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DOMINICAN REPUBLIC

CLIMATE RESILIENCE PROGRAM FOR BRIDGE INFRASTRUCTURE IN THE DOMINICAN REPUBLIC

(DR-L1166)

LOAN PROPOSAL

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ABBREVIATIONS	
ASODIFIMO	Asociación de Personas con Discapacidad Físico Motora (Association of People with Physical and Motor Disabilities)
BSA	Blue Spot Analysis
ECLAC	Economic Commission for Latin America and the Caribbean
MEPyD	Ministry of Economy, Planning, and Development
MOPC	Ministry of Public Works and Communications
OECD	Organisation for Economic Co-operation and Development
PNLOG	Plan Nacional de Logística de Cargas (National Freight Logistics Plan)
SIUBEN	Sistema Único de Beneficiarios (Consolidated System of Beneficiaries)
SOFR	Secured Overnight Financing Rate
UEPFRE	Unidad Ejecutora de Proyectos Financiados con Recursos Externos (Execution unit for externally financed projects)

PROJECT SUMMARY

DOMINICAN REPUBLIC

CLIMATE RESILIENCE PROGRAM FOR BRIDGE INFRASTRUCTURE IN THE DOMINICAN REPUBLIC (DR-L1166)

<table>
<tr><th colspan="6">Financial Terms and Conditions</th></tr>
<tr><td colspan="3">Borrower:</td><td colspan="3">Flexible Financing Facility[a]</td></tr>
<tr><td colspan="3">Dominican Republic</td><td colspan="2">Amortization period:</td><td>23.75 years</td></tr>
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<tr><td colspan="3">Ministry of Public Works and Communications (MOPC), through the execution unit for externally financed projects (UEPFRE)</td><td colspan="2">Grace period:</td><td>5.5 years[b]</td></tr>
<tr><td>Source</td><td>Amount (US$)</td><td>%</td><td colspan="2">Interest rate:</td><td>SOFR-based</td></tr>
<tr><td rowspan="2">IDB (Ordinary Capital):</td><td rowspan="2">200,000,000</td><td rowspan="2">100</td><td colspan="2">Credit fee:</td><td>[c]</td></tr>
<tr><td colspan="2">Inspection and supervision fee:</td><td>[c]</td></tr>
<tr><td>Total:</td><td>200,000,000</td><td>100</td><td colspan="2">Weighted average life:</td><td>15.21 years</td></tr>
<tr><td colspan="3"></td><td colspan="2">Approval currency:</td><td>U.S. dollars</td></tr>
<tr><th colspan="6">Project at a Glance</th></tr>
<tr><td colspan="6">Project objective/description: The program’s general objective is to contribute to the sustained and inclusive economic growth of the Dominican Republic. The specific objective is to improve the climate resilience of the country’s bridge infrastructure.</td></tr>
<tr><td colspan="6">Special contractual conditions precedent to the first disbursement of the loan: (i) approval of the (program Operating Regulations) including workflows, internal controls, and environmental and social management plans describing the requirements and procedures that apply to program execution, under the terms previously agreed upon with the Bank; and (ii) appointment of the following staff for the program’s execution: (a) project manager; (b) technical coordinator; (c) hydraulic specialist; (d) hydrology specialist with expertise in climate change; (e) planning specialist; (f) procurement specialist; (g) financial specialist; (h) structural specialist; (i) environmental specialist; and (j) social specialist with experience in gender and diversity (paragraph 3.4).

Special contractual conditions of execution: See the socioenvironmental contractual conditions in Annex B of the environmental and social review summary (required link 3).</td></tr>
<tr><td colspan="6">Exceptions to Bank policies: None</td></tr>
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<tr><td>Objectives:[d]</td><td colspan="2">O1 ☐</td><td colspan="2">O2 ☒</td><td>O3 ☒</td></tr>
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</table>

[a] Under the terms of the Flexible Financing Facility (FN-655-1), the borrower has the option of requesting changes to the amortization schedule, as well as currency, interest rate, commodity, and catastrophe protection conversions. The Bank will take operational and risk management considerations into account when reviewing such requests.

[b] Under the flexible repayment options of the Flexible Financing Facility, changes to the grace period are permitted provided that they do not entail any extension of the original weighted average life of the loan, or the last payment date as documented in the loan contract.

[c] The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors during its review of the Bank’s lending charges, in accordance with applicable policies.

[d] O1 (Reduce poverty and inequality); O2 (Address climate change); and O3 (Bolster sustainable regional growth).

[e] OF1 (Biodiversity, natural capital, and climate action); OF2-G (Gender equality); OF2-D (Inclusion of diverse population groups); OF3 (Institutional capacity, rule of law, and citizen security); OF4 (Social protection and human capital development); OF5 (Productive development and innovation through the private sector); OF6 (Sustainable, resilient, and inclusive infrastructure); OF7 (Regional integration).

I. Description and Results Monitoring

A. Background, problem addressed, and rationale

1.1 **Macroeconomic context.** The Dominican Republic's annual economic growth averaged 5.3%[1] between 2013 and 2022, while inflation has remained controlled within the Central Bank of the Dominican Republic's target range of 4% +/-1%. Growth in economic activity is estimated at around 2.5% in real terms for 2023, owing to the effects of the tight monetary policy that enabled inflation to decrease from 9.5% in May 2022 to 4.4% in May 2023 and to 3.6% in December 2023. The construction and "transportation and storage" sectors (representing 14.3% and 8.7% of gross domestic product (GDP), respectively, between January and September 2023) are major contributors to production and employment,[2] as they cut across all socioeconomic activities and have a high impact on productivity and competitiveness indicators.[3]

1.2 **The Dominican Republic's vulnerability to climate change.** The country is one of the most exposed in the world to disasters caused by natural phenomena. As such, it is especially vulnerable to the effects of climate change. According to the Climate Change Vulnerability Index, 30% of the Dominican population was *very vulnerable* to extreme climate phenomena in 2018,[4] a proportion that is increasing over time. Likewise, the Index for Risk Management for Latin America and the Caribbean places the Dominican Republic among the 10 countries in the region with a very high level of exposure to tropical cyclones and a high level of climate-related risk. There has been an increasing trend in extreme events (hurricanes and storms) in the country over the past decades, with 16 events in the 1970s, 25 in the 1980s, 62 in the 1990s, 107 between 2000 and 2009, and 90 events between 2010 and 2019.[5]

1.3 Recently, the country experienced Tropical Disturbance 22 and trough in November 2023, with torrential rain, electrical storms, and gusts of wind resulting in human and material losses and putting 14 provinces in a state of red alert and another 15 provinces in a state of orange alert.[6] Between 17 and 18 November, 30 people died, and unprecedented rainfall was recorded: over 431 mm in only 24 hours.[7] This led to the displacement of more than 37,000 people, impacted more than 7,000 homes, and left 2,300,000 people without access to drinking water.[8] The most affected areas throughout 2023 were the country's southwestern and eastern provinces, as well as some north-central provinces.

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1 Central Bank of the Dominican Republic, 2023.

2 The construction sector accounts for 7.1% of the country's employment (ILO, 2021).

3 Boletín de Competitividad Sectorial, 2021.

4 National Statistics Office of the Dominican Republic, 2023. Eventos naturales, una mirada georreferenciada. Boletín de estadísticas ambientales.

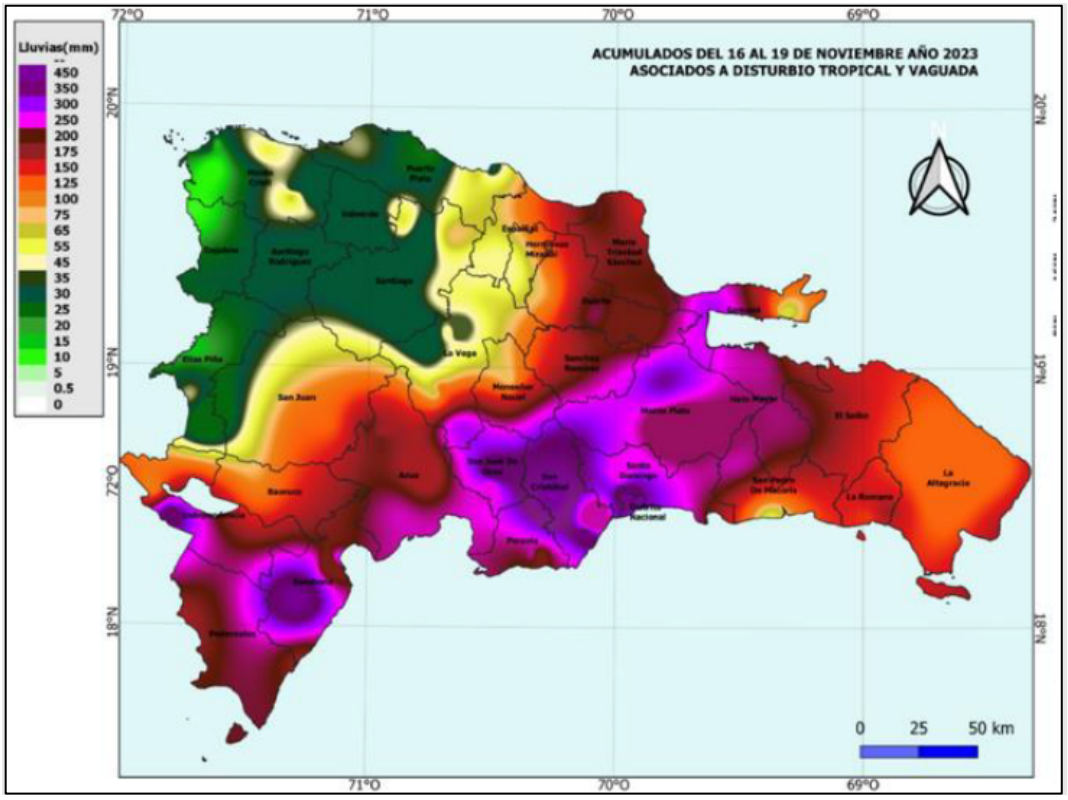
5 ECLAC, 2020. Análisis espacial de datos históricos y escenarios de cambio climático en México, Centroamérica, Cuba, Haití y la República Dominicana.

6 Emergency Operations Center of the Presidency. 19 November 2023.

7 Naciones Unidas en República Dominicana. 21 November 2023.

8 Hasbun, J., CNN. 21 November 2023.

Figure 1. Cumulative precipitation in the Dominican Republic between 16 and 19 November 2023



Source: Flooding in the Dominican Republic—Status Report 1. United Nations, 2023.

1.4 **Impact of climate change on the country's economy.** The Dominican Republic's economic growth is limited by damages and losses from the consequences of climate change. Between 1961 and 2014, the economic cost of damages from hydrometeorological events was equivalent to 0.69% of GDP per year.[9] In 2014 and 2015, the country experienced one of the worst droughts in the past 20 years, which, combined with flooding, temporarily displaced tens of thousands of people and caused serious damage to road infrastructure.[10] In 2022 alone, direct economic losses attributable to Hurricane Fiona were estimated at US$381,700,000, equivalent to 0.3% of GDP.[11] In addition, productive and business activities were disrupted as the economy went through a recovery process of up to 15 months, with economic losses of approximately US$1.1 billion, equivalent to 1.5% of GDP in 2020.[12] Several economic sectors are affected by these events, especially tourism and agriculture (13% and 11% of GDP, respectively), which are significantly impacted by the effects of infrastructure

9 World Bank, 2015.

10 2017/2018 Report. Amnesty International.

