



Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 04-Apr-2024 | Report No: PIDDC00371



BASIC INFORMATION

A. Basic Project Data

Project Beneficiary(ies) Ecuador	Operation ID P504400	Operation Name Ecuador Guayas: Resilient Rural Roads	
Region LATIN AMERICA AND CARIBBEAN	Estimated Appraisal Date 24-Jun-2024	Estimated Approval Date 10-Sep-2024	Practice Area (Lead) Transport
Financing Instrument Investment Project Financing (IPF)	Borrower(s) Prefectura de Guayas	Implementing Agency Dirección de Obras Públicas	

Proposed Development Objective(s)

The Project Development Objectives (PDO) is to increase access to an improved, resilient and safe road network in POG and, in case of an Eligible Crisis or Emergency, respond promptly and effectively to it.

PROJECT FINANCING DATA (US\$, Millions)

Maximizing Finance for Development

Is this an MFD-Enabling Project (MFD-EP)?	Yes
Is this project Private Capital Enabling (PCE)?	No

SUMMARY

Total Operation Cost	100.25
Total Financing	100.25
of which IBRD/IDA	100.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	100.00
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Non-World Bank Group Financing

Counterpart Funding	0.25
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Local Govts. (Prov., District, City) of Borrowing Country		0.25
Environmental and Social Risk Classification	Concept Review Decision	
Substantial	The review did authorize the preparation to continue	

B. Introduction and Context

Country Context

- Ecuador's economic situation is challenging, marked by a combination of factors including high public debt, fiscal deficits, and the impact of the COVID-19 pandemic.** The country's economy contracted by 7.8 percent in 2020 due to the pandemic, after several years of modest growth.¹ Also, a significant concern is the public debt which stood at around 62% of GDP, with efforts underway to restructure and manage it more effectively.² Moreover, inflation in Ecuador has been relatively stable, with rates around 0.5% - 1.5% in recent years, but subject to fluctuations due to external factors like oil prices. The country's vulnerabilities include a heavy dependence on oil exports, a lack of macroeconomic buffers, restricted access to capital markets, subdued private sector dynamism, a pervasive informal economy, and substantial disparities in access to public services. In recent months, the economy has encountered a considerable slowdown, exacerbated by heightened insecurity linked to organized crime and political uncertainty which increase the social challenges such as poverty, inequality, and access to education and healthcare, which have been exacerbated by the pandemic.
- Latin America and the Caribbean stand out as the most urbanized developing region globally, yet in Ecuador, a notable 36 percent of the population resides in rural areas.** Recent data from ECLAC (2023) underscores a concerning trend, revealing that the poverty rate in these rural zones in the country has risen to 46.4 percent, representing an increase from 2022 figures, compared with 18 percent in urban areas. Agricultural, livestock and fishing activities accounted for 69.8 percent of rural jobs; however, figures from the Ecuadorian Institute of Statistics and Census (INEC) show that 71.3 percent of rural employment is unsuitable, and 20 percent of rural work is unpaid.³ This is due to the production scheme of family agriculture. A primary obstacle hindering rural communities' access to essential services and impeding economic development is the lack of road infrastructure and its insufficient maintenance. For farmers, low accessibility constrains the ability to get the best prices for their produce, increases the cost of transport of inputs e.g., seeds, fertilizers, farm implements, and leads to unnecessary loss and wastage of produce when it cannot be picked or delivered on time.
- Ecuador ranks among the top 10 countries facing the highest Natural Hazard risk in the region and is listed among the top 20 in the WorldRiskIndex 2022.** This vulnerability stems from its exposure to a range of geological and

¹ World Bank Indicator. <https://datos.bancomundial.org/indicador/NY.GDP.MKTP.KD.ZG?locations=EC>.

² Primicias, 2023. <https://www.primicias.ec/noticias/economia/lasso-cifras-deficit-pobreza-empleo-crecimiento/>.

