



Board of Executive Directors

For consideration

On or after 1 October 2024

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Simultaneous Disclosure

To: The Executive Directors
From: The Secretary
Subject: Ecuador. Loan proposal for the “Border Integration Project - Axis Road No. 4 Bellavista-Zumba-La Balza Zamora-Chinchiipe Province”

Basic Information: Loan Type.....Specific Investment Loan (ESP)
BorrowerRepublic of Ecuador
Amountup to US\$150,000,000
SourceOrdinary Capital

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Remarks: This operation has an environmental impact classification Category A. Therefore, it is presented to the Board of Executive Directors by Standard Procedure, in accordance with Part III, paragraph 3.2 of document GN-1838-3.

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DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

ECUADOR

**BORDER INTEGRATION PROJECT – AXIS ROAD 4,
BELLAVISTA-ZUMBA-LA BALSA ROAD, ZAMORA-CHINCHIPE PROVINCE**

(EC-L1295)

LOAN PROPOSAL

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Annex II	Results Matrix
Annex III	Fiduciary Agreements and Requirements

LINKS
REQUIRED:
1. Multiyear execution plan / Annual work plan
2. Monitoring and evaluation plan
3. Environmental and social review summary
4. Procurement plan
OPTIONAL:
1. Climate change annex and Paris alignment
2. Gender and diversity annex
3. Project technical annex and implementation schedule
4. Economic evaluation
5. Project Operating Regulations
6. Regional integration annex
7. Supplemental environmental and social study
8. Pilot plan for disaster risk management – Early warning system
9. Analysis of public investment for disaster risk reduction
10. Resilience study for Ecuador’s national road system
11. Project theory of change

ABBREVIATIONS

3CV	Individual consultant selection
AADT	Annual average daily traffic
ANT	Agencia Nacional de Tránsito (National Traffic Agency)
ANV	Annualized net value
BDE	Banco de Desarrollo del Ecuador B.P. (Development Bank of Ecuador)
CAF	Andean Development Corporation/Development Bank of Latin America and the Caribbean
CAN	Andean Community
CEBAF	Centro Binacional de Atención Fronteriza (Binational Border Service Center)
CGE	Contraloría General del Estado (Office of the Comptroller General of the Nation)
CONADIS	Consejo Nacional para la Igualdad de Discapacidades (National Council for Disability Equality)
DRM	Disaster risk management
ENEMDU	Encuesta Nacional de Empleo, Desempleo y Subempleo (National Survey of Employment, Unemployment, and Underemployment)
e-SIGEF	Sistema Integrado de Gestión Financiera (Integrated Financial Management System)
EWS	Early warning system
ICAP	Institutional Capacity Assessment Platform
ICB	International competitive bidding
INEC	Instituto Nacional de Estadística y Censos (National Statistics and Census Institute)
IRR	Internal rate of return
km	Kilometer
MTOP	Ministry of Transportation and Public Works
NCB	National competitive bidding
PBDRF	Plan Binacional Desarrollo Regional Fronterizo (Binational Development Plan for the Border Region)
QCBS	Quality- and cost-based selection
SGR	Secretaría de Gestión del Riesgo (Office of Disaster Risk Management)
SOFR	Secured Overnight Financing Rate
STEM	Science, technology, engineering, and mathematics
TSP	Transport Division

PROJECT SUMMARY

ECUADOR BORDER INTEGRATION PROJECT – AXIS ROAD 4, BELLAVISTA-ZUMBA-LA Balsa ROAD, ZAMORA-CHINCHIPE PROVINCE (EC-L1295)