11 National Statistics Office of the Dominican Republic, 2023.

12 Central Bank of the Dominican Republic, 2021.

damage, lack of connectivity, emergency preparedness, increased operating costs, and business disruptions.[13]

1.5 As a result, the Dominican Republic's economic growth is not sustained, a problem that stems from the recurring need to make large public investments in repairing infrastructure damage caused by extreme weather events and the impact of these events on the country's main productive activities (paragraph 1.12). Moreover, its economic growth is less inclusive because the most vulnerable population's access to basic services and economic opportunities is the most limited by the effects of climate change (paragraph 1.13).

1.6 **National road and bridge infrastructure.** The Dominican Republic's road network[14] includes 1,395 km of main highways, 2,412 km of secondary highways, 1,620 km of tertiary highways, and more than 60,000 km of rural access roads, paths, and trails. Only 22% of the latter are in good condition, while 44% are in fair condition and 34% are in poor conditions. The country also has around 1,200 bridges, according to the most recent census.[15] These are the most vulnerable assets (the weakest link in the chain), and over 50% of them require some type of rehabilitation and, in particular, periodic and routine maintenance work.[16] Due to its strategic location, this infrastructure has a high level of exposure, and its performance can be adversely affected by weather events that result in disruptions or the collapse of structures, isolating communities and economic activities.

1.7 **Impact of climate change on transportation infrastructure.** Between 2016 and 2017, 15 provinces and more than 644 road infrastructure works—especially bridges—required rebuilding because of the adverse effects of weather events. Damages were reportedly worth US$394 million[17] in terms of required repairs, and they impacted the availability, serviceability, and performance of the logistics and connectivity system throughout the country. Between 2017 and 2023, intense precipitation damaged 75 bridges,[18] which affected the country by isolating more than 617 towns, reflecting the impact of climate change in terms of the connectivity of the transportation network. More recent events in November 2023 (paragraph 1.3) led to estimated damages of over US$43 million,[19] while the Emergency Operations Center reported that 45 communities were isolated, 5 bridges were severely affected, and part of the 27 de Febrero Avenue overpass structure collapsed onto several vehicles, killing 9 people.[20] Therefore, the low climate resilience of bridge infrastructure in the Dominican Republic is identified as a key determinant of the general problem of economic growth that is unsustained and limited in terms of inclusiveness.

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13 The Dialogue, 2023. Impactos climáticos y resiliencia en la República Dominicana.

14 MOPC GeoPortal.

15 MOPC, 2023.

16 The overall basic infrastructure access gap is US$9.926 billion in the long term. National Infrastructure Plan 2020-2030.

17 MOPC, 2018.

18 National Statistics Office of the Dominican Republic, 2023.

19 This estimation was calculated using the Blue Spot Analysis tool (paragraph 1.10).

20 Medina J; Diario Libre, 20 November 2023. Disturbio tropical rompió récord de precipitaciones en 24 horas en el país.

1.8 **Sector institutions.** The Ministry of Public Works and Communications (MOPC) is the institution responsible for planning, building, and maintaining the physical infrastructure required for the country's socioeconomic development, and bridges are the most critical and strategic points in terms of connectivity. In this context, one of the priority pillars of the MOPC's Institutional Strategic Plan 2021-2024 is the alignment all actions to counter the effects of climate change and achieve the environmental sustainability needed for the effective sustainable development of investments. Although this entity has a high level of technical and operational capacities, and even specific units responsible for developing regulations for designing bridges and managing their construction and maintenance, it lags in terms of resource planning and prioritization. It only began to use specific tools and methodologies a few years ago to adequately coordinate investments, with specific actions for climate resilience (paragraph 1.9).

1.9 **Public investment in infrastructure.** According to the Multiyear National Public Sector Plan 2021-2024, investment spending on infrastructure construction and maintenance in the transportation sector ranks second among policy priorities, with a total amount of US$2.577 billion. This amount is equivalent to 22% of total investment and is second only to the water and sanitation sector. However, for this investment to be effective, it must be done properly and target the areas of greatest impact. For example, resources for infrastructure maintenance (approximately 0.08% of average annual GDP between 2016 and 2021) have historically been limited and prioritized without the use of technological tools that help to adequately plan and manage assets, thereby optimizing resources according to the most cost-effective needs. Moreover, there was no clear policy to guide planning in accordance with climate action objectives.[21] In this regard, recent estimates[22] indicate that the average annual investment required to offset economic losses due to climate change are around 5.8% of GDP, a trend that is projected to increase between 2025 and 2050. Likewise, annual financing needs for climate adaptation and mitigation published in the Dominican Republic's 2020 Nationally Determined Contribution[23] are 1.8% of GDP.

1.10 **Infrastructure investment with a climate resilience approach.** Conscious of the vulnerability of the country, and especially transportation infrastructure, to the effects of climate change (paragraph 1.2), in recent years the Government of the Dominican Republic, through the MOPC and with the Bank's support, has been implementing an investment prioritization methodology within a framework for decision-making under uncertainty[24] called Blue Spot Analysis (BSA).[25] This methodology is currently operational and makes it possible to: (i) estimate the vulnerability and criticality of infrastructure under different scenarios; (ii) assess damages and losses anticipated from natural hazards; (iii) prioritize investments in

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21 In 2023 the Bank approved technical cooperation operation (ATN/FC-20095-DR), the objective of which is to support the mainstreaming of climate action in the country's fiscal management and policy.

22 ECLAC, 2023. Economic Survey of Latin America and the Caribbean 2023.

23 Nationally Determined Contribution, 2020.

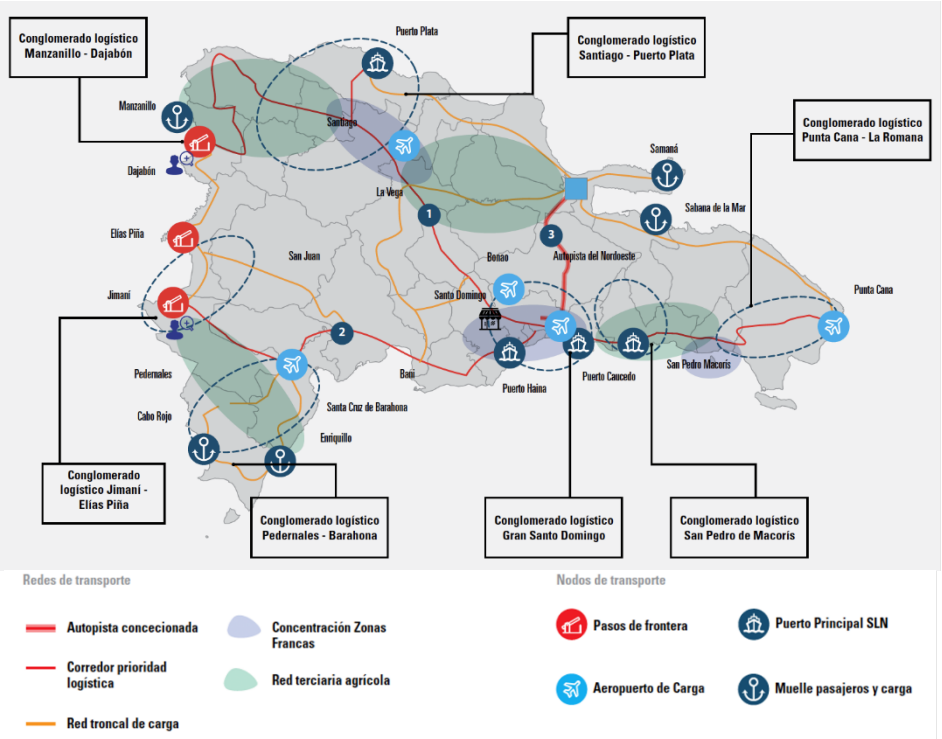
24 Transporte resiliente al cambio climático: ¿cómo priorizar la inversión?: caso de República Dominicana (IDB, 2022).

25 The BSA is a prioritization methodology for investments in transportation infrastructure to strengthen its resilience to the impacts of climate change. It is based on a systematic analysis of the vulnerability and criticality of a transportation network's hot spots subject to natural risks in different scenarios.

the road network, including map visualization tools; and (iv) propose risk mitigation measures in terms of design. The MOPC has used this tool to prioritize bridges throughout the country and identify those with very high/high levels of vulnerability to extreme weather events, which facilitates the efficient targeting of public spending with a view to investing in preventive resilience measures to reduce damages and avert socioeconomic losses.

1.11 **Connectivity and logistics.** Strengthened and resilient transportation infrastructure is an opportunity for the Dominican Republic to improve regional connectivity, thereby increasing its competitiveness.[26] According to the National Freight Logistics Plan (PNLOG) 2020-2032, the regions with the greatest economic potential in the country include: (i) Cibao Norte and the northeastern region, where 30% of agricultural production is concentrated; (ii) the southwestern region, which is important due to its agricultural development (8% of the national total) and logistics services cluster (24% of provincial economic activity); and (iii) the eastern region, where significant agricultural production is concentrated, mainly sugar (45% of national volume), as well as logistics and tourism clusters developed around maritime areas. These regions are connected by highways and rural access roads that provide access to local markets and link the main logistics hubs (ports and airports of the national logistics system). Many of these connections require crossing bodies of water and watercourses via bridges and drainage structures.

Figure 2. National logistics system

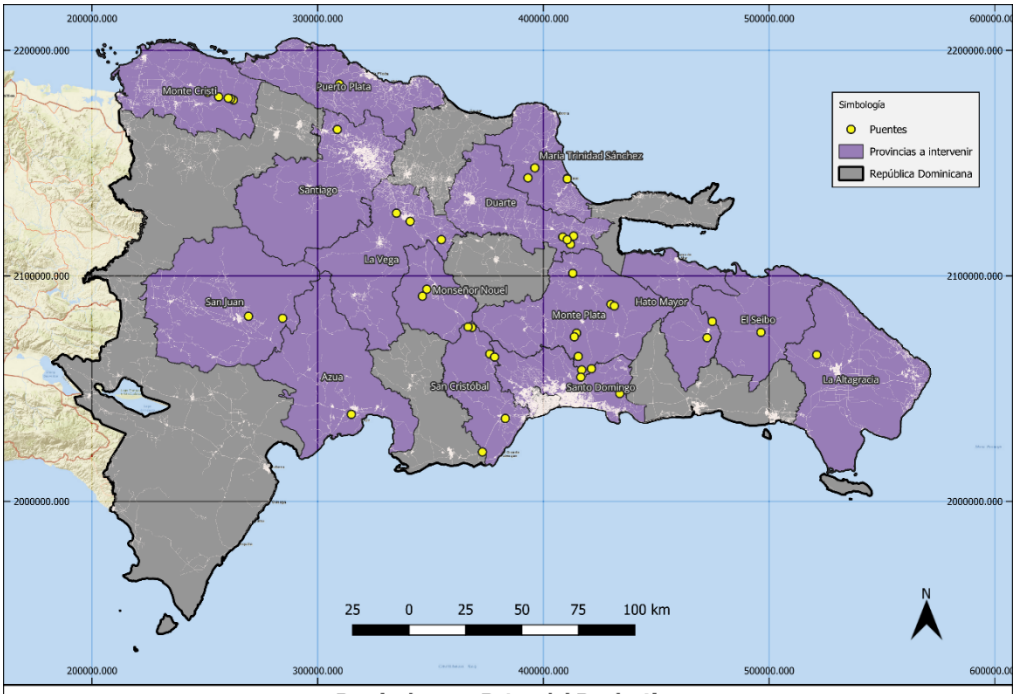


Source: National Logistics Plan 2020 — 2032 (IDB, 2020).

