km of rural roads (116 percent of the target), restoring access for over 900,000 people. These works were concentrated in the Grand Sud and Boucle Centre Artibonite regions, but also extended to departmental, secondary, and national networks. The interventions were strategically distributed, with nearly 80 percent of works on communal roads, ensuring that the benefits reached the most vulnerable and remote populations. Complementary facilities such as bus stops, lighting, and safety structures further enhanced the utility and safety of the improved road network. These efforts led to substantial improvements in the Rural Accessibility Index (RAI), with 63 percent of rural population in selected sub-regions, now living within 2 km of an all-weather road.



29. **The interventions also enhanced access to essential services and markets, with over 720,000 people (target: 660,000) able to reach regional markets within 120 minutes and more than 326,000 women (target: 320,000) gaining timely access to health facilities.** These results reflect the project's gender-responsive design and its focus on linking rural populations to economic and social opportunities. Beneficiary surveys reinforce these findings: 97 percent of respondents highlighted the importance of the road network for community mobility, 75 percent for commercial exchange, and 39 percent for access to basic services. The project's adaptability, including additional financing and integration of activities from other regions, further expanded its impact and resilience, as evidenced by both quantitative results and positive beneficiary feedback documented by the client evaluation reports.
30. **The establishment of mobility plans and the updating of the National RAI for all departments provide a solid foundation for future investments and policy development, directly reinforcing the achievement of PDO (a).** These mobility plans, developed through community consultation and integrating climate resilience and gender considerations, help identify and prioritize local needs for road access. Meanwhile, the updated RAI offers comprehensive, up-to-date data on rural connectivity across the country, enabling policymakers to target investments where they are most needed and to monitor progress effectively. Together, these tools ensure that future interventions are strategic, evidence-based, and sustainable, supporting ongoing improvements in all-weather road access in selected sub-regions.
31. **Achievement of PDO (a) is rated High,** with clear evidence of transformative impact on rural accessibility. The quantitative and qualitative results demonstrate that the project not only met but exceeded its objectives for increasing all-weather road access in selected sub-regions. The improvements have led to greater social inclusion, economic opportunity, and resilience for Haiti's rural communities.

PDO (b): Improve the resilience of selected segments of the road network

32. **Outcome Indicator: "Total population living in areas serviced by connecting roads upgraded to a climate resilient standard (number)", which had a target of 700,000 people, was successfully achieved.** The project substantially improved the resilience of selected segments of the road network by rehabilitating and upgrading critical road sections and bridges to climate-resilient standards, implementing robust drainage and erosion control measures, and developing a functional bridge management system within the MTPTC. Eight critical bridges and 124 critical points/segments were completed. These interventions have directly contributed to stabilizing key transport corridors, reducing interruptions in the movement of people and goods during extreme weather events, and making approximately 80 km of roads reliably passable year-round. Beneficiary surveys reinforce these achievements, with 82 percent of respondents reporting improved preparedness for natural disasters and 87 percent noting fewer access disruptions during the rainy season, underscoring the tangible impact of the project on community resilience. These interventions ensured that over 900,000 people now benefit from modernized, resilient roads—far exceeding the original target—and that key crossing points remain passable during adverse weather and natural disasters.
33. **Institutional strengthening was also a notable outcome,** with the development and operationalization of a Bridge Management System within MTPTC. This system enhanced the government's ability to monitor, maintain, and plan for resilient infrastructure, laying the groundwork for sustained improvements beyond the project's lifespan. Additionally, several studies were completed including urban mobility and climate resilience in Port-au-Prince and Cap-Haitien that support institutional strengthening in urban transport and climate resilience management and planning. The tools associated with those studies were not completed before the closing data and its development is transferred to RUTAP. This does not undermine the achievement of the institutional strengthening objectives.
34. **Achievement of PDO (b) is rated High.** The combination of robust infrastructure works, positive beneficiary feedback, and strengthened institutional capacity has significantly enhanced Haiti's ability to withstand and recover from climate and disaster-related shocks.



PDO (c): Provide an immediate and effective response to an eligible crisis or emergency

35. **Outcome Indicator: “People with restored access to the road network (Number)”, which had a target of 407,000, was successfully achieved.** The project effectively achieved this objective by activating its CERC following the devastating 7.2 magnitude earthquake in Haiti in August 2021. This rapid response was enabled by reallocating US\$30 million to CERC, which funded urgent interventions such as repairing and clearing critical road segments, constructing a temporary bridge in Jérémie to restore connectivity with Grand’Anse, supporting building assessments, and rehabilitating essential infrastructure like irrigation canals and water systems. The project not only met but exceeded its targets, restoring road access for over 422,337 people, repairing eight critical bridges, and treating 90 critical points (target: 80). Beneficiary feedback confirmed that over 81 percent of respondents felt their communities were better prepared for future disasters, underscoring the effectiveness and impact of the emergency response measures.
36. **Achievement of PDO (c) is rated High.**

Justification of Overall Efficacy Rating

37. **The Overall Project's efficacy in achieving its PDOs is rated High.** The project fully achieved its objectives, and all three PDO targets were met or surpassed.

C. EFFICIENCY

Assessment of Efficiency and Rating

38. **The efficiency of critical spot improvement, bridge repairs and other rural road improvements completed under the project are High.** The project completed improvements in 550 km of rural roads, and 222 critical spots (that include among other box culverts, slope stabilization and embankments protection) and rehabilitation and improvement of 16 bridges with a total cost of US\$110 million. The average per unit cost was US\$159,000 per km of rural roads, US\$78,000 per critical spot and US\$ 863,000 per bridge intervened. The rehabilitation cost of rural roads is lower than the US\$200,000 /km assumed at appraisal without accounting for the price increase and inflation since appraisal and below the average of actual costs (US\$165,000/km) found under the BCA project closed in 2021.
39. **While there was not an economic evaluation done at appraisal due to the framework approach designed, the economic analysis at closing demonstrates the positive economic return of project investment using baseline climate and climate change projections (Table 5).** The main Project benefits included are a reduction in climate impacts (fluvial, pluvial and coastal floods) on asset damage, lower road user costs through less travel disruption, decreasing the frequency of road crashes, and economic benefits of greenhouse gas reduction (Annex 4).

Table 5. Economic indicators at Project Close

	Historical climate	Under climate change (SSP 5-85)
NPV (in US\$ million)	20.9	32.7
EIRR (in percent)	15.3	17.1
BCR	1.21	1.33

40. **The project experienced smooth implementation, achieving its outcomes in its timeframe.** Despite all events and external factors affecting the country, the project was implemented at a steady pace with disbursement following the original and revised estimations with US\$18 million on average annual disbursement and a peak of US\$64 million disbursed in FY22. The PIU had no staff-turn over, there were no significant cost over-runs and procurement didn't experience significant delays that impacted project implement. The 23-month extension was not a result of delay but to accommodate completion timeframes for new activities added to its two additional financing.
41. **Therefore, the project's efficiency is rated as High,** reflecting effective use of resources, strong achievement of objectives relative to costs and timeframe, and adaptive management in response to unforeseen challenges.



D. JUSTIFICATION OF OVERALL OUTCOME RATING

42. **The overall outcome rating for the project is Highly Satisfactory**, given the project's substantial achievement of its objectives, including significant improvements in rural accessibility, daily mobility, and access to essential services. High beneficiary satisfaction and strong implementation performance further support this positive assessment. This rating is consistent with a High rating for Relevance of PDO, High rating for both Efficacy and Efficiency.