Financial Terms and Conditions							
Borrower:				Flexible Financing Facility^(a)			
Republic of Ecuador				Amortization period:		24.5 years	
Executing agency:				Disbursement period:		5 years	
Ministry of Transportation and Public Works (MTOPI)				Grace period:		6 years ^(b)	
Source		Amount (US\$)	%	Interest rate:		SOFR-based	
IDB (Ordinary Capital):		150 million	100%	Credit fee:		^(c)	
				Inspection and supervision fee:		^(c)	
Total:		150 million	100%	Weighted average life:		15.25 years	
				Currency of approval:		U.S. dollars	
Program at a Glance							
<p>Project objective: The general objective of the project is to improve border regional integration between the southern and central highlands of Ecuador and northern Peru and to improve the quality of life of the border populations. The specific objectives are: (i) to improve efficiency and road safety on the Bellavista-Zumba-La Balsa road; (ii) to improve the accessibility of health and education services for border populations; and (iii) to improve the MTOPI's institutional capacity and labor inclusion with gender equity criteria in the project's area of influence.</p>							
<p>Special contractual conditions precedent to the first disbursement of the financing: The first disbursement of the loan proceeds will be contingent on meeting the following conditions to the Bank's satisfaction: (i) approval of the project Operating Regulations on the terms previously agreed upon with the Bank, including: work flows, internal controls, and environmental and social requirements, including the environmental and social management system, environmental and social management plan, and environmental and social action plan as annexes, detailing the requirements and procedures applicable to project execution; and (ii) appointment of a management team exclusively dedicated to project execution based on the job descriptions included in the project Operating Regulations (paragraph 3.5).</p>							
<p>Special contractual conditions for execution: For other conditions precedent to the first disbursement see Annex B of the Environmental and Social Review Summary and the Fiduciary Agreements and Requirements (Annex III).</p>							
Exceptions to Bank policies: None.							
Strategic Alignment							
Objectives:^(d)	O1 <input checked="" type="checkbox"/>		O2 <input checked="" type="checkbox"/>			O3 <input checked="" type="checkbox"/>	
Operational Focus Areas:^(e)	OF1 <input type="checkbox"/>	OF2-G <input checked="" type="checkbox"/> OF2-D <input checked="" type="checkbox"/>	OF3 <input checked="" type="checkbox"/>	OF4 <input type="checkbox"/>	OF5 <input type="checkbox"/>	OF6 <input checked="" type="checkbox"/>	OF7 <input checked="" type="checkbox"/>

- (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 and 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 as part of its review of the Bank's lending charges, in accordance with the 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); and OF7 (Regional integration).

I. DESCRIPTION AND RESULTS MONITORING

A. Background, problem addressed, and rationale

- 1.1 **Macroeconomic context of Ecuador.** In 2023, Ecuador's real GDP grew 2.4%, and the Central Bank of Ecuador projects 0.1% growth in 2024, which reflects stagnant growth following the postpandemic economic recovery. GDP grew 4.5% in 2021, and then 2.9% in 2022.¹ At the end of 2023, the country recorded a fiscal deficit equivalent to 3.6% of GDP (US\$4.3 billion). Together with debt repayments, financing needs in 2023 were equivalent to 8% of GDP. In the first quarter of 2024 oil exports had risen 32.5% from same period in 2023, while nonoil exports fell 0.1% in the same span of time. Conversely, in the first quarter of 2024 oil imports had fallen 17.1% from the same period in 2023. Despite falling 813 basis points from January to May, the country risk indicator remains high (1,242 basis points) after its low point of 1,111 basis points on 29 April 2024. To cover financing needs, the government arranged a credit with the International Monetary Fund (IMF) that was approved on 31 May 2024. The arrangement will provide access to nearly US\$4.5 billion in multilateral funding.
- 1.2 **Social context of Ecuador.** From 2007 to 2018 Ecuador experienced a notable reduction in poverty levels.² Due to the COVID-19 pandemic, among other factors, the country's economic and social conditions have been deteriorating since 2020. According to data from the National Statistics and Census Institute (INEC), in 2022 poverty stood at 25.2%, and extreme poverty at 8.2%, down from 2021 but up from the values five years ago.³ In urban areas poverty was 17.8%, and extreme poverty 3.9%, whereas in rural areas poverty was 41.0%, and extreme poverty 17.3%. Conditions are worse in southeastern Ecuador,⁴ where geographic isolation⁵ leads to greater difficulties in accessing basic services like health and education⁶ and scant public investment in infrastructure.⁷ On Ecuador's southern border, the province of Zamora Chinchipe has higher poverty levels, reaching 50.1%, than Loja with 39.4% and El Oro with 36.6%.
- 1.3 **Regional integration.** By integrating with surrounding countries and regional blocs, Ecuador can expand its markets, attract foreign investment, and foster cooperation in such strategic areas as infrastructure, energy, and technology.