26 National Competitiveness Strategy.

1.12 **Productivity in strategic provinces.** Potential disruptions in the transportation network due to problems at hot spots such as bridges prevent many of the country's producers from improving their business performance because of impacts on operating costs, travel times, and logistics costs.[27] This constitutes one of the main challenges for the Dominican Republic's connectivity and competitiveness.[28] To counter this situation, the MOPC has identified the need to strengthen its transportation network, especially its bridge infrastructure (Figure 3) in the provinces in which, according to the Provincial Productive Profiles 2022, over 50% of agricultural production is concentrated and which are noted for their high economic growth potential. These provinces include: (i) San Juan, Monte Plata, and San Cristóbal, the provinces with the most agricultural production units in the country; (ii) Montecristi, where plantains and bananas are produced and then exported through the Manzanillo port (paragraph 1.22); (iii) Azua, the province with the most extensive area (672 km^2) dedicated to the cultivation of subsistence crops for the domestic market; and (iv) Santo Domingo and the National District, where the country's main industrial and commercial activities are concentrated.

Figure 3. Provinces with productive potential and bridges with investment priority



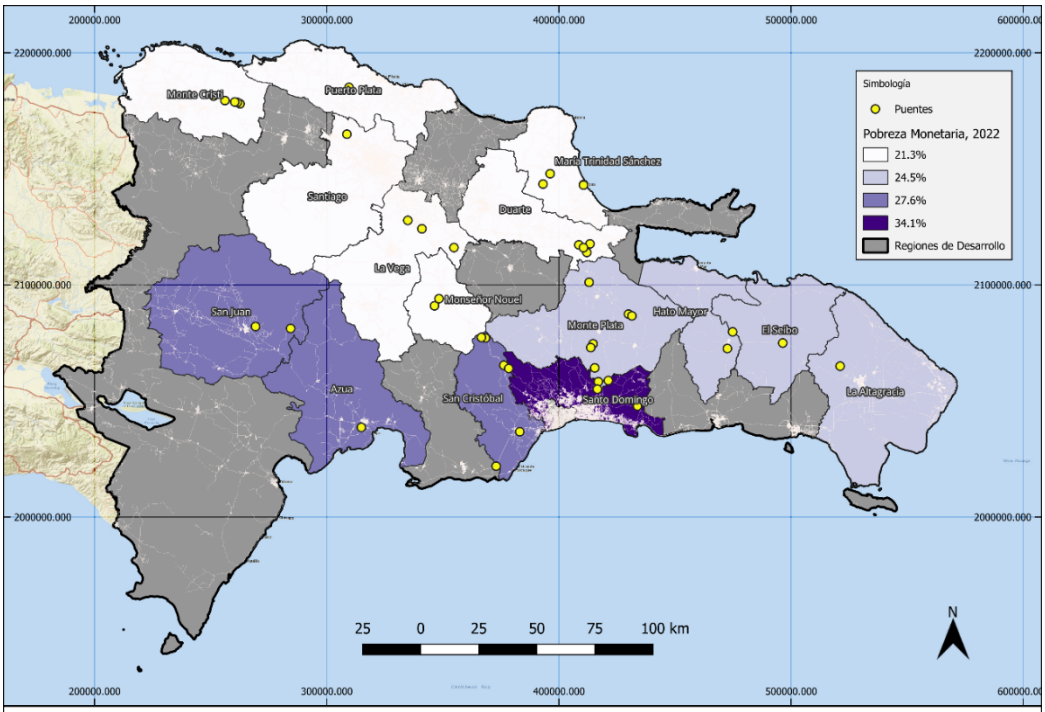
Source: MOPC—IDB, 2023.

[27] In the sample bridges' area of influence (paragraph 2.3), agricultural producers report losses of around 5% owing to perishable goods that spoil because of traffic disruptions due to overflowing rivers and collapsed bridges for up to 10 days per year, as a cumulative average.

[28] The Dominican Republic's price per ton-kilometer is the fourth highest in the region, standing at US$0.14 per ton-kilometer (IDB, 2013).

1.13 **Accessibility of basic services for the vulnerable population.** The most vulnerable population's access to basic healthcare and education services is affected when there are disruptions to the transportation network due to extreme weather events.[29] For example, according to a Pan American Health Organization report,[30] heavy rainfall during Hurricane Fiona caused landslides and infrastructure damage that completely shut down highways. This led to the isolation of several towns and overcrowded shelters, increasing the risk of transmission of diseases such as cholera. In this sense, similar to the analysis of provinces' productivity, the MOPC relied on the Bulletin of Official Monetary Poverty Statistics 2022 to identify the macroregions with the highest general monetary poverty rates (Figure 4). These are Ozama (34.1%; 1,300,000 people) and Sur (27.6%; 500,000 people). This provides a rationale for prioritizing the investment of resources in these macroregions, as part of the solution to problems associated with the availability and condition of infrastructure for accessing work opportunities and services such as healthcare and education.

Figure 4. Poverty rates by province and bridges with investment priority



Source: MOPC—IDB, 2023.

1.14 **Gender gap.** According to International Labour Organization (ILO) data, women account for 7.1% (24,082 jobs) of employees in the transportation and communications sector, and 1.4% (4,709 jobs) of employees in the construction

[29] In the sample, beneficiary families of healthcare and education services report disruptions in access when serviceability is limited in periods of rainfall. They report average disruption times of between 32 and 102 hours per year and, in extreme cases, weeks of inaccessibility if bridges collapsed.

[30] Pan American Health Organization, 2022. Cholera Resurgence in Hispaniola.

sector in the Dominican Republic.[31] MOPC data[32] show that women represent only 6.6% of individuals hired, and women who work as engineers or supervisors account for less than 15% of individuals hired. Most women perform jobs such as traffic detour signaling at construction sites, warehouse managers, checkers, secretaries, and janitors, which are the lowest-paid jobs in the sector. To increase women's participation, the MOPC, with the Bank's support, has developed bidding processes that incorporate award criteria benefiting women contractors and/or women-led micro, small, and medium-sized enterprises,[33] as well as requirements in terms of women's participation in maintenance contracts for rural access roads. The Interagency Gender Mainstreaming Committee was also created, the objective of which is to coordinate, develop, and monitor actions that will ensure the mainstreaming of the gender-based approach in the entity's plans, programs, and projects. Despite these measures, there are still barriers to increasing women's inclusion in the sector's workforce, such as environmental conditions, training opportunities, and the risk of harassment and violence (optional link 2).

1.15 **Accessibility for persons with disabilities.** According to the Dominican Republic's Consolidated System of Beneficiaries (SIUBEN), there are 464,379 people with some type of disability in the country,[34] equivalent to 7.3% of the population. Of these, 42.2% are men, 57.8% are women, and only 33.4% of those over 15 have some type of employment. According to the third socioeconomic household study conducted by SIUBEN, 27.9% of persons with disabilities report having issues with accessibility to transportation[35] and spend up to 40% of their income on mobility. This is evidence of the significant barriers that persons with disabilities face when accessing job opportunities and other services. To close these gaps, the Government of the Dominican Republic, through the National Transit and Ground Transportation Institute, is developing policies and strategies to make mobility more inclusive. Likewise, the MOPC and the National Disability Council have signed a technical cooperation and collaboration agreement with a view to ensuring that all infrastructure works are accessible to persons with disabilities, thereby strengthening the government's commitment to include, review, and oversee project designs with this approach.

1.16 **Innovation and digitalization gap in infrastructure management.** The 2022 United Nations E-Government report ranks the Dominican Republic 15th out of 33 countries in the Latin America and the Caribbean region, with an index of 0.64 out of a maximum of 1.0. This indicates that the country has an intermediate level of digitalization,[36] with good institutional frameworks, but that it also has room for improvement in terms of introducing digital services and technologies. In its Institutional Strategic Plan 2021-2024, the MOPC targets the optimization of

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31 ILO, 2021.

32 Sample of 14 rural access roads targeted by interventions.

33 In the Road Infrastructure Rehabilitation and Maintenance Program in the Dominican Republic (5504/OC-DR), 11 of 36 bidding processes for road maintenance were awarded with gender criteria.

34 These range from mild disabilities, such as visual problems corrected with glasses or hearing problems corrected with hearing aids, to severe disabilities, such as mobility restrictions or cerebral palsy.

35 De la Rosa citing the Association of People with Physical and Motor Disabilities (ASODIFIMO), 2 May 2018. "Due to lack of accessibility, people with disabilities spend 40% of their income on transportation alone."

36 United Nations E-Government report 2022, viewer for the Dominican Republic.

technological processes and strengthening innovation as strategic objectives, while highlighting innovation and digitalization gaps. These gaps are reflected in the lack of integration of project management processes in technical departments and the absence of a planning and management system aligned with the infrastructure assets' investment and maintenance needs. In recent years the Bank has supported and promoted the creation of digital tools and the incorporation of resources within programs, with a focus on innovation (paragraph 1.20). However, it is necessary to further develop technical elements and scale up available solutions to remotely monitor and inspect infrastructure conditions, increase process effectiveness, and optimize the prioritization and management of road and bridge assets, especially to identify needs in terms of sustained maintenance over the medium and long terms. Notably, through technical cooperation operation ATN/OC-20119-RG, the Bank is supporting the MOPC in the preparation of an in-depth diagnostic assessment and roadmap for the institution's digital transformation.

1.17 **Rationale.** To decrease the economic and social impact of climate change on the country (paragraphs 1.4 through 1.7) and contribute to closing infrastructure management and development gaps (paragraphs 1.11 through 1.16), it is essential to invest in improving and maintaining strategic assets that represent hot spots in the national logistics system, such as bridges. These investments must be based on the efficient prioritization of resources, with planning systems that incorporate criteria related to climate change resilience and social and productive connectivity, with a view to achieving positive socioeconomic outcomes, helping producers access new markets and production and consumption centers, and facilitating the beneficiary population's access to job opportunities and basic services. This approach to infrastructure planning lays the groundwork for making more efficient use of public resources by promoting their replicability in other sectors and in line with the Dominican government's strategy, in which several of the strategic pillars are focused on supporting economic and social development through the provision of resilient, sustainable infrastructure (paragraph 1.24).

1.18 **Proposed intervention and nonfinancial additionality.** The program's interventions will target 150 bridges in several provinces in the country, and they will include a periodic and routine maintenance strategy. The eligibility of bridges for program interventions will be determined based on their very high/high levels of vulnerability and criticality to natural disasters and climate change,[37] resulting from the application of the BSA (paragraph 2.4). Considering all eligible bridges, the following prioritization criteria will be incorporated: (i) the percentage of the population living in monetary poverty[38] in the bridges' area of influence and their need to access basic healthcare and education services, according to data from the municipal district in which they are located (paragraph 1.13); (ii) the connectivity of the infrastructure with areas with high productive potential, in line with the national logistics system's chains and based on data from the Provincial Productive Profiles 2022 (paragraph 1.12); and (iii) the technical level of

[37] Execution of hydrological-hydraulic analyses using intensity-duration-frequency curves that consider extreme levels of precipitation in the design of access embankments, drainage, and the hydraulic capacity of bridges and engineering works.

[38] At least 20% of the municipio in which the bridge is located must be living in monetary poverty, according to the current Bulletin of Official Monetary Poverty Statistics.

intervention of the MOPC's bridge inventory. The intervention will ensure the availability, levels of service, and functionality of each bridge, generating benefits in terms of connectivity for the populations and producers located near each one. To ensure the resilience of the prioritized bridges, the operation will apply a methodology that incorporates climate variability and detailed hydrodynamic analyses using the IDB's computer model HydroBID Flood. This will help generate information to evaluate the current state of bridges, and to verify or improve the design of the bridges' elements, as well as ensure their resilience to future extreme weather events, in harmony with the built environment and adaptive territorial development.