Table 6. Overall Outcome Rating

Rating Dimension	Rating
Relevance of PDO	High
Overall efficacy	
<i>Outcome (a)</i>	<i>High</i>
<i>Outcome (b)</i>	<i>High</i>
<i>Outcome (c)</i>	<i>High</i>
Efficiency	High
Outcome rating	Highly Satisfactory

E. OTHER OUTCOMES AND IMPACTS (IF ANY)

43. **Gender.** The project significantly improved gender outcomes by increasing women's access to health services and economic opportunities. Pilot local mobility plans in three micro-regions incorporated women's safety and mobility needs, identifying specific interventions to enhance access to health services and reduce risks, including gender-based violence (GBV), which had previously constrained women's mobility. Post-completion surveys of over 3,200 women showed that 88 percent reported better access to basic services, and 95 percent felt safer during their trips. The project also promoted female participation in the transport sector, with 75 percent road maintenance trainees being women, far exceeding the target. Improved market access and infrastructure boosted economic prospects for traders, most of whom were women: 74 percent of survey respondents reported increased market revenues.
44. **Road safety.** The project improved road safety across target regions. It achieved its goal of integrating road safety measures into 100 percent of road designs under intervention. Post-completion impact assessments confirmed this success, with 85 percent of respondents confirming a reduction of road accidents on project roads.
45. **Private sector strengthening.** The project fostered a more conducive environment for private sector growth. It directly supported the agrobusiness sector by constructing modern market facilities and improving connection between key production areas and markets. Additionally, it provided specific training, skills development and direct economic opportunities for construction firms, small and medium enterprises (SMEs), and local communities.
46. **Institutional strengthening.** Institutional capacity of Haiti's MTPTC and UCE was significantly enhanced through targeted training and system upgrades. Achievements included strengthened project management, fiduciary systems, environmental and social safeguards, infrastructure management and disaster response. Activities included: training and licensing for MS Project and AutoCAD; RAI workshops; road maintenance support; and disaster assessment training for 390 engineers. While some systems, e.g., the climate resilience roadmap and traffic monitoring tools were not fully implemented, adaptive management and robust structures improved effectiveness and sustainability.
47. **Poverty reduction and shared prosperity.** The project contributed meaningfully to poverty reduction and shared prosperity in rural Haiti by improving access, creating jobs and promoting inclusion. Economic opportunities grew through improved circulation of agricultural goods, better access to farmland, and upgraded local markets: 85 percent of surveyed respondents reported better livelihoods. Labor-intensive roadwork generated 153,960 workdays for 10,264 rural residents, of which 1,096 were women. Gender-sensitive design and robust community engagement led to high satisfaction and willingness to participate in future initiatives. Overall, key development barriers were addressed, improving living conditions for Haiti's most vulnerable populations.



III. KEY FACTORS AFFECTED IMPLEMENTATION AND OUTCOME

A. KEY FACTORS DURING PREPARATION

48. **Hurricane Matthew's devastating impacts were a key factor during Project preparation.** The storm struck southwestern Haiti on October 4, 2016, as the strongest hurricane to hit the country since 1964. It affected 1.1 million people, caused 674 fatalities, and inflicted damage equal to 32 percent of the GDP. Transport infrastructure was severely impacted, with critical bridges and roads destroyed, isolating 1.2 million people from emergency aid. These vulnerabilities shaped project design, prompting a resilience-focused approach, including data-driven climate vulnerability mapping for project selection, capacity building in resilience planning, and targeted spot improvements.
49. **The project areas were selected in alignment to the government strategy to close rural access gaps and to foster synergies across the WB's portfolio.** RAI was used as the main selection criteria and as core indicator for tracking progress and outcomes. The first RAI national survey, financed by the BCA, gained institutional momentum, becoming the government's tool for guiding infrastructure strategies. Coordination with other Bank-financed operations—such as the Improving Maternal and Child Health Project (P123706), the Providing and Education of Quality in Haiti (P155191) and the Emergency Resilient Agriculture for Food Security Project (P177072)—maximized development impacts by improving access to services intervened by other projects in health, education and agriculture.
50. **The CE strategy embedded in the project design enabled sustained performance under highly challenging national circumstances.** It included a range of measures to foster citizen involvement, including: (i) adopting a participatory methodology for investment development; (ii) engaging local university students and organizations in data collection and analysis; (iii) implementing a comprehensive CE plan that facilitated two-way communication and closed feedback loops—using geolocation technologies to gather insights on aspects public transport quality, road safety, and women's security; and (iv) establishing detailed grievance redress procedures, which clearly defined roles for government officials, instituting mechanisms for complainant feedback, and monitoring of grievance resolutions progress.

B. KEY FACTORS DURING IMPLEMENTATION

(a) Factors subject to control of government and/or implementing entities

51. **Some financial management shortcomings affected timely reporting and internal controls.** Moderate deficiencies in financial management, including delays in preparing and submitting operational budgets, interim financial reports, and audit documents, jeopardized the project's ability to provide reliable information for management and monitoring. Issues such as outdated accounting records, lack of electronic backup systems, and insufficient inventory management highlighted the need for corrective actions to strengthen internal controls.
52. **Staff turnover at UTE and its main implementing partner led to delays in procuring some activities.** The project faced minor and unresolved issues in launching procurement for the regional market, the maintenance center and two bridges due to shortcomings in the UTE and the United Nations Office for Project Services, its key implementing agencies. Under AF1, UTE became an implementing partner for additional activities in the Artibonite region, while UCE remained responsible for overall Project implementation. UTE, housed within the ministry of finance, faced staff shortages and leadership turnover. Together with high security risk in the area, the commencement of the road maintenance center, regional market and two bridges and led to the third restructuring to cancel those activities.

(b) Factors subject to World Bank control

53. **Effective Supervision was essential for Project Success.** The WB Task Team and the experienced UCE ensured smooth coordination, technical exchanges, and operational guidance. Their approach allowed fast issue identification and timely adaptation during crises, such as the 2021 earthquake, ensuring efficient resource use and continuity, even amid Haiti's instability. Regular field visits, prompt and candid reporting, and robust monitoring supported accurate



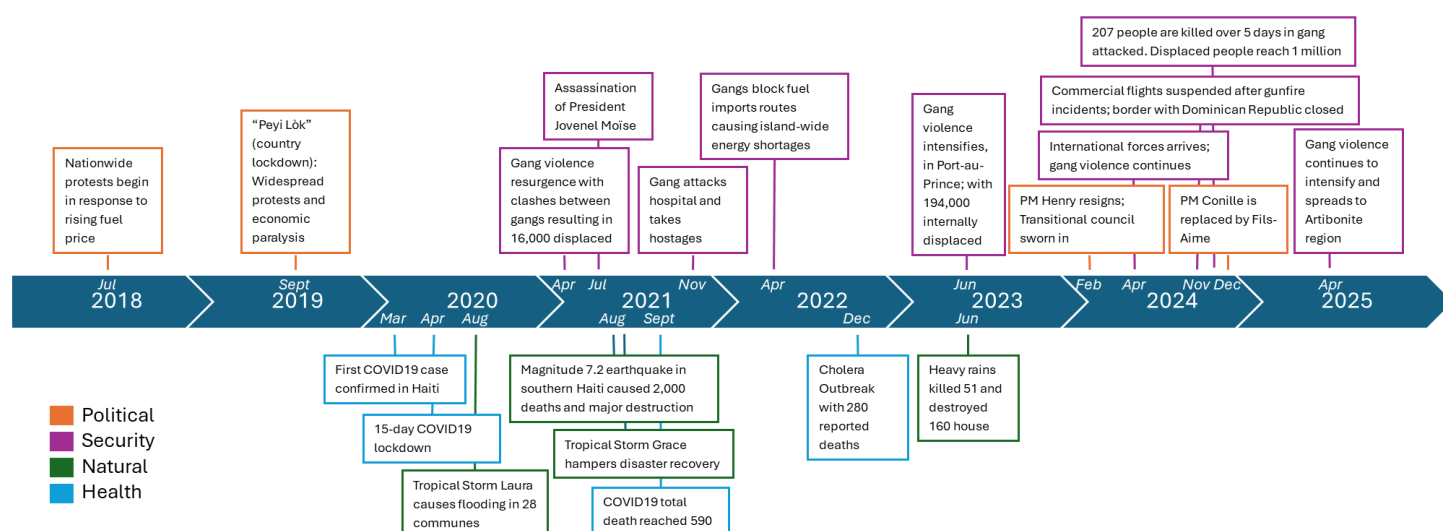
progress tracking and smart decision-making. Unfinished activities were successfully shifted to other projects, safeguarding key results despite budget and security challenges.

54. **Mobilization of trust fund resources enabled effective supervision while advancing knowledge and innovation.** During implementation, the project secured five trust funds totaling US\$1.7 million, which enabled effective oversight and advance critical areas such as disaster risk reduction planning for transport infrastructure, integration of nature-based solutions, analysis of barriers to women's and girl's access to education and health and delving into urban mobility and private sector involvement in urban transport.

(c) Factors outside the control of government and/or implementing entities

55. **Political instability, COVID19, and rising gang violence disrupted implementation.** The assassination of President Jovenel Moïse in July 2021, widespread protests and unrest, and "Peyi Lòk" lockdowns halted economic activity and weakened institutions (Figure 2). Gang violence and kidnappings, especially in the Centre and Artibonite Departments, made field operations hazardous and delayed Project execution. Additionally, the COVID19 pandemic further challenged implementation during 2020. To overcome these challenges, the project recruited local technical staff for on-site monitoring, restructured activities, and transferred unfinished works to other WB-financed projects.
56. **Natural disasters compounded the difficulties, prompting emergency responses and project restructuring to address urgent needs.** On August 14, 2021, a magnitude 7.2 earthquake struck southern Haiti, causing over 2,000 deaths, major destruction, and isolating more than 450,000 people, with damages to over 850 km of road network and losses estimated at US\$160 million. Just three days later, Tropical Storm Grace brought flash floods and landslides, further hampering rescue and recovery efforts. Another earthquake of magnitude 5.3 hit the Nippes region on January 24, 2022, damaging homes already affected by the previous disaster. These consecutive natural disasters (Figure 2), alongside political, security, and COVID-19 crises, worsened the humanitarian and socio-economic situation.