¹ [Central Bank of Ecuador](#), 2024.

² From 2007 to 2018 poverty and extreme poverty fell 11.7% and 7.6%, respectively. [National Survey of Employment, Unemployment, and Underemployment \(ENEMDU\)](#) (INEC, 2021).

³ In 2018 poverty stood at 23.2%, and extreme poverty at 8.4%, rising to 27.7% and 10.5%, respectively, in 2021. [Population and Housing Census](#) (INEC, 2022).

⁴ According to INEC 2022, average poverty in the rural parishes of Chinchipe Canton is 72.78%, which is higher than the 41% poverty rate in rural areas nationwide. The poverty rates in this canton's rural parishes are as follows: Zumba (85.56%), Chito (82.68%), El Chorro (40.13%), La Chonta (77.18%), Pucupamba (76.92%), and San Andrés (74.23%).

⁵ Loja, the most populous city in southern Ecuador, is more than 681 km from Quito and 403 km from Guayaquil (approximately 12 and 8 hours from these cities, respectively).

⁶ With a population of 110,973 (INEC, 2023), the province of Zamora Chinchipe has few higher education institutions. The only one is Universidad Estatal Amazónica in El Pangui.

⁷ Overall, 95% of the national road system in Ecuador is paved, with the remaining 5% located near the country's borders.

The country has various partnerships with its neighboring markets, notably: (i) active member of the Andean Community (CAN), an organization promoting economic, social, and political integration in the Andean region; (ii) associate member of MERCOSUR, providing access to a market of more than 290 million people and expanding trade and investment opportunities; and (iii) observer state of the Pacific Alliance, a trade bloc promoting free trade and economic integration with an emphasis on Asian markets located in the Pacific. Globally, in 2023 the United States was the main destination for Ecuador's exports (23.1% of the total), followed by Panama (14.8%), China (14%), the CAN member countries (5.7%), and others. The United States was the main origin of imports (24.2%), followed by China (17.9%) and the CAN member countries (12.5%).⁸ Within the CAN, Peru is the major strategic partner, absorbing 55% of Ecuadorian exports, which highlights the importance and intensity of economic relations between the two nations.

- 1.4 **Integration with Peru.** The latest binational agreements between Ecuador and Peru have emphasized the importance of integration for both countries, to support their economic growth. In 2023 trade stood at US\$2.286 billion, up 2.2%, rising for the third consecutive year on increased exports from Ecuador to Peru (+21%).^{9,10} Despite this progress, crossborder barriers persist that constrain trade, capital, and labor flows between neighboring countries.¹¹ Improving integration not only helps the countries' economies but has positive impacts on border populations, which are often underdeveloped and poor, thus driving more equitable and sustainable development.
- 1.5 **Binational agreements with Peru and the need to address trade issues and improve quality of life.** To address trade challenges and improve quality of life in border areas (paragraphs 1.2 and 1.4), Ecuador and Peru have been committed to improving regional integration since 1998. All these efforts are reflected in high-level meetings, binational agreements, and integration plans framed in the 1998 Brasília Presidential Act (also known as the Peace Accord), which lays out commitments for cooperation and joint development in different areas.
- 1.6 **Connectivity commitments in the Peace Accord.** This key milestone is known as the Ecuador-Peru Comprehensive Agreement on Border Integration, Development, and Neighborly Relations. It identifies five road interconnectivity projects, known as axis roads,¹² totaling 2,176 km, to address connectivity limitations as a way of facilitating economic integration and trade. Biannual presidential meetings and the action plans¹³ to follow up on the Binational

⁸ [Foreign Trade Report](#) (Ministry of Production, Foreign Trade, Investment, and Fishing, 2023).