³ Encuesta Nacional de Empleo, Desempleo y Subempleo (ENEMDU), Anual 2022 (INEC, 2023).



hydrometeorological threats, including earthquakes, volcanic eruptions, floods, and droughts. The recurrent occurrence of climate extremes not only poses a direct threat to the well-being of Ecuador's population but also exerts pressure on the country's economy. One of the most affected sectors is transport, where the repercussions of connectivity loss due to these natural events extend beyond individual users to impact overall economic growth. Approximately 52 percent of the national road network lies in areas prone to landslides, posing a significant threat to the integrity of the road network. Hydrometeorological hazards compound these risks, with 46 percent of major roads situated in flood-prone areas, covering 450 kilometers in regions at high risk of flooding. Considering projections indicating an intensification of such events due to global climate change, Ecuador's vulnerability to disasters is expected to escalate in the coming years.

4. **Ecuador has not yet carried out significant reforms to achieve sustainable, inclusive, green, and resilient growth.** Despite reaching fiscal balance in 2022, Ecuador needs to cement a sustainable, inclusive, and resilient fiscal framework to reduce debt and create reserves to face the potential effects of aggravated global crises, future natural disasters and meet its upcoming climate commitments. Despite its low per capita GHG emissions, Ecuador is committed to achieving carbon neutrality by 2050, however, policies to reduce gas flaring in oil fields and encourage private investment in non-conventional renewable energy generation They are not yet implemented. The country needs to improve private investment and productivity to improve competitiveness and generate new engines of growth and employment, as a decarbonized world induces the country to move away from the oil sector. This will require developing the private sector by addressing high informality and limited diversification, prevailing protectionism, rigid labor markets and market-distorting regulation, along with a more efficient public sector.

Sectoral and Institutional Context

5. **Transportation plays a pivotal role in the development of the Ecuadorian economy, contributing significantly with a noteworthy US\$5.3 billion or 7.3 percent of the country's GDP in 2019.** The sector is a linchpin for employment generation, with construction accounting for 7 percent of job creation, closely followed by trade and transport. Serving as the foundation for numerous economic and social interactions, the limitations in transport infrastructure pose a substantial challenge to equality and hinder access to opportunities. Despite 60 percent of the population residing in urban areas, the Rural Accessibility Index (RAI) reveals a stark reality — only 52 percent of the rural population lives within a proximity of 2 kilometers to a primary or secondary road. This stark contrast underscores the pressing need for improved accessibility in rural regions to ensure that economic and social opportunities are not geographically constrained. The economic repercussions of inefficient transport systems further exacerbate these challenges. Road safety emerges as a significant concern, with mortality rates in Ecuador surpassing those of other countries in the region despite comparable crash rates. Moreover, the impact of transport and mobility on advancing human capital agendas in education and health cannot be overstated. In health, limited accessibility directly contributes to higher mortality rates due to insufficient health care. In education, compromised accessibility hampers the regular presence of both students and teachers in schools, fostering conditions that lead to school dropouts. Addressing these multifaceted challenges in the transport sector is not only crucial for economic growth but also paramount for promoting equality, improving access, and enhancing the overall well-being of the Ecuadorian population.
6. **The Province of Guayas, one of the 24 provinces of Ecuador, stands out as a vital economic and industrial center; however, it faces risks due to natural disasters that affect its connectivity.** Recognized for its important agricultural activities, such as the cultivation of bananas, cocoa and other products, Guayas contributes significantly to the country's economic landscape. Its capital, Guayaquil, is Ecuador's most populous city and a crucial economic



and commercial center. With one of the most important ports in Latin America, the seaport of Guayaquil, the province plays a fundamental role in facilitating international trade and connecting Ecuador to the global market. However, flooding is a recurring problem in the province of Guayas, due to factors such as flat topography and changes in precipitation patterns associated with climate change. These floods have a significant impact on the population, causing temporary displacement, damage to infrastructure, economic losses and risks to public health. In the winter season of 2024, 7,000 people have been affected and 2,047 homes have been damaged due to the rains so far.⁴