Figure 2. Major Events in Haiti (2018-2025)



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

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

M&E Design

57. **At appraisal, the M&E framework was robust, with clear objectives, comprehensive indicators, and explicit responsibilities.** A well-structured TOC linked activities to immediate outputs, intermediate outcomes, and long-term



impacts, including improved accessibility, economic opportunity, and climate resilience. Gender and CE indicators, along with a multi-criteria approach for selecting investment areas, ensured targeted and inclusive interventions. Outcome indicators—including the rural population with access to all-weather roads, total population served by climate-resilient roads, and people with restored road access—were specific, measurable, and directly aligned with the PDOs, providing a solid basis for tracking progress and assessing impact. Intermediate indicators—such as kilometers of roads rehabilitated, number of critical bridges built, territorial mobility plans developed, and citizen satisfaction with investment designs—offered granular data for monitoring component-level progress. The inclusion of social and environmental safeguards and the development of specialized tools (dashboard, bridge management system) further strengthened the design. The indicators were adequate although some could have had more clarity on the definition and methodology, these were revised through AF1 to enable teams to report more effectively and consistently.

M&E Implementation

58. **Implementation was consistent, with regular data collection and field missions, and proactive to project's impacts.**

Regular semi-annual reports and field missions enabled close monitoring, even in hard-to-reach areas. From 2018 to 2025, the project maintained consistent reporting via Implementation and Procurement Follow-up Tables, Gantt charts, dashboards, Aide Memoires (AMs), and the Implementation Status and Results Reports (ISRs) to keep stakeholders updated. Despite security, logistical, and data management challenges, including incomplete electronic archiving, these issues did not hinder effective monitoring. The project adapted to security and logistical challenges by recruiting local staff and leveraging mixed methods (quantitative surveys, qualitative interviews, focus groups). Financial audits and a grievance redress mechanism (GRM) further promoted transparency and accountability. With most activities concretely identify through implementation rather than at appraisal, the project proactively used its restructuring to revise definitions, provide detailed methodologies for data collection, and revised intermediate and final targets, demonstrating the project's adaptability and responsiveness to external shocks. Institutional arrangements for M&E fostered collaboration and accountability between UCE-MTPTC and UTE-MEF, with clear responsibilities and reporting procedures detailed in the project implementation manual.

M&E Utilization

59. **M&E findings were used to inform project restructurings (e.g., CERC activation after the earthquake), resource reallocations, and future planning.** M&E findings were actively used to inform project adjustments, strategic shifts, and future recommendations. M&E data facilitated prioritization of actions, improved budget absorption, and informed recommendations for institutionalizing participatory monitoring, integrating climate and gender dimensions, and strengthening road information systems. The impact study provided actionable recommendations and highlighted significant positive outcomes (improved accessibility, resilience, beneficiary satisfaction).

Justification of Overall Rating of Quality of M&E

60. **The overall rating of quality of Project's M&E system is Substantial**—well-designed, effectively implemented, and well-used for project management and learning. The system's adaptability and comprehensive approach were notable strengths, however minor design shortcomings, incomplete tool utilization and archiving issues prevented a "High" rating. Continued improvements in these areas could further enhance M&E quality in future projects.

B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE

61. **Overall Safeguard performance at Project closing was rated Satisfactory.** At appraisal, the project was classified "Category B" with "Moderate" risk rating, which remained consistent throughout the project's lifetime, as activities were small to medium in scale and posed no significant or irreversible impacts. Indeed, the rating reflects limited land acquisition, potential economic displacement, and the need to address vulnerable groups; however, no large-scale or irreversible social impacts were expected. The project triggered several safeguard policies, including Environmental



Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), Physical Cultural Resources (OP/BP 4.11) and Involuntary Resettlement (OP/BP 4.12), with mitigation measures detailed in an Environmental and Social Management Framework, site-specific Environmental and Social Management Plans, a Resettlement Policy Framework, and site-specific Resettlement Action Plans, with regular consultation and disclosure. Risk was addressed through an Environmental and Social Management Framework and site-specific plans, with compliance rated **“Satisfactory” (S)** throughout the lifespan. Moreover, social risks—e.g., labor influx and GBV—were effectively managed through participatory planning, compensation protocols, and robust GRM, with 100 percent of registered grievances addressed. A significant incident resulting in a fatality occurred in October 2021 when a truck engaged in loading operations experienced brake failure and struck a nearby child. Following the incident, the client implemented a corrective action plan, which was executed satisfactorily. Environmental compliance was rated **“S”** throughout implementation, with UCE-MTPTC demonstrating strong capacity in environmental and social risk management, including diligent monitoring, reporting, and adaptation to challenges such as COVID-19 and natural disasters. No major environmental incidents or non-compliance issues were reported, and all required safeguards instruments were prepared, disclosed, and implemented effectively. Social performance was rated **“S” throughout implementation**, and the social risk rating remained **“Moderate”** for most of the project, rising to **“Substantial”** only at closure due to external factors such as political instability and security constraints, rather than project-specific shortcomings. Overall, the project maintained high standards of social safeguard compliance and stakeholder engagement despite operating in a challenging context.

62. **At closing, the project’s FM and Procurement performance were rated “Moderately Unsatisfactory” (MU) and “Satisfactory” respectively.** The project maintained strong fiduciary compliance in both procurement and financial management throughout its lifetime, despite operating in a highly challenging environment. Procurement was consistently rated **“MS”** for most of the lifespan, with an upgrade to **“S”** in the final stages, reflecting the successful completion of over 100 procurement activities totaling more than US\$77 million. While some procurement processes faced delays and a limited number of valid bids, these were mitigated by experienced staff and close Bank support, and all major contracts were completed, except for the construction of the St-Michel center. Financial management (FM) was also rated **“MS”** for most of the project, with timely submission of Interim Financial Reports (IFRs) and audit reports, and no ineligible expenditures reported. However, FM ratings were temporarily downgraded to **“MU”** in late 2024 and early 2025 due to unresolved issues such as delays in revising procedures manuals, incomplete asset inventories, and missing bank account reconciliations. These issues were exacerbated by staff turnover and security incidents, but UCE took steps to address recommendations and restore compliance including: (i) reporting FM issues in the AM and MAL, (ii) establishing an action plan to upgrade the ratings as described in the different AM and (iii) holding regular meetings between the Bank FM specialist and UCE FM specialist to monitor progress and propose recommendations. Overall, fiduciary risk was rated **“Substantial”** at approval, reduced to **“Moderate”** during implementation, and briefly returned to **“High”** at closure due to late-stage audit delays and persistent internal control weaknesses. Despite these challenges, the project demonstrated resilience and adaptability, ensuring the integrity of fiduciary processes.

C. BANK PERFORMANCE

Quality at Entry

63. **The project’s design leveraged extensive lessons from previous Bank-financed transport operations in Haiti to maximize resilience, connectivity, and resource efficiency.** Drawing on a foundation established by projects like the Transport and Territorial Development Project (P095523), the Emergency Bridge Reconstruction and Vulnerability Reduction Project (P114292) and the other transport projects in Haiti, it incorporated proven strategies for reducing vulnerability and improving connectivity amid resource and coordination challenges. Key technical assistance, including surveys, road assessments, and the National Bridge Inventory, has shaped the project’s targeted spot improvements, robust asset management, and technical support to address vulnerabilities.



64. **The project was designed as part of a continued engagement in Haiti's transport sector, with a vision beyond project closing.** Building on the above-mentioned transport operations, it also laid the foundation for future support in critical areas such as urban mobility and private sector participation in transport services, and bridge management. Studies financed under Component 3 informed follow-up operations such as the RUTAP and the Resilient Corridor Project (P510851), ensuring continuity and long-term impact.
65. **Strong strategic alignment and comprehensive design enabled an effective project launch.** The project's objectives closely matched Haiti's development priorities, and aligned with the CPF and sectoral strategies, what ensured high relevance and buy-in. The design integrated multiple components—including road rehabilitation, resilience-building, sustainable mobility, emergency response, and project management—that addressed both immediate and long-term needs. By incorporating a CERC from the start, the project was able to respond rapidly to unforeseen disasters such as the 2021 earthquake, demonstrating foresight and adaptability.
66. **Rigorous technical, social, and risk considerations enhanced project robustness.** Extensive technical and social analyses—drawing on sector diagnostics, prior lessons, and stakeholder consultations—strengthened the project framework. The integration of gender and climate considerations through targeted indicators and activities promoted inclusivity and resilience. Environmental and social safeguards were properly addressed with appropriate classifications and robust frameworks, while fiduciary responsibilities were assigned to capable entities and supported by clear financial management and procurement strategies. The design further identified and planned for substantial risks, with mitigation strategies such as a flexible design and emergency components, reinforcing the project's resilience and likelihood of success.