⁹ Especially oil (+59%) and increased purchases of agricultural products (+3%).

¹⁰ [Foreign Trade Report](#) (Ministry of Production, Foreign Trade, Investment, and Fishing, 2023).

¹¹ [The Six Major Puzzles in International Macroeconomics](#) (Obstfeld and Rogoff, 2001).

¹² Axis roads: (i) Axis road 1: Piura/Guayaquil (Guayaquil-Machala-Huaquillas-Aguas Verdes-Tumbes-Piura), 538 km; (ii) Axis road 2: Sullana/Arenillas (Arenillas-Pindal-Zapotillo-Lalamor-Alamor-Lancones-Sullana), 244 km; (iii) Axis road 3: Sullana/Loja (Loja-Catacocha-Macarará-La Tina-Sullana), 319 km; (iv) Axis Road 4: Saramiriza/Loja (Loja-Vilcabamba-Zumba-Chinchipe-Namballe-Jaén-Bagua-Santa María de Nieva-Saramiriza), 690 km; and (v) Axis road 5: Saramiriza/Méndez (Méndez-Yaupi-Borja-Saramiriza), 385 km.

¹³ [Ecuador-Peru action plans](#).

Development Plan for the Border Region (PBDRF)¹⁴ have reaffirmed the importance of completing these axis roads while verifying the progress made in meeting the related commitments.¹⁵

- 1.7 **Axis roads.** Ecuador has met most of its commitments under the agreement, except for Axis Road 4. This axis road has a total length of 690 km (Figure 1). On the Peruvian side, the commitment to build the axis road from Saramiriza to La Balsa (486 km) was met with a paved road in good condition reaching the La Balsa international bridge.¹⁶ From Loja to Bellavista, Ecuador has completed the construction of 151 km.¹⁷ The Bellavista-Zumba-La Balsa segment (Figure 2), targeted by this investment project, has a total length of 53 km and is pending completion. In addition, although some services like immigration and police are currently provided at the border, they are rudimentary and minimally staffed with only simple infrastructure. Once the axis road is completed, flows of passengers and freight are expected to increase, which will require the construction of the Binational Border Service Center (CEBAF),¹⁸ planned in La Balsa,¹⁹ to provide control services for people, baggage, goods, and vehicles. As pledged in the Peace Accord, responsibility for building the center falls on Peru once the Bellavista-Zumba-La Balsa segment of Axis Road 4 is completed in Ecuador.

¹⁴ The plan's objective is to improve the quality of life of the populations of southern and eastern Ecuador and northern and northeastern Peru and to advance integration and cooperation between the two countries. It is structured around four main lines of action: (i) social issues, focused on reducing inequality gaps and improving basic services like health and education; (ii) production, trade, tourism, and investment; (iii) environmental, energy, and mining issues; and (iv) infrastructure and connectivity ([Ecuador-Peru PBDRF](#), 2016). In October 2023 the presidents of Ecuador and Peru extended the term of the PBDRF during commemoration of the twenty-fifth anniversary of the signing of the Brasilia Peace Accords between the two countries.

¹⁵ [Minutes of the Sixteenth Meeting of the Peru-Ecuador Neighborly Relations Commission](#), June 2024.

¹⁶ International roughness index of approximately 5 m/km. The international roughness index is a statistical standard of roughness and serves as a reference in measuring road surface quality (World Bank, 1986). The road on the Peruvian side is being maintained on an ongoing basis under a level of service contract until 2026.

¹⁷ In the adjacent segment from Vilcabamba to Bellavista, Ecuador invested more than US\$104 million to build the road ([Ministry of Transportation and Public Works \(MTOPE\)](#), 2019).