1.19 **Empirical evidence.** Implementing climate change adaptation measures has positive impacts on economic activity, precisely because these interventions aim to prevent or mitigate the negative effects of weather events on people, human settlements, infrastructure, or livelihoods, thereby reducing their related losses and damage. In the case of the transportation sector, the construction of resilient infrastructure that takes into account disaster risk and the impacts of climate change prevents costs associated with their rehabilitation, repair, and reconstruction. According to estimates,[39] investing in resilience and disaster risk prevention in infrastructure yields returns, as benefits are four to seven times greater than costs in terms of damages and losses prevented. Moreover, a United Nations Development Programme analysis determined that returns on investments in disaster risk reduction are very high, as each dollar invested in disaster prevention can yield savings of seven dollars in economic losses attributable to disasters.[40] A model proposed by the OECD reached a similar conclusion,[41] projecting that the GDP of the G20 would be 2.5% higher than what is forecasted under current conditions, but if prevented climate change-related costs were considered, it could be as much as 4.7% higher.

1.20 **The Bank's experience and value-added.** The Bank is one of the great drivers of decarbonization and climate resilience in the region's transportation sector, in line with countries' commitments under the Paris Agreement. For several years, the Bank has been providing technical and financial support to the Dominican government to strengthen its transportation infrastructure and make it resilient, especially in the supported investment projects. The design of the Manzanillo Port Rehabilitation and Expansion program (5282/OC-DR; US$100,000,000) addressed the risk of tsunamis and torrential rain, as these were determining variables in selecting the technical solution for the new offshore terminal. The Road Infrastructure Rehabilitation and Maintenance Program in the Dominican Republic (5504/OC-DR; US$140,000,000) used project eligibility criteria based on the results of a multicriteria matrix grounded in the BSA methodology. Furthermore, to improve planning and regulatory considerations, the Bank has supported the following since 2019: (i) updating of design, construction, and maintenance regulations for highways and rural access roads, as well as the first regulation for bridges incorporating climate resilience technical standards (ATN/OC-16831-DR; US$650,000); (ii) implementation of the BSA (paragraph 1.10) and the

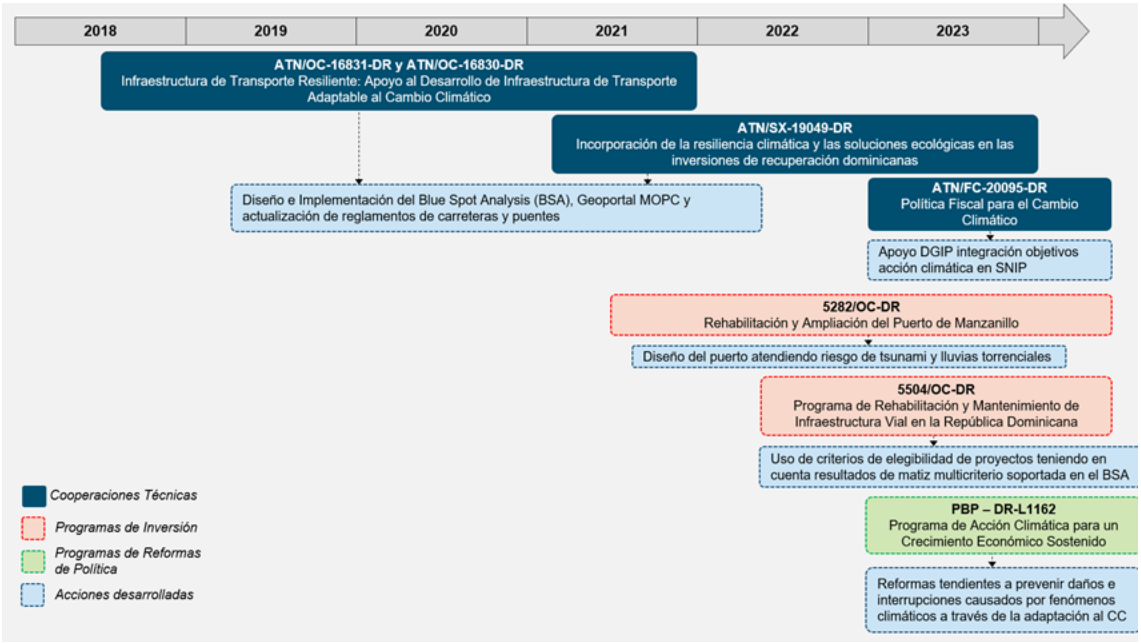
[39] United Nations Office of Disaster Risk Reduction, 2011; and Kull, et al., 2013.

[40] United Nations Development Programme (2010) Disaster Risk Reduction and Recovery.

[41] OECD (2018) Investing in Climate, Investing in Growth.

materialization of its application and value-added through the creation of the Geoportal, which facilitates the management and visualization of information relevant to the infrastructure; (iii) the General Directorate of Public Investment's support for integration of climate action objectives (adaptation and mitigation) in the framework of the National Public Investment System (ATN/FC-20095-DR; US$660,000); (iv) approval of the Climate Action Program for Sustained Economic Growth[42] (5806/OC-DR, US$300,000,000), which promotes an ambitious set of reforms that aim to prevent damages and disruptions to economic activity caused by extreme weather events through climate change adaptation, as well as increase the productivity and competitiveness of the economy through efficiency gains from its increased decarbonization; and (v) drafting and processing of Law 368-22 on Land-use Planning, Soil Use, and Human Settlements, which articulates the constitutional mandate for territorial development considering climate change adaptation and resilience to extreme natural events, for which this program's development is instrumental because of its complementarity and alignment (optional link 4). This support provided by the Bank has resulted not only in the improvement of technical aspects for planning projects, but also in the institutional strengthening of the MOPC and other involved institutions, which is reflected in the satisfactory results in the execution of the various programs financed in recent years (paragraph 3.1).

Figure 5. The Bank's value-added



Source: IDB, 2024.

1.21 **Lessons learned.** The Bank's experience with similar programs in the region, as well as its work with the country in recent years, has generated the following lessons learned, which have been incorporated into the preparation of this operation: (i) having an expeditious and multicriteria methodology that enables the

[42] Policy-based loan.

appropriate prioritization of investments, limiting the use of discretionary criteria; (ii) strengthening climate and disaster risk analysis and management processes, as a mechanism to support the sustainability of investments (paragraph 1.10); and (iii) providing continuity and strengthening the maintenance financing modalities based on levels of service with an inclusive approach focused on gender and persons with disabilities (paragraph 1.36). For the execution stage, other lessons learned will be incorporated that have been successful in programs financed in the country, most notably: (i) having timely access to engineering studies with an appropriate level of analysis prior to starting bidding processes, to reduce uncertainty in scope and potential cost overruns (paragraph 3.3); and (ii) having computer and technological tools that help to manage, supervise, and monitor the execution of works and level of investment (optional link 5).

1.22 **Coordination with other Bank projects in the sector.** The program will complement the investments that are currently being executed by programs 5282/OC-DR and 5504/OC-DR (paragraph 1.20), which focus on rehabilitating logistics corridors, highways, and rural access roads in production areas that are hard to reach. The accessibility and connectivity of many of these are greatly affected during periods of intense precipitation, especially due to disruptions at hot spots crossing over bodies of water. This program also complements policy-based loan 5806/OC-DR (paragraph 1.20), which seeks to contribute to the country's sustained economic growth through climate action and proposes two reforms directly linked to this operation: the adoption and use of the BSA in National Public Investment System projects as a planning and prioritization methodology for investments in transportation infrastructure, based on the incorporation of climate resilience and adaptation criteria. Lastly, there are synergies with the Yuna Watershed Management Plan Project (DR-L1161; US$255,000,000), currently in preparation, as, complementarily, this program analyzes the possibility of targeting some of the bridges located in that watershed.

1.23 **Synergies with the healthcare and education sectors.** In the healthcare sector, the Bank is currently supporting measures to eradicate malaria in 12 outbreak areas in several provinces in the country (GRT/MM-17254-DR) by promoting its passive detection in healthcare centers. However, access to quality primary care services in remote or rural areas is hindered by the absence or unavailability of connectivity infrastructure, especially in periods of intense precipitation. In the education sector, despite the lack of an active portfolio, the Bank supports the Government's development of the Ten-Year Education Plan 2024-2034. One of its components relates to physical access to education centers, which is adversely affected by deficient transportation infrastructure that lacks connectivity, especially in the most remote areas. Ensuring that the country's bridge infrastructure facilitates travel to healthcare and education centers, in any weather conditions, will help mitigate barriers to accessing services in these sectors.

1.24 **Government strategy.** The National Development Strategy 2010-2030 lines of action include: "Develop a prioritization system for transportation and logistics infrastructure projects according to their economic and social returns and their contribution to a communications network that interconnects the country." Likewise, the Ministry of Economy, Planning, and Development's guidelines for developing the Multiyear National Public Sector Plan 2021-2024 include strengthening supply chains and logistics infrastructure as a key pillar of action for

improving competitiveness, while the Development, Economic Policy, and Fiscal Sustainability Strategy prioritizes investment in resilient and sustainable infrastructure as a pillar[43] for economic growth, based on its influence on industrial, business, tourism, and agricultural productivity.[44]

1.25 **IDB Group strategy with the country.** The program supports the fulfilment of the IDB Group Country Strategy with the Dominican Republic (2021-2024) (GN-3084), and specifically the priority area of a sustainable, inclusive, and competitive economy, through the achievement of the expected outcomes related to the improved quality of transportation and logistics infrastructure; the increased climate resilience of the transportation network; and the promotion of infrastructure projects that incorporate the hydrological and hydraulics analysis from the design phase, including the potential effects of climate change on extreme precipitation and flooding.

1.26 **Strategic alignment.** The program is aligned with the IDB Group Institutional Strategy: Transforming for Scale and Impact (CA-631) and its objectives: (i) address climate change, by implementing adaptation considerations in the planning, design, construction, operation, and maintenance stages to reduce the potential impacts of extreme weather events on infrastructure (paragraph 1.35); and (ii) bolster sustainable regional growth, by providing reliable and resilient infrastructure that enhances local producers' access to markets and the population's access to social services (paragraph 1.18). The program is also aligned with the following operational focus areas: (i) biodiversity, natural capital, and climate action; (ii) sustainable, resilient, and inclusive infrastructure (paragraph 1.34); (iii) gender equality and the inclusion of diverse population groups (paragraph 1.31); and (iv) institutional capacity, rule of law, and citizen security (paragraph 1.37).

1.27 The operation is also strategically aligned with the following crosscutting areas: (i) climate change and environmental sustainability, by incorporating climate change adaptation considerations into the design and construction phases, with a view to reducing the potential impacts of extreme weather events on infrastructure; and (ii) gender equality and diversity, by promoting opportunities for women's workforce participation in traditional and nontraditional activities in the infrastructure sector, and by improving vulnerable users' access to healthcare and education social services.

1.28 The program has been reviewed using the Joint MDB Assessment Framework for Paris alignment and the IDB Group Paris Alignment Implementation Approach (GN-3142-1) and is deemed to be: (i) aligned with the adaptation target of the Paris Agreement; and (ii) universally aligned with the mitigation target of the Paris Agreement.

1.29 An estimated 50.60% of the operation's resources are invested in climate change adaptation activities, according to the joint methodology of the multilateral development banks for tracking climate finance (optional link 1). These resources

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[43] Latin American and Caribbean Macroeconomic Report (IDB, 2019).

[44] A 1% increase in transport productivity would increase agricultural productivity by 1.2%. (IDB, 2019).

contribute to the IDB Group target of increasing climate-related financing to 30% of annual approvals.

1.30 Lastly, the program is consistent with the IDB Infrastructure Strategy: Sustainable Infrastructure for Competitiveness and Inclusive Growth (GN-2710-5), by supporting the delivery of road infrastructure that improves accessibility, serviceability, and safety for users. It is also aligned with (i) the Transportation Sector Framework Document (GN-2740-12), Climate Change Sector Framework Document (GN-2835-13), and Skills Development Sector Framework Document (GN-3012-3), by improving connectivity and incorporating climate action in investments, and by boosting the sector's technological transformation; and (ii) the IDB Group Gender and Diversity Action Plan 2022-2025 (GN-3116-1) by including actions that promote the inclusion of women in nontraditional jobs.