Quality of Supervision

67. **Close technical implementation support missions provided extensive technical guidance to the GoH and the PIUs.** The project benefitted from field presence of a multi-disciplinary team throughout implementation with few turnovers, enabling regular dialogue with the GoH and close supervision. Since approval in 2018, the WB and the GoH jointly carried out 13 official implementation support missions, both in-person and virtual, and a Mid-Term Review mission on November 2021, that helped identify and resolve bottlenecks and prepare three restructurings.
68. **Proactive and adaptive supervision enabled effective crisis response.** The Bank demonstrated adaptability and speed, notably activating the CERC and reallocating resources after the 2021 earthquake. The three restructurings addressed evolving needs, while regular supervision missions, tracked through ISRs, aide-memoires, and impact studies, ensured continuous engagement with the PIUs and key stakeholders. The Bank quickly introduced operational mitigation measures to ensure smooth implementation during crisis starting during the “peyi lock”, during the COVID-19 crisis and the most recent security crisis. It included (i) provision of equipment to PIUs for home-based working (e.g., Internet access, batteries, and laptops); (ii) deployment of individual supervisors to strengthen field PIU's capacity; (iii) reorganization of work sites to promote social distancing and mechanized works wherever possible; and (iv) the expansion of work schedules (night and day) to support appropriate social distancing practices.
69. **Supportive oversight addressed implementation and safeguard challenges.** The Bank provided technical and fiduciary support to tackle financial management and procurement delays, including hiring consultants and strengthening UCE capacity. It also reinforced the application of environmental and social safeguards through corrective action plans, CE and GRM. Lessons learned were integrated into restructurings and additional financing, especially for emergency response and local capacity development.

Justification of Overall Rating of Bank Performance

70. **On account of all above considerations, the overall rating for WB performance is Highly Satisfactory.** The project was well tailored to Haiti's context, drawing on lessons learned from similar operations and built in mitigation



measures for identified risks The WB has measured its involvement and the nature of its support as required by the emergency, expectations and difficulties of the context.

D. RISK TO DEVELOPMENT OUTCOME

71. **Inadequate road maintenance and delays in timely repairs have been identified as significant risks to the sustainability of outcomes, potentially undermining the long-term benefits of improved connectivity and resilience.** While community training on basic rural road maintenance has reached many beneficiaries, the overall system for routine and periodic maintenance remains under-resourced and vulnerable to disruptions from security issues, funding gaps, and institutional weaknesses. These shortcomings risk accelerating the deterioration of road assets, especially in Haiti's disaster-prone environment. Without robust maintenance mechanisms and rapid response capabilities, the gains in rural accessibility and resilience achieved may not be sustained, potentially leaving communities once again isolated and undermining broader development objectives.
72. **Persisting insecurity, gang control, and climate impacts pose significant risks to the development outcomes of the project.** The spread of gang activity into project areas may further disrupt mobility, block access to key infrastructure, and limit the safe movement of goods, people, and project teams. Additionally, Haiti's vulnerability to climate hazards frequently damages roads and bridges, isolates rural communities, and interrupts access to essential services. These combined risks are especially severe for the rural poor, women, and marginalized groups, who face greater barriers to markets, health care, and education and could undermine progress on rural connectivity and resilience, jeopardizing the project's ability to deliver inclusive and sustainable development benefits.
73. **The disrepair of health centers threatens to reverse the project's achievements in improving women's access to essential health services, undermining both health outcomes and gender equity.** The project has enabled more women, especially in rural areas, to benefit from maternal and reproductive health services. However, when facilities deteriorate, women face renewed barriers to care, including unsafe conditions, unreliable water and sanitation, and disrupted services such as antenatal care and screenings. This not only discourages service utilization but also risks reversing progress in reducing maternal and child mortality. Therefore, sustained investment in health care facilities is key to preserving the project's development gains and ensured improvements in women's health.

V. LESSONS AND RECOMMENDATIONS

74. **The project has demonstrated that rural connectivity and transport infrastructure resilience can be improved even amid political instability and gang violence, given targeted support and adaptive strategies.** Key lessons include: (i) prioritizing simple, low-impact investments with immediate benefits; (ii) maintaining contingency plans to ensure continuity during crises; (iii) adopting flexible frameworks to adjust to evolving conditions; and (iv) relying on experienced PIUs with low staff turnover and proven track records.
75. **Continued sector engagement allows for a programmatic vision beyond project closing, efficient implementation and high-quality project design.** Since reengaging with Haiti in 2004, the transport sector has been a cornerstone of the partnership between the World Bank and the Republic of Haiti, maintaining strong relationships with government stakeholders and other development partners. This Project was the sixth IDA transport Operation since 2004 allowing for continued engagement in the sector, proactively incorporating lessons learned, and designing project with a mid-term vision (para. 63 and 64). Implementation has equally benefited from this continued engagement as the UCE has implemented Bank-financed projects in the transport sector for over 18 years, becoming highly experienced in managing World Bank financed projects in the transport sector, with extensive knowledge of the Bank's fiduciary and safeguard procedures (para. 53). This highlights the benefits of long-term investment in local capacity and client engagement through a series of interventions to support a programmatic vision
76. **The framework approach enabled flexibility and responsiveness, allowing interventions adapted to local needs and evolving circumstances.** Priority regions and broad intervention types were identified during preparation, while the



specific locations and activities selection were finalized during implementation through a participatory process (para. 50). This approach ensured that investments were targeted where they would have the greatest impact and allowed adjustments for unforeseen events like natural disasters or shifting security conditions (para. 56). Community engagement fostered local ownership and facilitated timely identification of priority investments. The flexible framework approach also supported efficient resource allocation and sustained progress despite Haiti's volatile context, ultimately contributing to the sustainability and effectiveness of project outcomes (para 42).

77. **Close implementation support and supervision—backed by financial and human resources aligned with the project's scale and the complexity of implementation—are critical in Haiti's fragile, low-capacity context.** UCE adapted to political instability (para. 68) by establishing regional offices in Cap Haitien and in Cayes (the latter currently being implemented), maintaining low staff turnover, and ensuring close supervision through country-office-based staff, including the team lead. This has been critical and allowed for faster identification and effective resolution of fiduciary and safeguard issues (para. 61). Third-party monitoring, involving communities and local consultants, ensured effective oversight and engagement. A procurement strategy was also developed to involve SMEs rooted in the communities. Over the past 20 years, the PIU has also gradually built up a network of reliable regional SMEs, facilitating smoother execution and boosting local economic participation and resilience (para 45).
78. **Labor-intensive works (LIW) in transport projects have become a vehicle for social cohesion, job creation and income generation in vulnerable communities.** In Haiti, where lack of social cohesion and opportunities are primary drivers of conflict, instability and gang violence (para. 73), transport projects have contributed to address root causes by providing employment and fostering community engagement, which are crucial for promoting social stability (para. 47). While violence persists in some well-connected areas, as seen in Port-au-Prince, Haiti's situation differs from other Fragile, Conflict and Violence contexts such as the ones with active armed conflicts. Improving infrastructure has provided better economic opportunities (para. 29) and direct employment LIW, the project strengthened community resilience, reduced the appeal of gang involvement and promote social stability in Haiti.



ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS

A. RESULTS FRAMEWORK

PDO Indicators by Outcomes

Increase all-weather road access in selected sub-regions								
Indicator Name	Baseline		Closing Period (Original)		Closing Period (Current)		Actual Achieved at Completion	
	Result	Month/Year	Result	Month/Year	Result	Month/Year	Result	Month/Year
Share of rural population in selected sub-regions with access within 2 km to an all-weather road (Percentage)	36.00	Nov/2017			55.00	Jun/2024	63.00	May/2025
	Comments on achieving targets		This indicator is completed.					
Improve the resilience of selected segments of the road network.								
Indicator Name	Baseline		Closing Period (Original)		Closing Period (Current)		Actual Achieved at Completion	
	Result	Month/Year	Result	Month/Year	Result	Month/Year	Result	Month/Year
Total population living in areas serviced by connecting roads upgraded to a climate resilient standard (Number)	0.00	Feb/2018			700,000.00	Jun/2023	902,267.00	May/2025
	Comments on achieving targets		The indicator is achieved					
Provide an immediate and effective response to an eligible crisis or emergency								
Indicator Name	Baseline		Closing Period (Original)		Closing Period (Current)		Actual Achieved at Completion	
	Result	Month/Year	Result	Month/Year	Result	Month/Year	Result	Month/Year
People with restored access to the road network (Number)	0.00	Jan/2022			407,000.00	Dec/2022	422,337.00	May/2025
	Comments on achieving targets		This indicator is achieved					

Intermediate Indicators by Components



Enhancing Rural Connectivity								
Indicator Name	Baseline		Closing Period (Original)		Closing Period (Current)		Actual Achieved at Completion	
	Result	Month/Year	Result	Month/Year	Result	Month/Year	Result	Month/Year
Roads rehabilitated (Kilometers)	0.00	Nov/2017			480.00	Jun/2024	554	May/2025
	Comments on achieving targets		This indicator is achieved					
Roads rehabilitated - rural (Kilometers)	0.00				430.00		499.00	
	Comments on achieving targets		Indicator achieved					
Roads rehabilitated - non-rural (Kilometers)	0.00				50.00		55.00	
	Comments on achieving targets		Indicator achieved					
Number of territorial mobility plans developed, climate informed and incorporating women's security needs (Number)	0.00	Nov/2017			3.00	Dec/2021	3.00	May/2025
	Comments on achieving targets		Mobility plans for the three micro-regions have been completed					
Share of citizens who consider that design of investments subjected to consultation is responsive to their needs/views (%) (Percentage)	0.00	Feb/2018			70.00	Jun/2024	80.00	May/2025
	Comments on achieving targets		This indicator is achieved					
Of which women, to reflect the focus of consultations on gender (Percentage)	0.00				90.00		95.00	
	Comments on achieving targets		This sub-indicator is achieved					
Number of people who can access regional size markets within 120 minutes in select project areas (Number)	525,000.00	Nov/2017			660,000.00	Jun/2024	720,620.00	May/2025
	Comments on achieving targets		This indicator is achieved					
Number of women who can access health services with obstetrical facilities within 60 minutes in select project areas (Number)	255,500.00	Nov/2017			320,000.00	Jun/2024	327,000.00	May/2025
	Comments on achieving targets		This indicator is achieved					
	0.00	Mar/2020			4.00	Feb/2022	4.00	May/2025



Number of critical bridges built in the CAL region (Number)	Comments on achieving targets		This indicator is achieved					
Spot interventions to enhance all-weather and resilient connectivity in the selected sub-regions of the Center of Artibonite Loop Region (Number)	0.00	Mar/2020			5.00	Jun/2022	5	May/2025
	Comments on achieving targets		This indicator is achieved					
Number of Road Maintenance Centers build or rehabilitated in the selected sub-regions of the Center of Artibonite Loop Region (Number)	0.00	Mar/2020			1.00	May/2025	1.00	May/2025
	Comments on achieving targets		This indicator is achieved					
Number of people trained within selected communities on basic Rural Road Maintenance in the selected sub-regions of the Center of Artibonite Loop Region (disaggregated by gender) (Number)	0.00	Mar/2020			200.00	Dec/2022	166.00	May/2025
	Comments on achieving targets		This indicator is significantly achieved. Completion target is 83 percent of estimated at appraisal. The target at completion was substantial enough to support the project development outcomes as originally planned.					
Disaggregated by gender, in % of women (Percentage)	0.00				35.00		75.00	
	Comments on achieving targets		This sub-indicator was achieved					
Urban and rural markets rehabilitated/constructed in the selected sub regions of the Center of Artibonite Loop Region (Number)	0.00	Mar/2020			4	May/2025	4.00	May/2025
	Comments on achieving targets		This indicator is achieved					
Urban plans developed and consulted with Local officials and local stakeholders in the selected sub-regions of the Center of Artibonite Loop Region (Number)	0.00	Mar/2020			3.00	Jun/2023	4	May/2025
	Comments on achieving targets		This indicator is achieved					
Regional development dashboard with open data including spatial analysis encompassing risk and climate data developed with Local	No	Mar/2020			Yes	Jun/2024	Yes	May/2025
	Comments on achieving targets		This indicator is achieved					



officials and local stakeholders in the CAL Region (Yes/No)								
Grievances registered related to delivery of project benefits that are addressed (%) (Percentage)	0.00	Mar/2018			80.00	Jun/2024	100	May/2025
	Comments on achieving targets		100% of registered grievances addressed					
Improving Resilience of Transport Connecting Infrastructure								
Indicator Name	Baseline		Closing Period (Original)		Closing Period (Current)		Actual Achieved at Completion	
	Result	Month/Year	Result	Month/Year	Result	Month/Year	Result	Month/Year
Number of critical bridges rehabilitated or protected on the primary and secondary network (Number)	0.00	Nov/2017			8	May/2025	8.00	May/2025
	Comments on achieving targets		This indicator is achieved					
Number of critical spot/segments built or rehabilitated on the primary and secondary road network (Number)	0.00	Jan/2018			150.00	May/2025	124.00	May/2025
	Comments on achieving targets		This indicator is significantly achieved. Completion target is 83 percent of estimated at appraisal. The target at completion was substantial enough to support the project development outcomes as originally planned and reflects the complexity of target estimations in a framework design approach.					
Bridge Management System within MTPTC developed and functional (Yes/No)	No	Feb/2018			Yes	Jun/2024	Yes	May/2025
	Comments on achieving targets		Bridge Management System is installed and functional					
Promoting Sustainable Mobility Development								
Indicator Name	Baseline		Closing Period (Original)		Closing Period (Current)		Actual Achieved at Completion	
	Result	Month/Year	Result	Month/Year	Result	Month/Year	Result	Month/Year
Climate Resilient and Sustainable Mobility Roadmap prepared and associated monitoring tool developed (Yes/No)	No	Jan/2018			Yes	Jun/2023	No	May/2025
	Comments on achieving targets		This indicator is partially achieved with roadmaps completed. The indicator is marked as “NO” as the development of the tool is not completed due to technical complexity in procurement and institutional capacity to manage software development. While the procurement was completed by Project’s closing date, the implementation will be taken over by the RUTAP. The partial achievement does not affect the outcome as the studies provides substantial institutional capacity on resilient and sustainable mobility.					
Establishment of a road traffic database and monitoring tool (Yes/No)	No	Feb/2018			Yes	Jun/2024	No	May/2025
	Comments on achieving targets		This indicator is unmet due to ongoing security challenges that prevented safe data collection and implementation. While the procurement was finalized before Project’s closing date, the implementation of the activity has been transferred to the RUTAP project awaiting for security situation to improve.					



Road safety assessments/measures included as part of all technical design and feasibility studies (Yes/No)	No	Mar/2018			Yes	Jun/2024	Yes	May/2025
	Comments on achieving targets		The indicator is achieved					
Contingent Emergency Response								
Indicator Name	Baseline		Closing Period (Original)		Closing Period (Current)		Actual Achieved at Completion	
	Result	Month/Year	Result	Month/Year	Result	Month/Year	Result	Month/Year
Critical bridges repaired or reconstructed (Number)	0.00	Jan/2022			7.00	Dec/2022	8	May/2025
	Comments on achieving targets		This indicator is achieved					
Critical spots treated (Number)	0.00	Aug/2021			80.00	Jun/2022	90	May/2025
	Comments on achieving targets		This indicator is achieved					



B. KEY OUTPUTS

Increase all-weather road access in selected sub-regions	
PDO Indicators	2. Share of rural population in selected sub-regions with access within 2 km to an all-weather road
Key Outputs (linked to the achievement of the PDO Outcome)	Rehabilitation of Rural Roads: 554km including 449km of rural roads and 55km of non-rural roads Construction and Rehabilitation of Bridges and Culverts: 4 in the Boucle Centre-Artibonite (BCA) region including on the Bretelle, Bonbon, Rio Frio, Wallondry, and L'Attalaye rivers Spot Interventions for All-Weather and Resilient Connectivity: 5 in selected sub-regions of the Boucle Centre-Artibonite region. Targeted interventions on road sections such as Aquin-Fonds-des-Blancs, Petit Trou de Nippes-Baradères, and Titanyen-Saut d'Eau Development of Territorial Mobility Plans and Capacity Building: 3, climate-informed and incorporating women's security needs and 200 people within selected communities trained on basic rural road maintenance
Improve the resilience of selected segments of the road network.	
PDO Indicators	3. Total population living in areas serviced by connecting roads upgraded to a climate resilient standard
Key Outputs (linked to the achievement of the PDO Outcome)	Rehabilitation and Upgrading of Rural and Connecting Roads to Climate-Resilient Standards: 400 km of tertiary and rural road network, including spot improvements, maintenance, and repair of 80 km of rural and non-rural roads to ensure all-weather access. Upgrades included slope stabilization, improved drainage, and use of weather-resistant materials. Targeted road sections included Titanyen-Saut d'Eau, Saint Michel-Saint-Raphaël, Dessalines-Saint-Michel, Hinche-Thomassique, and others