¹⁸ The CEBAF is the set of facilities located within the borders of a CAN member country, adjacent to a border crossing point, that provide integrated control services for the flow of people, baggage, goods, and vehicles. The Axis Road 4 CEBAF will be built in Peru pursuant to the [Presidential Meeting and Sixteenth Ecuador-Peru Binational Cabinet Meeting of 2022](#) (article 26), and Peru has made its construction a priority. Peru will in turn update the CEBAF studies.

¹⁹ The benefits of control include the potential reduction of illegal transit of goods and vehicles, increased efficiency in the ability to collect taxes and tariffs, and revitalization of the local economy as a result of more trade between border towns.

Figure 1. Axis Road 4 – Ecuador and Peru

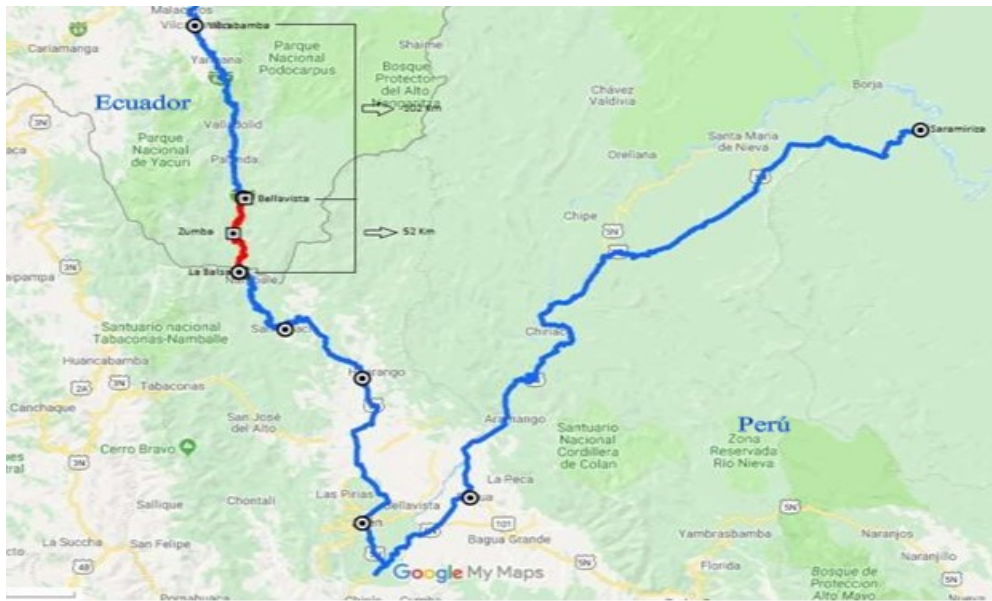


Figure 2. Bellavista-Zumba-La Balsa segment



Source: Prepared by the team based on project technical documentation (IDB-Walsh).

1.8 **Axis Road 4 as an integration corridor.** The road corridor connects the provinces of Loja and Zamora Chinchipe in the southern region of Ecuador with northern Peru,²⁰ providing access to the Amazon River and the Peruvian coast in the Piura area, including connection to the Port of Paita. Strategically, the benefits related to the regional integration associated with the road's improved connectivity are that it will (i) enable and facilitate the crossborder flow of people and goods, strengthening regional territorial productive integration with binational exchanges;²¹ and (ii) improve the accessibility of isolated rural areas.²²

²⁰ This area includes the cities of Namballe, Jaén, Bagua, Santa María de Nieva, and Saramiriza.

²¹ There are complementarities between provincial capital cities like Loja in southern Ecuador (with a cultural tradition and more geared toward health and education services) and Jaén in northern Peru (with strong agricultural and commercial activity).

²² There are isolated rural populations in Chinchipe Canton with approximately 10,000 inhabitants.