7. **In Ecuador, the prefectures are entrusted with the management of the provincial road system, guided by the competencies outlined in Resolution CNC - 009 – 2014.**⁵ Prefectures, adhering to national regulations, possess the mandate to plan, construct, and administer the provincial road network while the Minister of Transportation and Public Works (MTO) holds oversight over the national transportation sector. In a strategic move to invigorate the economy, the Province of Guayas (PoG) has championed the Guayas Road Plan (2017). This initiative aims to cultivate a robust road infrastructure that fosters seamless interconnection among communities, productive zones, and services linked to major thoroughfares. However, the current budgetary allocations fall short of meeting the substantial demands of the territory, which necessitates a concerted effort to secure financial resources for the efficient and effective execution of road projects within the province. The primary objectives of the Road Plan are: to elevate the quality of service within the provincial road system, ensuring its optimal functionality; enhance provincial competitiveness by curbing transportation costs and reducing travel times; facilitate greater accessibility and internal cohesion, thus promoting social inclusion; mitigate the environmental impact of the provincial road system; and elevate safety standards across the province.
8. **The road network in Guayas spans 6,065.28 km and features 249 bridges strategically distributed across its expansive territory.** At the core of this transportation network is the Pan-American Highway, a vital artery that traverses the province from north to south, complemented by connecting branches linking Guayas to Azuay, Los Rios, Manabí, and Santa Elena. The state road system, encompassing 882.49 km, is pivotal for transporting local, regional, and national production to markets, as well as facilitating the movement of people engaged in various activities. Within the province, economic-productive activities are intricately woven into the road network, with 83.15 percent dedicated to agricultural sectors, 13.65 percent to livestock sectors, 2.46 percent to the tourism sector, 0.68 percent to the fishing sector, and 0.06 percent to shrimp farming. Regarding road surface types, the network comprises 1.52 km of rigid pavement (0.03 percent), 712.92 km of flexible pavement (11.75 percent), 4853.57 km of ballast (80.02 percent), and 497.27 km of soil (8.20 percent). The overall condition of the provincial road network predominantly falls under the "fair" category, encompassing 4,045.14 km (66.69 percent). Following closely is the "good" condition, covering 1,405.18 km (23.17 percent), while the "poor" condition accounts for 614.96 km (10.14 percent). However, it is important to note that the condition of the state road network has raised concerns due to falling below quality levels, a situation exacerbated by heavy rains during the 2022-2023 winter season in 2023. This deterioration is closely correlated with inadequate investment in transport infrastructure and the constrained budget allocated for maintenance.
9. **Improvements in rural road conditions bring economic and social gains but increases speed can lead to road safety issues if not addressed properly.** Ecuador suffers from a high rate of vehicle crashes, and the World Health Organization reports that road crash injuries are one of the leading causes of death. Factors contributing to road

⁴ El Universo, February, 2024. <https://www.eluniverso.com/noticias/ecuador/en-guayas-hay-7000-personas-afectadas-y-2047-viviendas-con-danos-por-las-lluvias-nota/>.

⁵ Resolution CNC - 009 – 2014.



safety issues include poor road infrastructure, inadequate vehicle maintenance, and reckless driving. In addition, driving conditions can be particularly challenging during the rainy season, when landslides and flooding can lead to road closures, delays, and hazards due to hydroplaning effects. Various efforts by government agencies combined with increased driver awareness and traffic reduction related to the COVID-19 pandemic contributed to a decrease in the number of road crashes from 2017 to 2020. However, accidents are currently rising from previous years. According to the INEC, 2022 was the year of most mortality due to road crashes. Of the total number of deaths (around 2,000 deaths per year), the most affected group were between 20 and 29 years of age, a highly productive age group including many heads of households. This translates into a social and economic problem for families and their environment. In August 2020, the United Nations General Assembly Approved Resolution A/Res 74/299 establishing a Second Decade of Action for Road Safety with the goal of reducing road traffic deaths and injuries by 50 percent between 2021 and 2030.