	2. Construction and Rehabilitation of Climate-Resilient Bridges and Culverts: Construction of four climate-resilient bridges in the Boucle Centre–Artibonite region and additional bridges on key road sections. Construction of culverts on the Bretelle river and other critical points to prevent flooding and ensure year-round connectivity. Rehabilitation and protection of critical bridges (e.g., Trou du Nord, Bellevue, Cutis, Port-à-Piment, Rouge, Virgile, Carrefour 44) 3. Protection and Stabilization of Road Infrastructure: Construction of embankment walls, retaining walls, and erosion control structures to protect roads from landslides and water damage. Protection of riverbanks (e.g., Sucrierie Henry, Pont Boileau) and road sections (e.g., RD22 in Dupuy and Madian). Rehabilitation of roads and urban sections (e.g., Rue générale Marion, Chaussée in Cayes). 4. Development of Institutional Capacity and Emergency Response: Development and operationalization of a bridge management system within MTPTC to support ongoing maintenance and resilience. Training of 200 people from beneficiary communities in basic rural road maintenance. Activation of the Contingent Emergency Response Component (CERC) post-earthquake (2021), supporting rapid restoration of connectivity, construction of temporary bridges (e.g., Jérémie), and rehabilitation of critical infrastructure.
Provide an immediate and effective response to an eligible crisis or emergency	
PDO Indicators	4. People with restored access to the road network
Key Outputs (linked to the achievement of the PDO Outcome)	1. Restoration and Repair of Critical Road Network Segments: Improvement of the Cance-Batte segment (South department). Construction and rehabilitation of multiple culverts (dalots) in Cahoane, Les Anglais-Tiburon, Carrefour maçon-Débouchette-Saint-Jean du Sud, Anse-à-veau-Arnault,



and Carrefour La Colline on RN 2. Rehabilitation of General Marion Street and hydraulic concrete road in Cayes. Protection works on riverbanks (e.g., Sucrierie Henry, Pont Cavaillon) and bridges (e.g., Pont de Port-à-Piment, Pont Brash, Pont des Coteaux). Additional works in Baradères, Cascade, Titanyen-Saut d'Eau, and Hinche-Maissade sections.

2. **Construction of Temporary Bridge and Restoration of Connectivity:** A temporary bridge was constructed in Jérémie to re-establish connectivity with Grand'Anse, a region isolated by the earthquake.
3. **Repair and Reconstruction of Critical Bridges and Points:** 8 critical bridges were repaired or reconstructed, and 90 critical points were treated/stabilized.
4. **Support for Building Evaluation and Rehabilitation of Other Critical Infrastructure:** Activities supported the evaluation of buildings by the Technical Building Office (BTB) of MTPTC. Rehabilitation of irrigation canals and water supply systems in affected areas was also supported, contributing to broader recovery efforts



Project Management	
Intermediate Results Indicators	No indicator
Key Outputs (linked to the achievement of the Component)	
Contingent Emergency Response	
Intermediate Results Indicators	25. Critical bridges repaired or reconstructed 26. Critical spots treated
Key Outputs (linked to the achievement of the Component)	1. Construction and Rehabilitation of Bridges and Culverts: • Construction of four bridges on the Hinche-Maïssade and Saint-Michel-Saint-Raphaël Road sections. • Rehabilitation of the Port-à-Piment Bridge and construction of a large culvert at the entrance of Gelée. • Construction of three culverts on the Maçon-Débouchette-Saint-Jean du Sud section and three culverts on the Les Anglais-Tiburon axis. 2. Maintenance and Repair of Critical Road Sections and Points: • Stabilization and repair of 80 km of rural and non-rural roads. • Improvement of critical punctual points such as culverts, bridges, and slope stabilization on key road sections (Titanyen-Saut d'Eau, Saint Michel-Saint-Raphaël, Dessalines-Saint-Michel, Hinche-Thomassique). 3. Urban Infrastructure Rehabilitation • Rehabilitation of General Marion Street in Les Cayes, addressing critical urban connectivity.



	- Reconstruction of 1260 meters of hydraulic concrete pavement in Les Cayes, enhancing resilience and durability of urban infrastructure. 4. Protection of Riverbanks and Erosion Control - Protection of riverbanks at Sucrerie Henry (Colline-Fonds-des-Blancs), safeguarding critical infrastructure from natural hazards. - Implementation of erosion control measures and construction of retaining walls to protect road and bridge assets.
Promoting Sustainable Mobility Development	
Intermediate Results Indicators	23. Establishment of a road traffic database and monitoring tool 22. Climate Resilient and Sustainable Mobility Roadmap prepared and associated monitoring tool developed 24. Road safety assessments/measures included as part of all technical design and feasibility studies
Key Outputs (linked to the achievement of the Component)	1. Integration of Road Safety Measures in Technical Studies: All technical design and feasibility studies for project-financed works included road safety assessments and measures, ensuring that new and rehabilitated infrastructure meets safety standards and contributes to safer mobility. 2. Preparation of Technical Specifications and Terms of Reference: Technical specifications and Terms of Reference for the road traffic database and monitoring tool, as well as for the climate resilient and sustainable mobility roadmap, were developed and finalized, laying the groundwork for future implementation. 3. Consultant Engagement and Delivery of Preliminary Reports: Consultants were engaged for both the road traffic database and the mobility roadmap. Preliminary reports and databases were delivered, providing a foundation for future activities, even though full implementation was not achieved within the project period.



Improving Resilience of Transport Connecting Infrastructure	
Intermediate Results Indicators	19. Number of critical bridges rehabilitated or protected on the primary and secondary network 20. Number of critical spot/segments built or rehabilitated on the primary and secondary road network 21. Bridge Management System within MTPTC developed and functional
Key Outputs (linked to the achievement of the Component)	1. Rehabilitation and Protection of Critical Bridges • Eight critical bridges were rehabilitated or protected. These included bridges in Damassin, Bash à Léogane, Milet à Roche-à-Bateau, and Coteaux, among others. • Works involved structural repairs, reinforcement, hydraulic protection, and slope stabilization to ensure long-term durability against climate hazards. 2. Construction and Rehabilitation of Critical Road Segments and Spots • 124 critical spots/segments were built or rehabilitated, focusing on areas prone to flooding, landslides, or other climate-related risks. • Interventions included drainage improvements, retaining walls, erosion control structures, and repairs to culverts and river crossings, enhancing the resilience of the road network. 3. Development and Operationalization of the Bridge Management System (BMS) • The BMS was developed and made functional within MTPTC, including the creation of a bridge inventory, assessment protocols, and a management roadmap. • Capacity-building activities were conducted, such as the training workshop in Lyon, to ensure effective use and sustainability of the system.



Enhancing Rural Connectivity	
Intermediate Results Indicators	2. Roads rehabilitated 5. Number of territorial mobility plans developed, climate informed and incorporating women's security needs 6. Share of citizens who consider that design of investments subjected to consultation is responsive to their needs/views (percent) 8. Number of people who can access regional size markets within 120 minutes in select project areas 9. Number of women who can access health services with obstetrical facilities within 60 minutes in select project areas 10. Number of critical bridges built in the CAL region 11. Spot interventions to enhance all-weather and resilient connectivity in the selected sub-regions of the Center of Artibonite Loop Region 12. Number of Road Maintenance Centers build or rehabilitated in the selected sub-regions of the Center of Artibonite Loop Region 13. Number of people trained within selected communities on basic Rural Road Maintenance in the selected sub-regions of the Center of Artibonite Loop Region (disaggregated by gender) 15. Urban and rural markets rehabilitated/constructed in the selected sub regions of the Center of Artibonite Loop Region 16. Urban plans developed and consulted with Local officials and local stakeholders in the selected sub-regions of the Center of Artibonite Loop Region 17. Regional development dashboard with open data including spatial analysis encompassing risk and climate data developed with Local officials and local stakeholders in the CAL Region 18. Grievances registered related to delivery of project benefits that are addressed (percent)
Key Outputs (linked to the achievement of the Component)	1. Extensive Road Rehabilitation: Over 550 km of roads rehabilitated, surpassing targets and improving year-round access for rural communities.