1.31 **Gender actions.** The program will help close the gaps in women's workforce participation (paragraph 1.14) through: (i) implementation of the actions prioritized in the gender action plan of the MOPC's Office of the Deputy Minister of Planning, such as the creation of regulations, protocols, and procedures that help to standardize the gender-based approach and international good practices in infrastructure planning, design, construction, and operation processes; (ii) consolidation of the inclusive bidding system with a gender-based approach through results- and performance-based contracts for bridge maintenance; and (iii) implementation of a paid internship program in contracting firms that provides training for women in road engineering sectors related to the management, technical design, or construction and maintenance of roads and bridge structures.

1.32 **Inclusion actions for persons with disabilities.** The program includes bridge infrastructure interventions that seek to ensure universal accessibility, while incentivizing the contracting of workers with disabilities. To this end, the program includes the following activities: (i) development of universal accessibility standards in the design and construction of bridge infrastructure,[45] in accordance with applicable technical standards, international best practices, and recent institutional agreements; (ii) definition and adoption of incentives that promote the participation of persons with disabilities in the sector's workforce, as established in the applicable legislation; and; (iii) development and implementation of a training program for MOPC civil servants, contractors, and works supervision firms on the inclusion of persons with disabilities in the sector's workforce (optional link 2).

1.33 **Actions for technological modernization of the sector.** The program will aim to further develop specific aspects that will help modernize and deepen the digitalization of the MOPC's work as the entity responsible for building, maintaining, and operating bridge infrastructure nationwide. Thus, the following activities have been prioritized: (i) design and implementation of an asset management system that among other things, favors proper prioritization in periodic and routine maintenance works, complements the MOPC's other existing tools, and enables the maintenance of an updated nationwide bridge inventory; (ii) development of pilot programs that incorporate bridge sensors and robotics systems to monitor the condition of bridge structures in real time, in order to identify

[45] Ramps with appropriate gradients, rails, bridges, sidewalks in urban areas with podotactile tiles, and other elements depending on the context of each structure.

extreme weather conditions, corrosion, vibrations, deformities, and other measurements. These will serve as inputs for the management systems, thereby improving decision-making in terms of infrastructure design and maintenance; and (iii) the launch of a document management and information system, including cybersecurity elements, that will enable the standardization of monitoring and digitalization processes and mechanisms in projects executed by the MOPC's execution unit for externally financed projects (UEPFRE).

B. Objectives, components, and cost

1.34 The general objective of the program is to contribute to the sustained and inclusive economic growth of the Dominican Republic. The specific objective is to improve the climate resilience of the country's bridge infrastructure.

1.35 **Component 1. Climate resilience of bridge infrastructure (US$169,000,000).** This component will finance: (i) the construction, rehabilitation, and improvement of bridge infrastructure[46] throughout the country,[47] in rural and urban areas, including the design and implementation of climate resilience measures. Specific activities to be executed include the restoration of their structural and functional characteristics, the adaptation of access structures to support expected transit loads, and the incorporation of road safety measures for pedestrians, cyclists, and children, as well as universal accessibility measures for persons with disabilities; and (ii) the supervision of the works to be executed. For these activities, the component will promote contracting systems that are inclusive of small and medium-sized enterprises, preferably led by women.

1.36 **Component 2. Maintenance of bridge infrastructure (US$19,000,000).** This component will finance the implementation of a periodic and routine maintenance program for critical infrastructure that does not require major interventions, but only improvements to structural, operational, and functional aspects to guarantee the infrastructure's useful life. These actions will be carried out within a framework of results- and performance-based contracts including indicators that measure levels of service and that promote the contracting of local staff, small women-led enterprises and/or women contractors, in line with the objective of increasing women's participation in the sector.

1.37 **Component 3. Infrastructure management (US$6,000,000).** This component will finance: (i) engineering designs and technical and economic feasibility studies for bridge rehabilitation and reconstruction, including climate and natural disaster resilience considerations; (ii) technical consulting services to support the executing agency in climate change-resilient infrastructure planning, contract monitoring, and the updating of technical protocols and manuals for the construction, operation, and maintenance of bridges and hydraulic structures; (iii) procurement of equipment and development of technological tools for the inventory of bridges and

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46 The intervention does not include greenfield bridges, but rather the rehabilitation of existing structures or building new ones to replace bridges that have collapsed or are in danger of collapsing.

47 The sample of projects, according to the prioritization criteria that have been defined (paragraph 2.3), includes interventions in the following provinces: Azua, National District, Duarte, El Seibo, Hato Mayor, La Altagracia, La Vega, María Trinidad Sánchez, Monseñor Nouel, Montecristi, Monte Plata, Puerto Plata, San Cristóbal, San Juan, Santiago, and Santo Domingo.

their climate change resilient management, including structural and hydrometeorological monitoring tools; (iv) design and implementation of a technology platform for document, project, and information system management, including cybersecurity elements; (v) consulting services to support the MOPC's gender action plan, including information and dissemination activities and workshops; (vi) design of a training and internship program for women in contracting firms; and (vii) development and implementation of an action plan for the inclusion of persons of disabilities in the MOPC and in construction and supervision firms, including training and awareness-raising workshops.

1.38 **Component 4. Technical, socioenvironmental, and climate resilience considerations (US$3,000,000).** This component will finance: (i) development of the environmental and social management program; (ii) technological development to optimize the BSA tool, including data management and monitoring systems; (iii) development of a national intensity-duration-frequency curve library, taking climate change conditions into account; (iv) training workshops for the MOPC on hydrology and hydraulic topics, with a focus on climate change, including failure mode identification on drainage works and bridges; (v) design of a technical manual to incorporate sustainable procurement in the MOPC's infrastructure bidding processes; and (vi) resettlement and economic compensation plans stemming from the interventions.

1.39 **Support for program administration (US$3,000,000).** This will finance operating and administrative costs such as the coordination of execution, including execution agency staff working on the program. It will also finance program audits, midterm and final evaluations, and a social and productive impact evaluation including baseline and monitoring.

C. Key results indicators

1.40 The indicators (Annex II) for measuring the general objective will be: (i) average annual public investment in repairs to bridge infrastructure, due to damages arising from weather-related emergencies, which is expected to decrease over time and generate savings for the government (paragraph 1.4); (ii) women's workforce participation in projects executed by the Ministry of Public Works and Communications' UEPFRE; (iii) average annual traffic disruptions affecting access to healthcare and education services, due to floods impacting the bridges targeted by the program, measured independently for each case; and (iv) losses reported by agricultural producers in the area of influence of the bridges targeted by the program, because of traffic disruptions stemming from overflowing rivers and/or the collapse of structures. The indicator to measure the specific objective will be average annual traffic disruptions on the bridges targeted by the program, due to floods associated with weather events.

1.41 **Economic analysis**. An ex ante cost-benefit analysis was carried out based on the BSA's methodological guidelines (optional link 8) to determine costs and benefits generated by savings from the damages and losses prevented through the planned interventions. The analysis of the project sample, using a discount rate of 12%, yielded an economic internal rate of return of 66.5% and an economic net present value of US$940,500,000 under baseline conditions and assumptions. The soundness of the program's expected efficiency under the most unfavorable

scenarios was also verified through a sensitivity analysis that combined a 20% increase in the investment cost and a 20% decrease in benefits, which yielded an economic net present value of US$737,500,000 and an economic internal rate of return of 55.1%.

1.42 **Beneficiaries.** The direct beneficiaries of the program will be the inhabitants of the area of influence of each of the structures, who cross the targeted bridges to carry out productive and commercial activities and access services. The project sample (paragraph 2.3), using a 5-kilometer buffer, identified a total of 1,140,000 beneficiaries (10.5% of the country's population), of which 576,000 are women. Therefore, it is expected that the totality of the program will have positive impacts for around 33% of Dominicans, including approximately 1,790,000 women. Moreover, an inclusive employability model should generate benefits in local job creation, including the workforce participation of women in the sector (paragraph 1.31). The planned interventions, through the incorporation of climate resilience measures, are also expected to have a positive impact in terms of preventing damages and losses from climate change related events. An estimate made by the BSA tool shows annual prevented losses of US$24,100,000 and annual prevented damages of US$26,600,000. These figures, projected over the average 30-year lifespan of a bridge, would total between US$1.2 billion and US$1.5 billion, based on different sensitivity scenarios. Lastly, the Dominican government will benefit in terms of public management, by having proven tools that can be scaled to other sectors that will enable the prioritization of infrastructure investment with a focus on resilience to climate change, enhancing savings in terms of damages and losses avoided.

II. Financing Structure and Main Risks

A. Financing instruments

2.1 **Modality.** The operation complies with the requirements of the operational guidelines for multiple works programs. The projects entail works that are similar but independent. The works' feasibility does not depend on the execution of others, and their individual size does not justify that they be managed directly. Each project will meet the established eligibility criteria, in accordance with the representative sample (paragraph 2.3).

2.2 **Cost and financing.** The total cost of the investment program is US$200 million, to be financed from the Bank's Ordinary Capital, as indicated in Table 1. The itemized budget is available in the multiyear execution plan and the annual work plan (required link 1). The disbursement period will be five years, and the disbursement schedule can be found in Table 2.

Table 1. Estimated program cost[48] (US$)

Components	IDB	%
Component I. Climate resilience of bridge infrastructure	**169,000,000**	**84.5**
Rehabilitation of bridges and hydraulic structures	162,240,000	
Supervision of rehabilitation works on bridges and hydraulic structures	6,760,000	
Component II. Maintenance of bridge infrastructure	**19,000,000**	**9.5**
Periodic and routine infrastructure maintenance by service level	19,000,000	
Component III. Infrastructure management	**6,000,000**	**3.0**
Engineering designs and feasibility studies	1,800,000	
Technical support consulting services	1,700,000	
Procurement of equipment, tools, and technology platforms	2,250,000	
Preparation and implementation of action plans, workshops, and training	250,000	
Component IV. Technical, socioenvironmental, and climate resilience considerations	**3,000,000**	**1.5**
Environmental and social management program	800,000	
Development of tools, manuals, and workshops	1,200,000	
Implementation of resettlement and economic compensation plans	1,000,000	
Support for program administration	**3,000,000**	**1.5**
Operating and administrative costs	2,300,000	
Audits	300,000	
Midterm, final, and impact evaluations	400,000	
Total	**200,000,000**	**100**

Table 2. Disbursement schedule (US$)

Source/Year	1	2	3	4	5	Total
Total	14,249,223	60,304,090	62,970,663	50,001,740	12,474,284	**200,000,000**
%	7.1%	30.2%	31.5%	25.0%	6.2%	**100.0**

2.3 **Representative sample.** The representative rehabilitation project sample, worth US$64,010,000, represents 32% of the program's total cost. The projects in the sample meet the established eligibility criteria (paragraph 2.4).

2.4 **Eligibility criteria.** The eligibility criteria to be met by all the bridge rehabilitation projects in the program are: (i) they have high/very high levels of vulnerability and criticality to natural disaster risks stemming from climate change, based on the application of the BSA; (ii) they have socioeconomic feasibility studies that show an economic internal rate of return equal to or greater than 12% for Component 1; and (iii) they are not classified as a Category "A" projects under the Bank's environmental and social policies (Environmental and Social Policy Framework). These eligibility criteria will also be met by all other projects financed by the program outside of the sample.

[48] The costs presented within each component are indicative and may vary in the projects' final design stage.