- 1.9 **Trade integration opportunities.** Completing the corridor will have a positive impact on the area's main economic activities.²³ The provinces of Loja and Zamora Chinchipe have high potential for crossborder trade in agricultural and livestock products and services with Peru. For both countries, the coffee and cocoa value chain is a significant source of income and jobs. In Peru, most coffee comes from the province of San Ignacio, which lacks processing plants for roasting and milling and mainly markets the raw produce. This raw produce is processed in Ecuador, where the lack of connectivity makes the product more expensive, increasing its final costs. Additionally, Zamora Chinchipe is known for its high-quality coffee produced especially for export, where 99.7% of the produce is grown in the cantons of Chinchipe and Palanda (the project's direct area of influence).²⁴ Dairy and beef cattle ranching is another major activity in the area. Approximately 2,000 heads of cattle from Chinchipe Canton are sold every month to other cities in Ecuador. Another binational activity with growth potential is the tourism sector, influenced by inbound tourism to Peru. Since 2016 the number of Ecuadorian and foreign visitors entering Peru from Ecuador has steadily risen, reflecting sustained growth in this sector.²⁵
- 1.10 **Gaps in accessibility of health services.** Ecuador's rural population faces significant challenges in accessing health services, due largely to the long travel times required to access them. Nationwide, 48.8% of the rural population has a high level of accessibility²⁶ to some type of service.²⁷ At the provincial level in Zamora Chinchipe, only 4% of the rural population has a high level of accessibility to some type of health service. In the project area, there is only one type-A service for basic and primary care: the Zumba Basic Hospital, which also treats patients crossing the border from the Peruvian side. In the last two years, the hospital has treated 1,336 Peruvians. However, for specific cases that require referral to a specialty hospital, patients must travel to the nearest type-C public hospital located in the city of Loja. This involves around four hours of travel, so accessibility to type-C health services in the project area is low. The Zumba-San Ignacio Binational Health Network project²⁸ was created in response to these needs and financed by the European Union and the CAN, to improve access to health services in the border towns of Zumba (Ecuador) and San Ignacio (Peru). That project strengthened the health infrastructure, as reflected in the larger number of patients treated at the Zumba Hospital. Despite this effort, there is still a need to make this service more accessible, especially for patients requiring

²³ See [Regional integration annex](#).

²⁴ MTOP, 2024.

²⁵ There is high tourism potential in places of interest like Vilcabamba in Ecuador and Chachapoyas and Cajamarca in Peru. There is also potential for food tourism exchange between the two countries.

²⁶ Accessibility refers to the time necessary to get from one place to another based the speed of travel in the area. The levels of accessibility are: high (between 0 and 15 minutes); moderate (between 15 minutes and 1 hour); and low (between 1 to 6 hours). [Thematic Cartography for Ecuador, MAG-SIGTIERRAS and Accessibility to Social Infrastructure](#) (Ministry of Agriculture, Livestock, Aquaculture, and Fishing, 2016).

²⁷ There are three types of health services: A (basic and primary care); B (promotion, prevention, recovery, etc.); and C (primary hospital with permanent care) ([Office of the President of the Republic of Ecuador, 2015](#)).

²⁸ This project included the expansion and improvement of services and facilities at the Zumba Hospital and the Namballe-San Ignacio health post. [Border development achievements](#).

urgent specialized care, where travel time may endanger people's lives if they fail to receive prompt medical attention.

- 1.11 **Gaps in accessibility of education services.** The gaps in accessibility of education services in Ecuador are significant, as only 39.2% of the rural population has adequate access to education services in general, and access to higher education levels is limited.²⁹ At the provincial level in Zamora Chinchipe only 8.3% of the rural population has a high level of accessibility to some type of education service. In Chinchipe Canton 90% of the population ages 12 and older have completed primary education, and 69.9% of the population ages 18 and older have completed high school; yet only 6.45% of the population ages 24 and older have completed higher education. As part of the PBDRF an education project³⁰ was implemented in the border provinces of San Ignacio and Zamora Chinchipe. Supported by the European Union and the CAN, this project sought to promote intercultural education, acknowledging the cultural and linguistic diversity of border communities. The project area has 36 educational units under the Sierra system at different levels, serving 2,974 students.³¹ In addition, access to higher education is limited. The closest public university to La Balsa is Universidad Nacional de Loja, five and a half hours away. This is one of the causes for lessened interest in achieving higher levels of education, which is crucial for accessing better job opportunities and higher pay and fostering development.