2. **Inclusive and Climate-Informed Mobility Planning:** Three territorial mobility plans developed, integrating climate resilience and women's safety, ensuring that infrastructure investments are sustainable and inclusive.
3. **Critical Infrastructure Construction:** Four critical bridges and five spot interventions completed, enhancing connectivity and resilience to climate events.
4. **Market and Health Access Improvements:** Four public markets constructed/rehabilitated, and over 326,000 women now have improved access to health services with obstetric facilities.
5. **Community Training and Capacity Building:** 166 people trained in rural road maintenance (75 percent women), building local capacity for sustainable infrastructure upkeep.
6. **Urban Planning and Data Systems:** Four urban plans developed and a regional dashboard established, supporting evidence-based planning and monitoring.
7. **Effective CE and Grievance Redress:** High citizen satisfaction (80 percent), especially among women (95 percent), and 99 percent of grievances addressed, reflecting strong participatory processes and accountability.

C. INTERMEDIATE INDICATOR CHANGES



Indicator Name	Changes Done	Rationale for Changes
ADDITIONAL FINANCING 1		
INTERMEDIATE INDICATORS		
Roads rehabilitated – rural (CRI, km)	Moved from Component 2 to Component 1; end target increased by 80 km	Corrected component assignment error; target increased to reflect additional works financed under the additional financing (AF) in the CAL region.
Roads rehabilitated – non-rural (CRI, km)	End target increased by 40 km	Reflects additional works under AF in CAL.
Number of territorial mobility plans developed, climate-informed and incorporating women’s security needs	Definition consolidated; sub-indicator merged	Consolidation to avoid duplication and report as a single, clearer indicator.
Number of which are climate informed and incorporate women’s security needs	Dropped (merged into parent indicator above)	Redundant after consolidation into the main mobility plan indicator.
Share of citizens who consider design of investments responsive to their needs/views (percent)	Intermediate targets revised	Target phasing adjusted; no substantive scope change.
Of which women (percent)	Intermediate targets revised	Target phasing adjusted; no substantive scope change.
Number of people who can access regional-size markets within 120 minutes	Description updated	Updated to include markets transferred from BCA.
Number of women who can access obstetrical health services within 60 minutes	Measurement refined from “ percent change” to “number”	Improves measurability; percentage can be derived from absolute numbers.
Number of critical bridges built in CAL	Scope/wording clarified to selected areas; activities transferred	Refined description; reflects activities transferred from BCA.
Spot interventions to enhance all-weather and resilient connectivity (number)	Added	Added to reflect BCA-transferred activities and resilience spot treatments.
Number of Road Maintenance Centers built/rehabilitated (CAL sub-regions)	Added	Added to reflect BCA-transferred activities.
People trained on basic rural road maintenance (disaggregated)	Added	Added to capture capacity-building from transferred activities.
Disaggregated by gender: percent women among trainees	Added	Introduced to track gender inclusion in training.



Indicator Name	Changes Done	Rationale for Changes
Urban and rural markets rehabilitated/constructed (CAL)	Added	Introduced to reflect activities transferred from CARDIP.
Urban plans developed and consulted (CAL sub-regions)	Added	Introduced to reflect BCA-transferred planning activities.
Regional development dashboard with open data, including risk/climate layers	Added	Introduced to strengthen evidence-based planning and risk-informed decisions.
Grievances addressed (percent)	Description added	Clarifies indicator description; no target change.
Critical bridges rehabilitated or protected (primary/secondary network)	Wording clarified	Explicitly references primary and secondary network scope.
Critical spots/segments built or rehabilitated (primary/secondary network)	Wording clarified	Explicitly references primary and secondary network scope.
Bridge Management System within MTPTC functional (Yes/No)	Moved from Component 3 to Component 2	Corrects component alignment; indicator pertains to Component 2's systems strengthening.
Climate Resilient and Sustainable Mobility Roadmap prepared + monitoring tool	Revised (intermediate targets)	Intermediate Target revised consistent with AF workplan.
Road traffic database and monitoring tool (Yes/No)	Revised (intermediate targets)	Intermediate targets revised consistent with AF workplan.
Road safety assessments/measures included in all designs and feasibility studies (Yes/No)	Description updated	Updated to capture BCA-transferred activities and mainstream road safety recommendations during construction/design.
ADDITIONAL FINANCING 2		
PDO INDICATOR		
PDO statement	Amended to add crisis response objective (iii)	Adds "to provide immediate and effective response to an eligible crisis or emergency" due to CERC activation following Aug 2021 earthquake .
People with restored access to the road network (number)	Added (PDO-level indicator)	New PDO indicator to measure CERC outcomes after the earthquake.
INTERMEDIATE INDICATORS		
Critical bridges repaired or reconstructed (number)	Added (Component 4 – CERC)	Tracks connectivity restoration via bridge works under CERC.
Critical spots treated (number)	Added (Component 4 – CERC)	Tracks build-back-better rehabilitation of critical road spots .



Indicator Name	Changes Done	Rationale for Changes
Roads rehabilitated (CRI, km)	End target increased from 380 to 480 km	Scope expanded/updated feasibility; aligns with AF2 implementation plan.
Urban and rural markets rehabilitated/constructed (CAL)	End target increased from 4 to 5	Scope adjustment reflecting updated AF2 program.
RESTRUCTURING FOR CANCELLATION		
INTERMEDIATE INDICATORS		
Urban and rural markets rehabilitated/constructed (CAL)	End target decreased from 5 to 4	Downward revision due to cancellation of Saint Michel de l'Attalaye Regional Market and associated funds.
Road Maintenance Centers (CAL sub-regions)	End target decreased from 2 to 1	Downward revision due to cancellation of Hinche road maintenance center and associated funds
Critical bridges rehabilitated or protected (primary/secondary network)	End target decreased from 10 to 8	Downward revision of targets due to cancellation of two proposed bridges (La Digue and Bethel).

**ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION****A. TASK TEAM MEMBERS**

Name	Role
Ibrahim Kabore	Team Leader
Fabian Hinojosa Couleau	Team Leader
Lydie Madjou	Financial Management Specialist
Lucas Carrer	Financial Management Specialist
Adjalou Celestin Niamien	Financial Management Specialist
Vladimir Mathieu	Procurement Specialist
Maurice Adoni	Procurement Specialist
Khalid Anouar	Environmental Specialist
Kevin McCall	Environmental Specialist
Barnet Joseph	Environmental Specialist
Lisbet Kugler	Environmental Specialist
Bruce MacPhail	Social Specialist
Felipe Jacome	Social Specialist
Maria Laetitia Antoine	Procurement Team
Maria Cristina Rosa Lucia Villani	Procurement Team
Licette M. Moncayo	Team Member
Sonia Rousseau-Lopez	Team Member
Nicolas Antoine Robert Collin Dit De Montesson	Team Member
Xavier Espinet Alegre	Team Member
Iris Teluska	Team Member
Eric Andre Christophe Jannaud	Team Member
Patricia De la Caridad Marrero	Team Member
Malaika Becoulet	Team Member

B. STAFF TIME & COST



Stage of Project Cycle	Staff Time & Cost	
	No. of Staff Weeks	US\$ (including travel and consultant costs)
Preparation		
FY17	2.515	24,842.55
FY18	42.100	323,641.92
FY19	1.802	10,807.58
FY20	0.075	441.90
FY22	1.100	5,842.32
FY23	1.715	26,434.93
FY24	0.000	52,540.00
Total	49.31	444,551.20
Supervision/ICR		
FY19	23.006	192,679.94
FY20	16.153	255,440.23
FY21	30.204	503,487.81
FY22	75.871	627,398.19
FY23	82.039	616,720.79
FY24	34.269	171,081.54
FY25	11.454	117,467.16
FY26	0.570	9,729.73
Total	273.57	2,494,005.39



**ANNEX 3. PROJECT COST BY COMPONENT**

Component	Amount at Approval (US\$M)	Actual at Project Closing (US\$M)
Enhancing Rural Connectivity	45.0	90
Improving Resilience of Transport Connecting Infrastructure	22.0	3.2
Promoting Sustainable Mobility Development	3.0	1.0
Contingent Emergency Response	1.0	30.3
Project Management	4.0	6.0

Note: Shortcomings in Financial management affected both the allocation and reporting of funds. When the CERC was triggered, \$30 million was shifted from components 1 and 2 for emergency activities. Although Additional Financing 2 was meant to restore these funds, \$15 million meant for component 2 was not properly reflected in the financial records and was instead reported under component 1 in the Interim Financial Reports (IFRs). As a result, while more money was actually used for component 2 activities, only \$3 million was officially recorded. This misreporting led to an underrepresentation of expenditures for primary and secondary roads, making the limited amount reported for component 2 primarily a result of financial management shortcomings rather than project implementation decisions.