B. Environmental and social risks

2.5 The program is classified as a Category “B” operation under the Environmental and Social Policy Framework and the results of the assessment conducted as part of the due diligence of projects in the representative sample, because the construction, rehabilitation, and improvement works will generate negative environmental and social impacts that will be localized and of limited duration, and for which there are effective and available mitigation measures. These impacts are typical for this type of intervention and include temporary lane closures, traffic restrictions, dust, noise, vibrations, the generation and inadequate disposal of construction debris, impacts on the community from the installation of camps and mobilization of labor, and accidents affecting workers and the population. The intervention will widen the cross section of some of the bridges, which involves impacts beyond the actual targeted area. The operation will not cause involuntary resettlement and/or economic displacement in the works in the sample. The presence of Indigenous populations has not been identified in the areas of intervention. The operation’s environmental and social risk rating is substantial due to the number of interventions and because it will be the first operation executed under the executing agency’s environmental and social policy framework.

2.6 The disaster risk and climate change classification is high because the operation targets infrastructure elements with a high level of exposure to different geophysical and hydrometeorological hazards, primarily river flooding that is projected to increase in the medium and long term owing to the effects of climate change.

2.7 The program’s works have been selected due to their high level of vulnerability and/or criticality in the transportation network. The program is not expected to notably exacerbate risks or maladaptive practices. However, to avoid potential negative impacts on third parties, exhaustive due diligence will be required in the preparation of a limited number of specific projects that have been identified. The disaster risk management plan includes structural and nonstructural measures to mitigate the risk associated with the program’s works, in a manner that is proportional to each case, with an emphasis on the abovementioned specific cases. Nonstructural measures include the mandatory emergency and contingency plan for disaster events.

2.8 The program includes an environmental and social assessment and environmental and social management plans for the projects in the sample, while an environmental and social management framework has been prepared for projects outside of the program’s sample, as well as an environmental and social management system and an involuntary resettlement framework.

2.9 A stakeholder participation plan has been developed and consultations were carried out at the end of March and in the third week of April 2024. Overall, stakeholders support the program’s activities. The consultations addressed topics such as the possibility of increasing the number of targeted bridges, maintaining the communication process with neighbors, and the works’ start-up dates. The final versions of the environmental and social documents and the consultation report were published on 21 May 2024, and the involuntary resettlement framework was published on 29 May 2024.

C. Fiduciary risks

2.10 The procurement of works, goods, and consulting services (paragraph 3.6) will be undertaken in accordance with current policies. The Bank used the Institutional Capacity Assessment Platform to assess the executing agency's operating performance in March 2024. The findings of the assessment indicate that the agency's fiduciary performance is satisfactory because it has extensive knowledge and experience in implementing Bank-financed projects and is familiar with its operational and financial management policies. However, the following medium-high risk was identified: operational overload in the simultaneous execution of programs, as the executing agency is currently executing three IDB loans.[49] To mitigate this risk, the program includes resources to strengthen the executing agency and support its operational management (paragraph 1.39), as well as a contractual clause to provide technical and management staff who will work exclusively on the program (paragraph 3.4), in addition to designated resources for contracting specialized external consultants to support specific management tasks.

D. Other key issues and risks

2.11 **Additional risks.** Potential medium-high risks have been identified related to: (i) low budget allocation to the program by the Ministry of Finance, leading to a divergence from the multiyear plan established to effectively achieve the operation's physical and financial targets. Mitigation measures include: (a) referring the first 18 months of execution planning to the Directorate of Public Credit at least three months before the preparation of the annual investment budget begins; (b) structuring the bidding processes for the projects in the sample during the period including the program's approval, ratification, effectiveness, and eligibility, in order to create an incentive for a high level of resource allocation with a view to increasing execution; and (c) scheduling high-level meetings to highlight the execution averages and results of the UEPFRE's projects under way (effectiveness of the interventions); and (ii) delays in the ratification process and subsequent entry into effect of the loan contract, which may delay the program's entry into effect and subsequent execution. Mitigation actions and measures include: (a) a continuous process of informing, enlisting, and consulting with incoming authorities on the program's relevance, the progress status of program planning, and the program's anticipated impacts and benefits; and (b) ensuring the constant flow of preinvestment resources for the prioritization of bridges that will be targeted outside of the sample, in accordance with eligibility criteria and the structuring of bidding processes, with a view to proposing more ambitious execution targets during the first 18-24 months.

2.12 **Sustainability.** In addition to resources for the construction, rehabilitation, and improvements to bridges, the program has a specific line item for the implementation of a maintenance program for other bridges requiring this type of

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[49] Sustainable Agroforestry Development Program (4553/OC-DR - 2019), closing phase; Manzanillo Port Rehabilitation and Expansion (5282/OC-DR - 2021), in execution, 44% disbursed with the start of the port rehabilitation contract in March 2024; and the Road Infrastructure Rehabilitation and Maintenance Program in the Dominican Republic (5504/OC-DR - 2022), in execution, 16% disbursed, with contracts awarded worth US$61 million.

intervention, to ensure their medium-term upkeep through two-year contracts (paragraph 1.36). For the bridges targeted in Component 1 and in the long term, the MOPC will allocate budget resources to ensure the sustainability of investments, as it has been doing for the various Bank-financed programs. This has been done through contracts that are, for the most part, executed regularly by the MOPC's Office of the Deputy Minister for Road Maintenance,[50] which have yielded satisfactory results in terms of periodic and routine maintenance. Along this line, the program considers the procurement and implementation of an asset management system financed under Component 3, which will facilitate the appropriate prioritization of investments in accordance with the specific maintenance needs of each structure. Lastly, it is notable that the investment budget allocated to the MOPC in 2023 was approximately US$840,000,000, of which 23.3% was dedicated to the road safety and assistance program. This demonstrates the Government's economic and political commitment[51] to maintaining these types of investments over time, which makes them available and stable over the long term. Although the scope of this program extends primarily to bridges at the regional and rural levels (the most critical and vulnerable structures), the IDB, in coordination with the World Bank, has expressed its intention to the MOPC to promote medium- and long-term maintenance systems with linkages to the private sector, through rehabilitation and maintenance type contracts, through the optimization of the current RD-VIAL trust structure, which is responsible for the collection and administration of tolls on the country's primary road network.

III. Implementation and Management Plan

A. Summary of implementation arrangements

3.1 **Borrower and executing agency.** The borrower will be the Dominican Republic, and the executing agency will be the MOPC through its UEPFRE,[52] which has over two decades of experience in executing projects with the Bank and other international organizations. This executing agency has in recent years had satisfactory performance in the execution of investment projects,[53] with positive assessments in fulfillment of outcomes and application of Bank policies and safeguards. The MOPC will coordinate and manage project execution, including fiduciary management activities, works supervision, and environmental and social matters. The UEPFRE will have a technical team supported by expert staff, based on specific program execution needs. The executing agency's functions and responsibilities in terms of execution include: (i) planning, coordinating, managing, and evaluating the execution of the works; (ii) outlining the work plan and preparing the annual and multiyear budgets; (iii) maintaining appropriate controls and

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50 Responsible for the maintenance and conservation of roadways and structures that make citizen mobility possible, on the basis of a preventive approach devoted to continuous service.

51 The history of the investment budget in recent years shows that the MOPC and its projects have been the second priority line item in terms of allocations. Therefore, this trend is expected to continue despite potential changes in the executive branch.

52 Established through MOPC Resolution 14/2018.

53 Programs 5504/OC-CO (road improvement) and 5282/OC-CO (Manzanillo port) show linear financial progress (disbursements) with respect to the execution period, which are incremental with respect to the annual budgetary allocation between fiscal years 2022 and 2024.

accounting and financial records; (iv) coordinating the management of disbursements with the Bank; (v) executing competitive and bidding processes, in accordance with technical studies and files; (vi) implementing monitoring and supervision activities; and (vii) preparing and submitting financial reports on execution and audited financial statements to the Bank.

3.2 Considering the identified fiduciary risks (paragraph 2.10) and based on the recommendation of the Bank's Office of the Executive Auditor, in April 2023 consulting services were contracted to conduct an institutional structure assessment and optimization proposal for the executing agency using a hybrid methodology that combined the Institutional Capacity Assessment Platform and *ad hoc* elements to identify strengths, weaknesses, solutions, and good practices. The resulting recommendations, some of which are already being implemented, include: (i) improve the executing agency's physical infrastructure; (ii) strengthen the executing agency's staff and equipment; (iii) restructure the internal functions organizational chart; (iv) implement procedures manuals, guides, and formats; and (v) develop a functions manual. Complementarily, and as part of the actions aiming to strengthen project execution, the UEPFRE has worked with the Office of Institutional Integrity to incorporate prevention, integrity risk, due diligence, and other measures for contractors into its bidding documents, including specific training in this area.

3.3 **Program execution arrangements.** Program execution is expected to begin with bidding on the first batches of rehabilitation works for the bridges in the sample, once the program has been approved and ratified by the legislative branch, and in accordance with the progress status of studies and designs.[54] The procurement periods will be sequenced in a manner consistent with budget availability and the technical teams' operational capacity. Experience with other multiple works programs in the country shows that preparing designs in advance allows physical execution to begin 12 months after the entry into effect of the loan contract. The procurement structure by batches responds to the need to geographically group the interventions according to structure type and based on the development of bidding processes for amounts consistent with the scale of the potential bidding market. Periodic and routine maintenance contracts by service level will be structured to encourage the participation of small and medium-sized enterprises at the regional level, prioritizing the employability of women in operating, technical, and management jobs.

3.4 **Special contractual conditions precedent to the first disbursement of the loan: (i) approval of the program Operating Regulations (optional link 9) including workflows, internal controls, and environmental and social management plans describing the requirements and procedures that apply to program execution, under the terms previously agreed upon with the Bank; and (ii) the appointment of the following staff for the program's execution: (a) project manager; (b) technical coordinator; (c) hydraulic specialist; (d) hydrology specialist with expertise in climate change; (e) planning specialist; (f) procurement specialist; (g) financial specialist;**

[54] The final designs of the first batches of bridges will be prepared with resources from technical cooperation operation DR-T1288 (in preparation), with physical execution to begin once the administrative process of program approval and ratification is complete.

(h) structural specialist; (i) environmental specialist; and (j) social specialist with experience in gender and diversity. These measures are necessary since, based on the Bank's experience in the region, the approval of the program Operating Regulations prior to the first disbursement supports the executing agency's internal organization for implementation of the operation. Additionally, the program must have staff in specific roles to achieve the proposed objectives.

3.5 **Fiduciary agreements and requirements.** These establish the framework for financial management and planning, as well as supervision of the anticipated procurement during program execution. Loan proceeds may be disbursed through the modalities of advances of funds, expenditure reimbursement, and direct payments to suppliers. In the case of advances of funds, disbursements will be made according to the program's financial plan covering a period of up to six months. The Bank may advance additional funds once at least 80% of the funds advanced have been accounted for. The financial review of disbursement requests will be conducted on an ex post basis (Annex III).

3.6 **Procurement of works, goods, and services.** Works, goods, and consulting services will be procured in accordance with the Policies for the Procurement of Goods and Works Financed by the Inter-American Development Bank (GN-2349-15) and the Policies for the Selection and Contracting of Consultants Financed by the Inter-American Development Bank (GN-2350-15) or updates thereof. The procurement plan (required link 4) describes the expected procurements, in line with the fiduciary requirements and agreements annex.

3.7 **Audits.** The project's external audit will be conducted by an external audit firm acceptable to the Bank. The independent external audit firm will be hired and financed with program resources, in accordance with the procedures, terms of reference, and request for proposals that have received the Bank's no objection. During execution, the audited financial statements will be submitted: (i) annually to the Bank, within 120 days after the end of each fiscal year; and (ii) upon program completion, no later than 120 days after the last disbursement.