Current status of the Bellavista-Zumba-La Balsa segment. The road's poor condition³² has a negative impact on production-oriented activities in the area, on freight and passenger transportation, and on the population's access to basic services. The road's deterioration is reflected in a low level of service,³³ lighter traffic volumes, long travel times, and high transportation costs that impede consolidation of the integration corridor. This discourages potential users from traveling since they would expose themselves to damage to their vehicles, personal safety concerns, and the peril of damage to the goods being transported. All this adversely affects regional and binational trade. Additionally, the road is highly vulnerable to landslides,³⁴ especially due to its location in mountainous terrain and the presence of significant cuts in the slopes, aggravated by heavy rainfall. This combination of factors increases both the risk of traffic disruptions

²⁹ Includes educational units (primary and secondary schools) and vocational education centers.

³⁰ Intercultural education project in contexts of cultural and linguistic diversity.

³¹ In the project area, there are two preschool and primary education centers, 29 primary education centers, and five primary and secondary education centers (Ministry of Education, 2024). The average distribution of students by level is as follows: 84 students in preschool education, 226 students in primary education, and 184 students in secondary education.

³² The international roughness index is > 20 m/km. The road condition can also be confirmed in the [national road system](#) report (MTOP, 2024).

³³ Fewer than 500 vehicles travel on the road per day. The travel time for 53 kilometers is more than three hours and 45 minutes.

³⁴ The road has an average of 250 landslides per year. Clearing passage after these events takes eight hours. These events generate annual direct losses of approximately US\$2 million in debris removal and damage costs and US\$9.2 million in annual indirect losses due to the costs associated with traffic interruption time. [Análisis de la inversión pública para la reducción de riesgo de desastres: Estudio de caso en Ecuador](#) (Public Investment Analysis for Disaster Risk Reduction: A Case Study in Ecuador) (IDB, 2022).

and the constant need for maintenance to ensure the safety and serviceability of the road.

- 1.12 **Empirical evidence.** Crossborder road construction has increased bilateral trade significantly. A report by the Economic Commission for Latin America and the Caribbean³⁵ found that bilateral trade increases 65% between neighboring countries after completion of a crossborder highway. Additionally, studies have shown the positive impact of investment in roads, notably higher incomes and lower poverty, owing to the greater accessibility of social services and employment opportunities.³⁶ In health, Peru has seen a 4% reduction in the morbidity rate due to illnesses and accidents for the general population and a 9% reduction for children under five as a result of improvements in road infrastructure.³⁷ In education, road investment in rural areas has been shown to increase school enrollment by 8% and improve school attendance by 7% for boys between 12 and 18³⁸ and by 6% for girls between 6 and 11 in Peru.³⁹
- 1.13 **The proposed intervention.** The intervention consists of completing Axis Road 4 by improving the only segment of the national road system yet to be paved in the province of Zamora Chinchipe: the Bellavista-Zumba-La Balsa road.
- 1.14 **Governance of road management and challenges for the sector.** The Ministry of Transportation and Public Works (MTOPE) is responsible for national road system development and maintenance in Ecuador. In the last five years the MTOPE has allocated an average of US\$60 million per year for preventive, corrective, and routine maintenance of the national road system, which is equivalent to 20% of the budget allocated to the ministry.⁴⁰ Interventions are currently based on the requirements sent by the MTOPE's area subdepartments or in response to emergencies arising from natural disasters. Yet there is no uniform data or information on the condition of the national road system for prioritizing investments based on standard road engineering technology tools. Although the current condition of the national road system is considered acceptable, several challenges persist in the sector, including: (i) the need to adapt infrastructure to climate change impacts, to make it more resilient and manage disaster risk effectively; (ii) innovation in public works procurement processes; and (iii) effective planning and prioritization of road maintenance projects.
- 1.15 **Adaptation of infrastructure to climate change.** Ecuador is among the countries most exposed to a series of global and regional disaster hazards, including earthquakes, tsunamis, floods, landslides, droughts, and volcanic eruptions.⁴¹

³⁵ [Practices and Initiatives for the Development of Crossborder e-Commerce in Latin America and the Caribbean and its Impact in the Postpandemic Era](#) (Díaz de Astarloa B., 2022).