10. **Gender segregation persists prominently within the infrastructure and transport sectors, where women's involvement remains notably low.** Only 7 percent of workers in Ecuador's transport and storage sectors are women, and 4 percent are engaged in the construction sector. Drawing parallels from analyses conducted on women working in road-related roles within similar Latin American contexts, Ecuadorian women encounter barriers that impede their participation both in recruitment and retention. In recruitment, the challenges include the absence of gender-sensitive engagement and selection processes, established gender stereotypes, insufficient skills, and limited access to training for specialized equipment. These barriers collectively contribute to the underrepresentation of women at the initial stages of employment in the transport sectors. The hurdles persist in retention as well, marked by inadequate flexible work policies, restricted access to care options, and the prevalence of sexual harassment within the workplace. These factors not only dissuade women from entering the sector but also contribute to high attrition rates among those who do manage to secure employment.⁶
11. **The transportation sector in Ecuador emerges as the second-largest contributor to Global Greenhouse Gas (GHG) emissions within the country, and it stands as the sole sector witnessing growth.** While Ecuador's overall GHG emissions constitute only 0.20 percent of the global total, the nation ranks as the eighth-largest emitter in Latin America. Transportation, second only to land-use change, takes the lead as the most substantial contributor to GHG emissions in Ecuador, showcasing an upward trajectory. Over the past decade, the transport sector has significantly elevated its share of national emissions, surging from 11.12 percent in 2009 to a notable 20.9 percent of all emissions in 2019. A key driver of this surge is the striking increase in the number of registered vehicles, more than doubling in a decade from 918,908 in 2008 to a staggering 2,403,651 in 2018. Compounding the challenge is the aging nature of this vehicular fleet, with an average age of 16 years, rendering it not only old but also environmentally harmful and safely compromised.
12. **The proposed Project, requested by the PoG, aims to improve the resilience and safety of the rural roads.** It covers maintenance and rehabilitation interventions for roads and bridges, aiming to enhance connectivity within the province. By strengthening infrastructure, the initiative aims to create a more resilient transportation network capable of withstanding environmental challenges. The project also includes activities focused on improving road safety and promoting positive gender outcomes. Additionally, it will help address climate-related hazards and enhance emergency preparedness and response. It also involves strengthening government capacity for road

⁶ Casabonne, Ursula, et al. 2015. Roads to Agency: Promoting Women's Participation in Rural Transport Projects, Washington.



design, planning, and maintenance, ensuring investment security, and promoting a cultural shift towards considering the implications of climate change in line with government.

Relationship to CPF

13. **The proposed Project is fully aligned with the World Bank Group’s (WBG) Country Partnership Framework (CPF)⁷ for the Republic of Ecuador (FY19-23).**⁸ The CPF identifies the country’s vulnerability to natural hazards as a key constraint to its development as the Results Area 3 of the CPF, “Enhancing Institutional and Environmental Sustainability.” Specifically, it includes the rehabilitation and improvement of existing assets to “build back better” standards to restore productive activities and strengthen long-term resilience. The Project contributes to the achievement of this objective by rehabilitating infrastructure with resilience consideration and providing institutional capacity for resilient planning and emergency response. Moreover, this project contributes to CPF Focus Area 2: “Boost Human Capital and Social Inclusion” through innovative income generating activities for those historically excluded (e.g. rural poor and women) by enabling community based solutions for routine maintenance and contribute to reduce the urban-rural divide through improved connectivity.
14. **The proposed Project is consistent with Ecuador’s National priorities, such as the Nationally Determined Contributions (NDC), National Adaptation Plan (NAP), and the National Climate Change Strategy (ENCC) of Ecuador.** In 2021, Ecuador set the unconditional goal of reducing its GHG emissions by 9 percent by 2025 and conditional on international support and cooperation, the commitment goes up to 20.9 percent. One of the main objectives of the NAP is to reduce the vulnerability of Ecuador’s transport infrastructure to the impacts of climate change by increasing its adaptive capacity and building resilience, which will comply with sectoral policies and integrated guidance for the Public Investment Plan. Similarly, the main objective of the ENCC is to reduce the negative impacts of climate change on Ecuador’s economy, society, and environment, while also promoting sustainable development. The ENCC aims to improve the resilience of transport infrastructure by strengthening its design, operation, and maintenance, considering the projected impacts of climate change, and implementing measures to reduce emissions.
15. This project is considered to include Private Capital Facilitation through Maximizing Development Financing – Enabling Projects (MFD-EP). The PoG is requesting financing to lead a next generation of Guayas road concessions. The project will support revision of existing contract and capacity building for integral concession planning.