B. Summary of arrangements for monitoring results

3.8 **Monitoring.** The monitoring and evaluation plan (required link 2) will support the execution of the operation based on the targets and progress indicators outlined in the Results Matrix (Annex II). To this end, the following instruments will be used: (i) the multiyear execution plan, annual work plan, procurement plan, financial plan, results matrix, and annual external audits; (ii) semiannual progress reports, including indicators for monitoring impact, outcomes, execution of each component, and fulfillment of the operational requirements described in the program Operating Regulations (optional link 9); as well as the environmental, social, and occupational health and safety reports described in the environmental and social management plan (required link 3); and (iii) audited financial statements. In addition, the executing agency will collect, store, and process information, indicators, and parameters, including the annual plans and the final evaluation that are needed to prepare the project completion report.

3.9 **Evaluation.** A midterm evaluation and an ex post final evaluation will be conducted to measure the results of the program's anticipated interventions based on the

indicators in the Results Matrix. The evaluation methodology will include, at a minimum: (i) an ex post cost-benefit analysis, using the same methodology as the ex ante analysis, as described in (optional link 8); (ii) the results of financial execution; (iii) fulfillment of the established targets, based on the agreed results indicators; and (iv) fulfillment of contractual commitments.

3.10 In addition, an impact evaluation will be conducted to assess the extent to which the results achieved are attributable to the interventions. This evaluation will be based on data gathered in the field through surveys of households located within the area of influence of some of the targeted bridges, as well as others in control areas that are not expected to be targeted. The baseline surveys will be conducted before the first interventions, and monitoring will take place two years after the interventions are complete, which will enable the implementation of a difference-in-difference methodology for the attribution of results. The survey's main questions will focus on measuring outcomes related to households' access to healthcare and education services and their levels of agricultural productivity, with a gender- and diversity-based approach that facilitates the evaluation of impact on specific groups such as women and persons with disabilities. This evaluation will provide new empirical evidence on the impact on households of transportation infrastructure interventions that focus on improving climate resilience.

3.11 Since the results expected from the interventions are related to the mitigation of the negative impacts of extreme weather events, which occur sporadically, this operation requires additional time after completion to demonstrate the expected results. Therefore, the beginning of the project completion report will be extended to 24 months after operation's completion. This period will facilitate the proper measurement of the expected outcomes, including the determination of the monitoring activities required to evaluate impact.

Development Effectiveness Matrix		
Summary	DR-L1166	
I. Corporate and Country Priorities		
Section 1. IDB Group Institutional Strategy Alignment		
Operational Focus Areas	-Gender equality and inclusion of diverse population groups -Institutional capacity, rule of law, citizen security -Sustainable, resilient, and inclusive infrastructure	
[Space-Holder: Impact framework indicators]		
2. Country Development Objectives		
Country Strategy Results Matrix	GN-3084	Improve support services for the productive sector with emphasis on strengthening linkages, competitiveness and resilience
Country Program Results Matrix	GN-3207	The intervention is included in the 2024 Operational Program.
Relevance of this project to country development challenges (If not aligned to country strategy or country program)		
II. Development Outcomes - Evaluability		Evaluable
3. Evidence-based Assessment & Solution		10.0
3.1 Program Diagnosis		2.5
3.2 Proposed Interventions or Solutions		3.5
3.3 Results Matrix Quality		4.0
4. Ex ante Economic Analysis		9.0
4.1 Program has an ERR/NPV, or key outcomes identified for CEA		1.5
4.2 Identified and Quantified Benefits and Costs		3.0
4.3 Reasonable Assumptions		2.5
4.4 Sensitivity Analysis		2.0
4.5 Consistency with results matrix		0.0
5. Monitoring and Evaluation		9.5
5.1 Monitoring Mechanisms		4.0
5.2 Evaluation Plan		5.5
III. Risks & Mitigation Monitoring Matrix		
Overall risks rate = magnitude of risks*likelihood		Medium Low
Environmental & social risk classification		B
IV. IDB´s Role - Additionality		
The project relies on the use of country systems		
Fiduciary (VPC/FMP Criteria)	Yes	Budget, Treasury, Accounting and Reporting, External Control. Procurement: Price Comparison.
Non-Fiduciary		
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:		
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project		

Evaluability Assessment Note:
The specific objective of the Program is to: (i) Improve the climate resilience of the country's bridge infrastructure. The achievement of this objective will contribute to the General Objective of Contributing to the sustainable and inclusive economic growth of the Dominican Republic".

The project presents a complete diagnosis, with a correct description of the current situation of the bridge infrastructure's vulnerability to climate events and its consequences on accessibility to social services and markets. The specific objective meets the condition of having at least one outcome indicator, which is SMART, and has a defined means of verification.

The economic analysis of the project was carried out using a cost-benefit analysis (CBA), in which the benefits are estimated based on the value of the travel time saved by avoiding alternative routes. The CBA has plausible assumptions, uses an appropriate methodology (Road Economic Decision Model), and has an adequate sensitivity analysis. The analysis concludes that the project is economically viable, with an IRR of 66.5%, using a discount rate of 12% and an evaluation horizon of 20 years.

The project includes a monitoring and evaluation plan in accordance with Bank standards. The effectiveness of the proposed intervention at the Specific Objective level will be measured following ex-post cost-benefit approaches and a before-after comparison. Additionally, at the General Objective level, a difference-in-differences analysis approach will be adopted.

The main risks identified are associated with Executing Agency management capacity, budget allocation, and delays in the counterpart approval process. The likelihood of these risks is no higher than Medium-High.

RESULTS MATRIX

Project objective:	The general objective of the program is to contribute to the sustained and inclusive economic growth of the Dominican Republic. The specific objective is to improve the climate resilience of the country's bridge infrastructure.

GENERAL DEVELOPMENT OBJECTIVE

Indicators	Unit of measure	Base-line value	Base-line year	Target year	Target	Mean of verification	Comments
General development objective: Contribute to the sustained and inclusive economic growth of the Dominican Republic							
Average annual public investment in repairs to bridge infrastructure, due to damages arising from weather-related emergencies	Index[1]	100	2024	2032[2]	50	Data from the National Public Procurement System (SNCCP) Agency responsible: MOPC	Baseline: US$31.09 million[3] (average from 2021 to 2023) Target: average from 2030 to 2032
Women's workforce participation in projects executed by the Ministry of Public Works and Communications' UEPFRE	%	7.2	2024	2030	10.0	Monitoring Report Agency responsible: MOPC	Baseline: Includes program impact (5504/OC-DR)

1 "Index" is used as a unit of measurement to homogenize the outcomes of different projects. The baseline value is defined as an index of 100 and targets are calculated as a proportional value of this baseline. Details can be found in the monitoring and evaluation plan.

2 Measurement is expected two years after project completion for the real measurement of long-term impacts once total execution is complete.

3 See calculation details in the monitoring and evaluation plan.

Indicators	Unit of measure	Base-line value	Base-line year	Target year	Target	Mean of verification	Comments
Average annual traffic disruptions[4] affecting access to healthcare services due to floods impacting the bridges targeted by the program[5]	Index	100	2023	2032	50	Surveys conducted in the area of influence of the bridges connecting to the identified healthcare centers[6] Agency responsible: MOPC	Baseline: 1.2 disruptions per year, lasting an average of 32 hours
Average annual traffic disruptions[7] affecting access to education services due to floods impacting the bridges targeted by the program	Index	100	2023	2032	50	Surveys conducted in the area of influence of the bridges connecting to the identified education centers[8] Agency responsible: MOPC	Baseline: 4.0 disruptions per year, lasting an average of 102.7 hours
Losses reported by agricultural producers in the area of influence of the bridges targeted by the program due to traffic disruptions stemming from overflowing rivers and/or the collapse of structures	Index	100	2023	2032	40	Surveys of producers in the identified provinces and municipios Agency responsible: MOPC	Baseline: 4.72% (percentage of annual losses reported in 2023)

4 Average number of times per year that access was cut off to healthcare centers in the projects' area of influence because bridges were closed to traffic, or their access was restricted, due to weather events. Surveys are used to determine the number of disruptions (# of events) per bridge, and the average is calculated for the number of targeted bridges.

5 The impact evaluation that will be developed for the program will aim to measure the extent to which this objective is achieved, in terms of this indicator: the number of disruptions in access to education services and losses reported by agricultural producers. Therefore, this evaluation's final design will allow their adjustment or the proposal of new ones to be included in the operation's start-up workshop.

6 Centers identified: La Reforma (municipio of Agua Santa del Yuna), CPN Lucia Contreras (municipio of Chirino), CPNA Mata Mamón (municipio of La Victoria), Mogollón (San Juan), and Marcos Guerrero CPN Pontón (municipio of La Vega).

7 Average number of times per year that access was cut off to education centers in the projects' area of influence because bridges were closed to traffic, or their access was restricted, due to weather events. Surveys are used to determine the number of disruptions (# of events) per bridge, and the average is calculated for the number of targeted bridges.

8 Centers identified: Hermanas Mirabal, San Isidro (municipio of Riva), José Altagracia Antigua Frías (municipio of Arenoso), Chirino, La Caguaza, Genaro Soriano Guzmán, Yabacao Abajo, Prof. Rogelio Guzmán (municipio of Monte Plata), Mogollón, Liceo Mogollón, Los Cerros, Pontón, José María de la Mota (municipio of La Vega), Franklin Mieses Burgos, and Juan Antonio Alix - Luz y Esperanza (municipio of San Antonio de Guerra).

SPECIFIC DEVELOPMENT OBJECTIVE

Indicators	Unit of measurement	Baseline value	Baseline year	Target year	Final target	Means of verification	Comments
Specific development objective 1: Improve the climate resilience of the country's bridge infrastructure							
Average annual traffic disruptions [9] on the bridges targeted by the program, due to floods associated with weather events	Index [10]	100	2023	2032[11]	30	Surveys conducted in the projects´ area of influence and MOPC reports of disruptions Agency responsible: MOPC	Baseline: 2.5 disruptions per year, lasting an average of 65 hours

OUTPUTS

Indicators	Unit of measure	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of project	Means of verification	Comments
Component 1: Climate resilience of bridge infrastructure											
Rehabilitated bridges and/or hydraulic structures including implementation of climate resilience measures	#	0	2024	0	30	50	50	20	150	Monitoring reports Agency responsible: MOPC	
Rehabilitated bridges incorporating universal accessibility standards	#	0		0	15	15	10	10	50		
Supervision of the contracted bridge interventions	#	0		2	4	2	0	0	8		
Component 2. Maintenance of bridge infrastructure											
Bridges and/or hydraulic structures maintained by service level	#	0	2024	0	0	20	50	30	100	Monitoring reports Agency responsible: MOPC	

[9] Average number of times per that there was no serviceability, the bridge was closed to traffic, or its access was restricted due to weather events. Surveys are used to determine the number of disruptions (# of events) per bridge, and the average is calculated for the number of targeted bridges.

[10] "Index" is used as a unit of measurement to homogenize the outcomes of different projects. The baseline value is defined as an index of 100 and targets are calculated as a proportional value of this baseline. Details can be found in the monitoring and evaluation plan.

[11] A two-year extension to complete the project completion report is requested in the operation's proposal (paragraph 3.11).