ANNEX 4. EFFICIENCY ANALYSIS

1. The economic evaluation covers all interventions under Component 1, 2 and 4, with a scenario-based approach the analysis simulated flood damages for the target regions and calculated the damage level and associated costs. In addition, the road damage results were used to calculate the user costs. To do this, an innovative scenario based methodological approach⁴ was developed to estimate the avoided potential flood, and the associated user and emission costs, that will be enabled by the climate resilience investment in the road network. The analysis simulates 10,000 scenarios with random flood events occurring across the analysis period (20 years) ranging from 1 in 5 and 1 in 1,000 events. We estimated, under current climate conditions, a baseline mean annual economic cost of US\$ 52.7 million on road asset damages due to coastal, fluvial and pluvial flooding. To account for climate change, we tested the economic evaluation using increased precipitation intensity due to climate projections related to the 2035-64 period for the SSP 5-8.5 that account for intermediate and pessimistic global decarbonization scenarios. Under this climate change scenario, the annual economic cost on road asset damages without project intervention could increase by 6.5 percent up to US\$ 56.16 million.

1. For each climate scenario probabilistic cash flow analysis (10,000 iterations) was implemented to evaluate the return on investment of the \$110 million climate resilience improvement projects on the road networks.

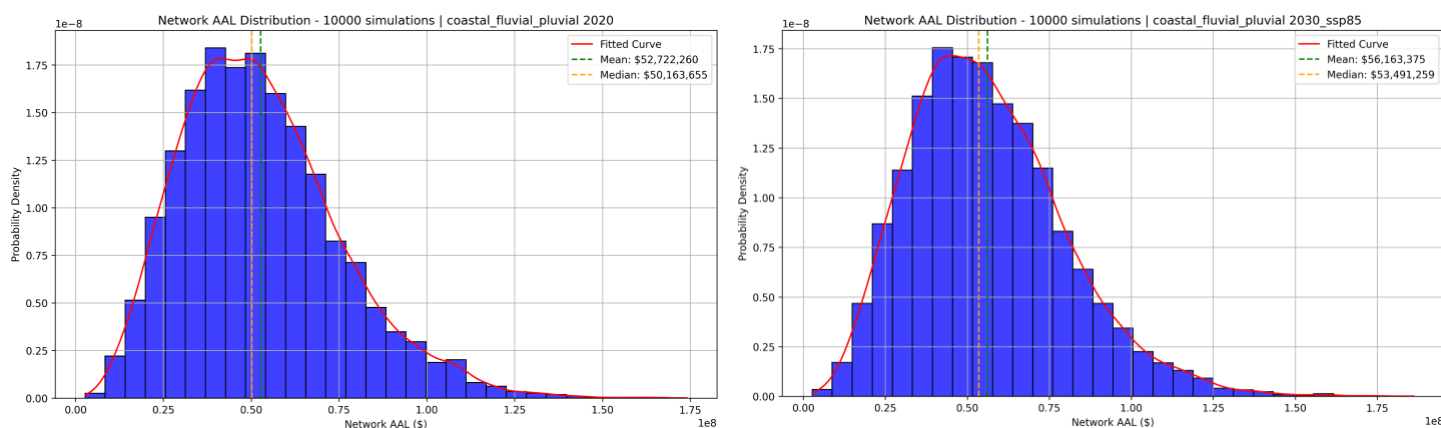


Figure A4.1 Probability Distribution of Damage Repair Cost across 10,000 scenarios for current climate condition (left) and climate projections (right)

2. Among these impacts, attempts are made to quantify the benefits in monetary terms. These are the direct benefits from reducing climate impacts that will accrue to beneficiaries:

- **Reduction in asset damages loss.** The impacts from disasters (river and coastal flooding) are included in the economic analysis. The analysis calculates the reduction on repair and rehabilitation damages. Flooding maps and water depths combined with scientific damage curves are used to quantify baseline infrastructure damages and the costs of repairs (based on current construction costs) (Figure A4.1). Reduction is measure as the avoided damages due to improved climate resilience.
- **Reduction in users' losses.** The analysis include reduction on users' economic losses as results of strengthening the resilience of transport assets. The analysis uses a network approach to user losses by identify road disruption and alternative road paths. The disaster scenarios equivalent to flood events that range from a 5 to 1000 year return

⁴ Farahmand, H., Yin, K., Hsu, C. W., Savadogo, I., Alegre, X. E., & Mostafavi, A. (2024). Integrating climate projections and probabilistic network analysis into regional transport resilience planning. *Transportation Research Part D: Transport and Environment*, 104229.



periods⁵. **Time saving and vehicle operating cost.** Using inputs from HDM4 calibrated for the country, the analysis includes travel time saving and vehicle operating costs as a results of less travel diversion due to road closures. **Road accidents.** Besides the human suffering generally associated with road accidents, there is economic loss in the form of vehicle and property damage, medical costs, loss of productivity of injured persons, and, in the case of commercial vehicles, loss of earnings. As such, accident reduction is clearly an economic benefit. Existing accident characteristics were employed to estimate the likely accident reductions. The value of life in the case of fatalities was included in the analysis.

- **Carbon emissions.** The Guidance Note on the shadow price of carbon in the economic analysis was adopted and used in the benefits estimation of reduction in carbon emissions. The World Bank's Shadow Price of Carbon Guidance Note⁶ recommends the use of a low and high estimate of the carbon price starting at US\$40 and US\$80, respectively.

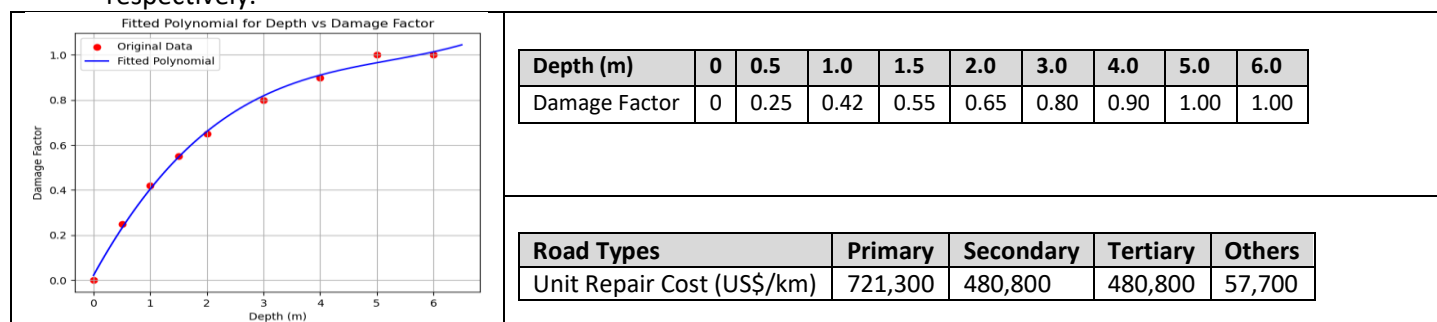


Figure A4.2: Road Asset Damage curve (figure left, table upper right) and Local unit Repair cost (bottom right)

- Other key assumptions considered in the economic analysis are presented below:
 - Discount rate for public investments is 12 percent with horizon time for analysis is 20 years.
 - Estimated traffic growth is -2 percent/year (first 5 years) and 2 percent after that (based on economic forecast).
 - Value of Time is US\$0.34 per hour, value of Life in Haiti is US\$50,000 and of serious injury US\$ 12,000
 - Regarding river and coastal flood damages, 30 days is considered to restore normal service

Table A4.1: Mean Economic Analysis Indicators

	Historical Climate	Under climate change
Net present value (NPV)	20.9	32.7
Benefit-cost ratio (BCR)	15.3	17.1
Economic internal rate of return (EIRR)	1.21	1.33

4. As a result, the project intervention will yield positive economic returns and can be confirmed to be economically viable. Due to reduction of climate change impacts (river and coastal floods), the project will yield annual savings on: asset damage loss of US\$ 17.5 million, US\$ 0.2 million in user economic costs, US\$ 84 thousand in road safety and US\$ 16 thousand in carbon cost. The economic analysis includes a stress-test of climate projections in economic results. As the project is building climate resilience in transport assets, when accounting for projected rainfall intensity increases, the economic evaluation results in higher positive outcomes. Under SSP 8.5, the project continues to yield a positive NPV. The mean value of NPV is US\$ 32.7 million meaning that the \$110M investment will yield significant avoided average annual loss (AAL) in terms of damage repair costs, user costs, CO2 costs, and road crash costs. The mean value of IRR for the investment is 17.1 percent and the mean value of BCR ratio is 1.33.

⁵ Hazard information is obtained from the WB and Fathom collaboration

⁶ World Bank, "Guidance Note on Shadow Price of Carbon in Economic Analysis," World Bank, Washington DC, 2017,



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

The Borrower completion report is attached.



Annex 5 Rapport
Final et d'Evaluation d

ANNEX 6. SUPPORTING DOCUMENTS (IF ANY)

The impact assessment report is attached.



Annex 6 Rapport final
de l'étude d'impact_P