C. Proposed Development Objective(s)

16. The Project Development Objectives (PDO) is to improve climate resilient and safe connectivity on targeted rural roads in the PoG.

Key Results (From PCN)

17. Potential key results indicators are:

⁷ Report No. 135374-EC.

⁸ The CPF was extended until 2025.



- a. **Improved connectivity:** (i) Average travel time in areas of intervention (minutes); (ii) Share of the road network in good condition (Percentage).
- b. **Improved resilience:** (i) People benefitting from transport infrastructure with enhanced resilience to climate risks (number).
- c. **Improved road safety:** (i) Road traffic fatalities on targeted rural roads in the PoG.
- d. **Gender:** New jobs of which (%) are for women and youth.
- e. **Climate Change:** Net Green House Gases (GHG) emissions per year.

D. Concept Description

18. The proposed Project will be financed with a Bank US\$100 million credit. This amount may be revised during appraisal. The project is proposed to be Investment Project Financing (IPF). The use of a Program-for-Results (PforR) financing instrument was ruled out since technical, fiduciary, and social and environmental risks would be too high given the lack of relevant experience of managing a program of such nature and scope.

19. The Theory of Change of the Project is represented hereafter.

Activities	Outputs	Outcomes (PDO)	Long-Term Outcomes
Rehabilitating rural roads and rural roads	<ul style="list-style-type: none"> • Designs for resilient rural roads. • Rural roads rehabilitated. • Road safety audits implemented on rural roads rehabilitated. 	<p>PDO1 Improved resilient and safe connectivity on targeted rural roads in the PoG.</p>	<ul style="list-style-type: none"> • Improve climate resilience to risks and climate change. • Drive for equal opportunities, sustainability, and inclusive growth (Plan de Creación de Oportunidades 2021-2025). • Strengthened institutional capacity to plan, implement and manage a resilient and inclusive transport infrastructure (<i>Plan de Creación de Oportunidades 2021-2025, Objective 14</i>). • Drive mitigation and adaptation measures (National Climate Change Strategy, Pillar 1 & 2).
	<ul style="list-style-type: none"> • Designs for resilient bridges. • Bridges rehabilitated on the rural roads. • Road safety audits implemented of bridges on the rural roads rehabilitated. 		
Building capacity building and technical support (PoG, communities, women)	<ul style="list-style-type: none"> • Road asset management system improved with resilience and road safety considerations (application, manuals, trainings). • Civil works contractors trained in GBV risk prevention and mitigation. 		
	<ul style="list-style-type: none"> • Trained women for employment in microenterprise for rural road maintenance. 		
Providing Contingency Emergency Response	<ul style="list-style-type: none"> • Contingent activities to respond to emergencies. 		



Critical assumptions/challenges:

- Strong political ownership and commitment continue during the project life.
- Project Implementation Team (PIT) has adequate capacity for implementing the project.

Project area

20. The proposed project will be implemented widely in rural areas across the Province of Guayas. A diagram of the network level approach and a map with the project area can be found in the Annex.

Potential Project Components:

21. The proposed Project will comprise three components that, as applicable, will be implemented with exploration of community inclusive gender-balanced approaches and careful attention to resilience to climate change and natural disasters.
22. **Component 1: Rural Road Development and Maintenance (US\$ 86 million).** This component would comprise two mutually reinforcing sub-components to improve resilient connectivity in selected lagging rural areas of the PoG. The PoG has prioritized road interventions based on the following criteria: (i) works located on provincial boundaries that have not received attention to their needs on the last decade; (ii) works with a large number of direct and indirect beneficiaries, especially those that promote the socioeconomic productive sector of the communities to be benefited; and (iii) works that ensure connectivity between population centers such as precincts and parishes, thereby improving viability. Additional works such as carriageway or pedestrian bridges were also considered as part of this criterion.
23. *Subcomponent 1a. Rehabilitation of Rural Roads (US\$79 million).* This sub-component will support the rehabilitation of rural roads. It is estimated that about 60 km could be accommodated. The works will be developed on roads that have (or have had) asphalt, have an annual average daily traffic of 400 to 1,800 vehicles, have an execution time of 6 to 12 months, and present definitive designs that have environmental permits, and directly help agriculture, livestock, forestry, and fishing.
24. *Subcomponent 1b. Rehabilitation of bridges in rural areas (US\$7 million).* This sub-component will support rehabilitation of bridges. The initial analysis shows up to 12 bridges will be intervened. The bridges to be rehabilitated will be 15 to 35 meters long, will take 4 to 5 months to complete, and have current national environmental permits. The bridges are made of reinforced concrete, without intermediate piers, with two lanes, and will be equipped with road safety and information signs and lighting.
25. **Component 2: Project Management and Capacity Building (US\$ 14 million).** The component would primarily focus on supporting PoG on managing the operation and increasing capacity for sustainable management of the transportation infrastructure for the Prefecture. Also, it includes a cross-cutting component that will leverage the impacts of other components by proactively engaging communities and implementing approaches that will ensure social inclusion and protection while contributing to reducing violence and increasing participation and decision making, especially for women.
26. *Subcomponent 2a. Project management (US\$ 2 million).* This component supports a unit in the Prefecture of Guayas, responsible for the project implementation, and related expenses.



27. *Subcomponent 2b. Capacity building and technical support (US\$ 13 million).* Support will include the development and implementation of an organization and business plan that addresses all functional areas, including planning, design, construction, maintenance, and the social and environmental management of the rural road network. The component will also support the development of technical manuals and essential guidelines for updating provincial road planning, development, maintenance, private financing assessments, resilience and climate change analysis, road safety audits and implementation of an asset management system. The Project will include activities to develop and carry out diagnoses of existing information, actors, private participation, systems, and processes used to carry out vulnerability assessments of the rural road network; will explore the review of design, construction, and maintenance standards with a resilience focus; and will carry out capacity building and outreach activities. The proposed project hopes to incorporate road safety considerations into all components informing the design and management of rural roads. Training activities will be supported under this component. In addition, this subcomponent includes support on the following areas:
- a. *Private sector participation.* This subcomponent also aims to enhance private sector participation, a key objective of the PoG, by assessing private financing options, creating incentives, and building institutional capacity. This will support the private sector to provide additional funds for projects that the prefecture cannot fully finance with its internal resources, have experience and expertise that can be beneficial to the prefecture in the implementation of its programs, and improve efficiency and effectiveness in project.
 - b. *Community Engagement and Inclusion.* This sub-component aims to develop and implement proactive policies to engage communities in project design and monitoring. It specifically targets women and other vulnerable groups who can be employed by microenterprise organizations for road maintenance. Activities will include: (i) design and implementation support for continuous community-based and gender-inclusive approaches for project design and sustainability; and (ii) analysis of barriers for and facilitators to participation in the rural road sector for women and other vulnerable populations.
 - c. *Community Protection.* This sub-component will tackle sensitive community and gender issues arising from project activities (e.g. vulnerability of women and girls from influx of non-local laborers at worksites) including SEA and HIV/AIDS. The proposed project will design and monitor prevention and mitigation measures for the potential victims, including: (i) detailed analysis of risks; (ii) incorporating SEA-related provisions in contract documents (e.g. Code of Conduct) and monitoring provision implementation; (iii) trainings for implementing agency staff to sensitize on gender and GBV risk prevention and mitigation; and (vi) community awareness on SEA, and GBV. The project will incorporate gender considerations in project design and implementation, recognizing discrimination as a barrier to promoting social inclusion.
28. **Component 3: Contingency Emergency Response (CERC).** (US\$ 0 million). This contingent emergency response component (CERC) is included under the project in accordance with OP/BP 10.00, paragraphs 12 and 13, for situations of urgent need of assistance, as a project specific CERC. Rural transport infrastructure is particularly vulnerable to climate disasters, including the CERC under the project will allow for rapid reallocation of project funds in the event of a natural disaster/ crisis during the project's lifespan. Eligible emergency needs and the conditions to trigger this component will be specified in the CERC operations manual. This component will have no funding allocation initially and will draw resources from the unallocated expenditure category in the case of activation.
29. **Paris Alignment.** Based on the initial assessment of the project under screening for rural roads, this project falls under the category of Road widening and construction of primary roads in countries with significant gaps in access or connectivity, and/or low motorization rate, and hence considered “Low” for climate mitigation risk.