Indicators	Unit of measure	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of project	Means of verification	Comments
Component 3: Institutional strengthening for the climate change resilient management of bridge infrastructure											
Engineering designs and technical and economic feasibility studies executed for the program's projects	#	0	2024	1	2	0	0	0	3	Monitoring reports Agency responsible: MOPC	
Technical consulting services supporting the executing agency, completed	#	0		0	5	5	10	5	25		
Technological tools and equipment for the inventory and management of bridge infrastructure	#	0		1	2	0	0	0	3		
Technological platform for the management of documents, projects, and information systems	#	0		0	1	0	0	0	1		
Consulting services supporting the implementation of the MOPC's gender-based action plan, completed	#	0		0	0	1	0	0	1		
Training and internship program for women in contracting firms, designed	#	0		0	1	0	0	0	1		
Action plan implemented for the inclusion of persons with disabilities in the MOPC and construction and supervision firms	#	0		0	0	1	0	0	1		
Gender awareness workshops and gender-based planning tools within the MOPC	#	0		0	2	2	2	2	8		
Vehicles procured to support monitoring and supervision	#	0		0	12	0	0	0	12		
Component 4: Socioenvironmental and climate resilience considerations											
Environmental and social management program implemented for the rehabilitation, improvement, and maintenance of bridge infrastructure	#	0	2024	0	0	0	0	1	1	Monitoring reports Agency responsible: MOPC	
Technological development implemented for the optimization of the Blue Spot tool	#	0		0	1	0	0	0	1		
National intensity-duration-frequence curve library developed	#	0		0	0	1	0	0	1		

Indicators	Unit of measure	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of project	Means of verification	Comments
Training workshops developed on hydrology and hydraulic considerations with a climate change focus, including the identification of failure modes in drainage works and bridges	#	0		1	1	0	0	0	2		
Technical manual developed for the incorporation of sustainable procurement in the MOPC's infrastructure bidding processes	#	0		0	0	1	0	0	1		
Resettled and economically compensated social units	#	0		0	10	5	5	0	20		

Country: Dominican Republic **Division**: TSP **Operation:** DR-L1166 **Year**: 03/14/2024

FIDUCIARY AGREEMENTS AND REQUIREMENTS

Executing agency: Ministry of Public Works and Communications (MOPC), through the execution unit for externally financed projects (UEPFRE)

Operation name: Climate Resilience Program for Bridge Infrastructure in the Dominican Republic

I. Fiduciary Context of the Executing Agency

1. Use of country systems in the operation (any system or subsystem approved subsequently may be applicable to the operation, pursuant to the terms of the Bank's validation).

☒ Budget	☒ Reporting	☒ Information system	☐ National competitive bidding (NCB)
☒ Treasury	☒ Internal audit	☒ Shopping	☐ Other
☒ Accounting	☐ External control	☐ Individual consultants	☐ Other

2. Fiduciary capacity

Fiduciary capacity of the executing agency	Since the executing agency is executing several operations simultaneously, an ad hoc analysis of its management capacity was conducted in April 2023 based partially on the Institutional Capacity Assessment Platform methodology. The assessment yielded a report on actions to strengthen the executing agency, which is currently being implemented. The most recent assessment of the executing agency's fiduciary capacity was conducted in the third quarter of 2021. Based on the results of the assessment and the agency's experience in project management, the fiduciary risk level is determined to be medium for project execution. The executing agency is considered to be suitable for executing the project due to its extensive knowledge and experience in implementing Bank-financed projects, and its familiarity with the Bank's operating and financial management policies. The Bank and the executing agency have executed: (i) the Multiphase Road Infrastructure Maintenance and Rehabilitation Program (1931/OC-DR); and (ii) Productive Development and Competitiveness of the Province of San Juan (Subcomponent 2.1) (3107/OC-DR), Sustainable Agroforestry Development Program (Component 2) (4553/OC-DR-2); and, recently, the Road Infrastructure Maintenance and Rehabilitation Program in the Dominican Republic (5504/OC-DR). The evaluation of the Dominican Republic's public financial management system (August 2017 and October 2019) indicates that, in general terms, its average level of development is medium. This is

	consistent with the results of the Public Expenditure and Financial Accountability assessment conducted in 2023. The updated diagnostic assessment of the government procurement system performed in February 2016, using the methodology of the OECD's Development Assistance Committee, identifies it as a moderately advanced system with some opportunities for improvement in the areas of sanctions and control mechanisms.

3. Fiduciary risks and response

Area	Risk	Risk level	Risk response
Organizational structure	Simultaneous execution of three IDB loans could generate a significant workload, which could slow the rate of execution of the different projects.	Medium-High	The necessary resources will be made available to provide the additional support required for this new project's technical and fiduciary management.
Governance systems	Infrastructure may be damaged during the works phase and throughout its lifespan because of its vulnerability to potential natural events.	Low	A detailed study of the country's current insurance system will be conducted with a view to adapting the works' contractual clauses and required guarantees.
Economic financial	Insufficient budget allocations in the third and fourth years of program execution would affect over 50% of the disbursement schedule, which would make it difficult to rectify the situation through an extension.	Medium-Low	Referring the first 18 months of execution planning to the Directorate of Public Credit at least three months before the preparation of the annual investment budget begins and scheduling high-level meetings to highlight the execution averages and results of UEPFRE's ongoing projects (effectiveness of interventions).

4. Policies and guidelines applicable to the operation: Documents GN-2349-15 and GN-2350-15.
5. Exceptions to policies and guidelines: Not applicable.

II. Considerations for the Special Provisions of the Loan Contract

Special conditions precedent to the first disbursement:
Exchange rate: For the purposes of Article 4.10 of the General Conditions, the parties agree that the exchange rate to be used will be the rate stipulated in Article 4.10(b)(ii). For such purposes, the agreed upon exchange rate will be the rate in effect on the effective date on which the borrower, executing agency, or any other person or corporation with delegated authority to incur expenditures makes the respective payments to the contractor, vendor, or beneficiary.
Type of audit: Annually, the program's audited financial statements, no later than 120 days after the close of each fiscal period. At the end of the project, the audited final financial statements no later than 120 days after the date of the last disbursement.

III. Agreements and Requirements for Procurement Execution

☒	Bidding documents	For procurement of works, goods, and nonconsulting services conducted in accordance with the procurement policies (GN-2349-15), subject to international competitive bidding, the IDB's standard bidding documents will be used or those agreed upon by the executing agency and the Bank for a particular procurement process. The selection and contracting of consulting services will be conducted in accordance with the policies for the selection of consultants (GN-2350-15) and will use the standard request for proposals issued by the Bank or that agreed upon by the executing agency and the Bank for a particular procurement process. The technical specifications and terms of reference will be reviewed during preparation of the selection processes by the project's sector specialist. This technical review may be ex ante and is independent of the procurement review method.
☒	Use of country systems	The shopping and off-the-shelf subsystems will be used for the procurement of standardized and readily available goods and nonconsulting services, pursuant to the approval of the Bank's Board of Executive Directors. The procurement plan for the operation will list the procurements to be conducted using the country system within the approved scope. If the scope of Board approval for use of the country system is expanded, it will be applicable to the operation.
☒	Recurrent costs	Recurrent costs required to start up the project, approved for financing by the Project Team Leader, will be incurred following the executing agency's administrative procedures. These procedures will be reviewed and accepted by the Bank provided they do not violate the principles of economy, efficiency, and competition. At the borrower's request, these expenses will include financing for the salaries of the dedicated execution unit staff working on the program. This expense is considered in line with policy set forth in document GN-2331-11 and meets the eligibility and sustainability criteria.

<table>
<tr><td>☒</td><td>Procurement supervision</td><td>Depending on the level of fiduciary risk identified for the project and the specific process, the supervision method will be ex ante or ex post. The ex post reviews will be performed in accordance with the annual supervision plan. The ex post review reports will include at least one physical inspection visit to the procurement processes subject to such reviews (the inspection will verify the existence of the procurement, leaving verification of their quality and compliance with the specifications to the sector specialist). The thresholds for ex post review are:
<table>
<tr><td>Executing agency</td><td>Works</td><td>Goods/Services</td><td>Consulting services</td></tr>
<tr><td>MOPC/UEPFRE</td><td>N/A</td><td>N/A</td><td>Individual firms: US$50,000</td></tr>
</table></td></tr>
<tr><td>☒</td><td>Records and files</td><td>The executing agency will be responsible for maintaining the files and supporting documentation for procurement processes and all receipts for payments made with project resources, and for making such payments in accordance with established procedures.</td></tr>
</table>

Main procurement items

Description of item	**Selection method**	**New procedures/ tools**	**Estimated date**	**Estimated amount US$ thousands**
Goods				
Equipment and development of technological tools for the inventory and climate change resilient management of bridge infrastructure (updating of geoportal, asset management system, and integration of sensors into structures)	International competitive bidding (ICB)		Q2-Year 1	900,000
Works				
Maintenance of bridges and/or hydraulic structures in several provinces	ICB with prequalification		Q1-Year 2	6,500,000
Rehabilitation of bridges and/or hydraulic structures in several provinces	ICB with prequalification		Q4-Year 1	60,000,000

Description of item	Selection method	New procedures/ tools	Estimated date	Estimated amount US$ thousands
Nonconsulting services				
Firms				
Supervision of the rehabilitation of bridges and/or hydraulic structures in several provinces	Quality- and cost-based selection (QCBS)		Q2-Year 1	3,000,000
Individuals				

To access the procurement plan, click here. [Include link to 18-month procurement plan here][link]

Procedures	Rationale for use

Other information relevant to the operation (BI)

IV. Financial Management Agreements and Requirements

☒	Programming and budget	The annual budget is prepared by the Ministry of Finance through the Budget Office, in coordination with the Ministry of Economy, Planning, and Development. The first 18 months of execution planning will be referred to the Directorate of Public Credit at least three months before the preparation of the annual investment budget begins, and high-level meetings will be scheduled to highlight the execution averages and results of the UEPFRE's ongoing projects (effectiveness of interventions) in order to "ensure" sufficient budget allocations in accordance with the disbursement schedule.
☒	Cash flow and management of disbursements	The project's cash flow programming will be consistent with the annual work plan and procurement plan that have received the Bank's no objection and will cover a period of at least 12 months. A special bank account at the Central Bank will be used for the project and will be managed through a subaccount within the Treasury Single Account. The currency for the operation's management will be U.S. dollars. The exchange rate to be used will be the effective rate on the date of payment of an expense in local currency - option (b)(ii) of Article 4.10 of the general conditions of the loan contract. The main disbursement modality for the program will be advances of funds, according to a financial plan of up to six months.

		Additional funds may be advanced once 80% of the funds advanced have been accounted for.
☒	Accounting, information systems, and reporting	For the operation's accounting records, the module for project execution units of externally funded projects in the country's Integrated Financial Management System (SIGEF) will be used as the technological platform, and cash-based accounting will be used. All of the project's main financial reports, including disbursement requests, will be generated directly by this system. To supplement the policies and guidelines applicable to the operation, the program Operating Regulations will be used with the documented definition of workflows and internal controls.
☒	Internal control and internal auditing	The government's internal audit function is the responsibility of the Office of the Comptroller General of the Dominican Republic (CGRD). To carry out this function, the CGRD is supported by internal audit units inside each of the country's government agencies.
☒	External control and financial reports	The borrower and/or executing agency will select and contract external auditing services in accordance with the terms of reference previously agreed upon by the executing agency and the Bank. They will establish the type of review, frequency, and scope. The selected external auditor and the auditing standards to be applied will be acceptable to the Bank. In accordance with the nature and risk of the operation, audited financial statements will be required for the program, preferably audited by an auditor with Eligible Plus status. The type of audit and qualification level may be adjusted during the life of the project depending on the results of Bank supervision. The program's audited financial statements are required annually, submitted to the Bank no later than 120 days after the close of each fiscal period (31 December), and at the end of the project, submitted to the Bank no later than 120 days after the date of the last disbursement.
☒	Financial supervision of the operation	The financial specialist will be responsible for on-site and desk reviews and support at intervals of once a year or less, if deemed appropriate.

Other information relevant to the operation (BI)

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-__/24

Dominican Republic. Loan ____/OC-DR to the Dominican Republic
Climate Resilience Program for Bridge Infrastructure
in the Dominican Republic

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Dominican Republic, as borrower, for the purpose of granting a financing aimed at cooperating in the execution of the Climate Resilience Program for Bridge Infrastructure in the Dominican Republic. Such financing will be for the amount of up to US$200,000,000, from the resources of the Bank's Ordinary Capital, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on _____ 2024)

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DR-L1166