Furthermore, the developed corridor is not expected to transport any coal products and intends to mainly serve transport of agricultural produce, and small manufactured products. The NDC submitted in 2019⁹ included adaptation actions related to transport, referring to the National Adaptation Plan and Ecuador’s National Climate Change Strategy. The project will contribute to consider the adaptation goals related to: (i) reducing vulnerability to the impacts of climate change, through increasing adaptive capacity; and (ii) facilitating the coherent integration of climate change adaptation into development planning processes, policies, and strategies. The project will further contribute to Ecuador’s adaptation goals measures by choosing constructing processes and methods to for allow increased resilience of the infrastructure to the potential hazard events.

- 30. **Climate considerations.** The Project will enhance connectivity and accessibility in selected departments. The component will be supported by financing of technical studies which will include climate-resilient designs and explore use of sustainable construction materials. Additional climatic factors such as projections of rainfall intensity and frequency, and extreme temperatures will also be included in the design process. Overall benefits related to climate considerations are likely to be high and detailed calculations will be provided as preparation advances and during appraisal. During project preparation, the team will conduct an assessment and explore interventions to maximize benefits related to climate considerations such as prioritizing designs or materials that enable road network resilience, assessing programs for upgrade and maintenance of rural roads, and strengthening client capacity for resilience projects planning.
- 31. **Disaster Risk Management Screening.** The project has been screened for climate change and disaster impacts and specific potential resilience-enhancing measures will be identified and properly reflected in the project appraisal documents. No specific risks with respect to the mitigation and adaptation aspects of the Paris Alignment Assessment are flagged at this stage.

Legal Operational Policies

	Triggered?	
	Last approved	Current
Projects on International Waterways OP 7.50	No	
Projects in Disputed Area OP 7.60	No	

Summary of Screening of Environmental and Social Risks and Impacts

⁹ [Ecuador’s NDC, 2019.](#)



The overall Environmental and Social Risk Rating is considered Substantial at this Concept Stage. This operation defines specific interventions for its execution. In general, these are road rehabilitation and bridge construction works with environmental and social (E&S) risks that could be considered mitigable with the appropriate application of specific instruments. The main risks and impacts are related to the socio-environmental characteristics in the areas surrounding the intervention sites and can be mitigated with plans that adjusted to each one. From the environmental side, it is identified that: (i) the project interventions already have environmental permits in accordance with national legislation (although gaps with the Bank's standards are foreseen); (ii) that they will be developed mostly in intervened and environmentally altered areas (although in one case very close to a protected area); and (iii) that they will generate impacts typical to road construction works, such as: impacts on the soil due to construction and adaptation of areas for roads and bridges; impacts on the air due to noise, emissions, and particulate matter; impacts on the water due to effluent generation; and other types of environmental impacts due to transportation and use of hazardous materials, generation of hazardous waste, transportation and storage of construction materials, and disposal of debris, among others. All these impacts can be managed with specific complementary Environmental and Social Management Plans (C-ESMPs) for each intervention, executed by contractors and supervised by the project executor (the client). From the social side, the impacts have to do with: (i) land acquisition for the execution of the interventions: this has been planned to be executed with national standards, so not all the criteria of the Bank's standards are considered in terms of replacement cost, characterization of the type of impact (physical and/or economic) and potential impact on livelihoods. (ii) labor management: definition of work and working conditions, temporary labor influx due the use of contractors; (iii) management of stakeholder participation and consultation: participation and consultation to manage expectations, management of community relations during the execution of works, management and follow-up of complaints and claims, and attention to the needs of vulnerable populations. For the management of these impacts, the respective Resettlement Plans must be proposed for each intervention where needed, Labor Management Procedures (LMP), and Stakeholder Engagement Plans (SEPs), which will complement the ESMP, and may be executed with the support of the contractors, for which this responsibility must be ensured in the terms of their contracting.

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