³⁶ Meta-analysis study of a series of 26 studies on rural roads in the last 20 years in developing countries ([Sieber and Allen](#), 2016).

³⁷ [Contracting the Road to Development: Early Impacts of a Rural Roads Program](#) (Development Bank of Latin America and the Caribbean (CAF), 2009).

³⁸ [Peru Rural Road Program: Bringing Access to the Rural Poor](#) (World Bank, 2010).

³⁹ Trade Logistics and Regional Integration in Latin America and the Caribbean (IDB, 2009).

⁴⁰ MTOPE, 2024. According to a 2017 study, the optimal annual level of maintenance investment for the national road system is US\$89 million ([Díaz-Cassou J., Ruiz-Arraz M., 2019](#)).

⁴¹ Ecuador is among the 10 countries with the highest risk of natural hazards in the region and among the top 20 in the world. [WorldRiskIndex 2022](#).

This exposure has been reflected in the more than 10,000 disasters recorded between 1970 and 2016, 51% of which were caused by landslides resulting from heavy rainfall.⁴² The IDB-funded resilience study for Ecuador's national road system⁴³ identified measures to improve the road system's resilience across public policy, laws and regulations, and tangible actions. The provinces of Loja and Zamora Chinchipe, targeted by the project, are highly prone to landslides. Between 2000 and 2018 more than 1,600 landslides were recorded in these two provinces, representing 23% of all landslides nationwide. With the projected increase in intensity and frequency of these events due to climate change, their impact is expected to escalate in the future. Several studies indicate that ex ante investment in disaster risk reduction generates benefits four to seven times greater than ex post operational expenditure on recovery.⁴⁴ Since landslides are a critical and recurring concern for the country's road infrastructure, the MTOP should build its institutional capacity in disaster risk management (DRM) from the early stages of the project life cycle. In 2022, the Bank published a technical note⁴⁵ that uses the Axis Road 4 project to illustrate, for road projects, how to identify critical points and areas and propose risk reduction measures, along with intervention options, an estimate of preliminary costs for these interventions, and specific recommendations for road design, considering DRM issues in the transportation sector. Axis Road 4 is the first MTOP project to mainstream climate resilience from the design phase. These considerations include measures to reduce risk via slope stabilization and the implementation of an early warning system (EWS) to warn road users and residents of the risk of landslides.

- 1.16 **Innovation for landslide-related DRM.** The EWS is highly efficient at reducing economic losses from natural hazard events by issuing timely warnings of potential road damage to road users and diverting traffic to alternative routes.⁴⁶ Investments in EWS are economically viable and yield significant socioeconomic returns with benefits between four and 36 times their cost.⁴⁷ The DRM innovation actions that will be included in the project are described in Subcomponent 2.1 (paragraph 1.34).
- 1.17 **Innovation in public works procurement processes.** Ecuador currently operates with traditional practices and regulation for public works contracting that need to be updated in line with prevailing international best practices. Although the country has successfully carried out a legal reform⁴⁸ to include works contracts under more robust contract management arrangements with modern risk management, it has not managed to create complementary policies, rules, and procedures for their development. The country and the MTOP would benefit from adopting international best practices for procuring works, attracting foreign

⁴² [DesInventar](#), 2019.

⁴³ [Resilience Study for the National Road System of Ecuador](#) (AECOM, 2019).

⁴⁴ MMC, 2005; Moench et al., 2007; EIRD, 2011; Kull et al., 2013; Micheler, 2015.

⁴⁵ [Análisis de la inversión pública para la reducción de riesgo de desastres: Estudio de caso en Ecuador](#) (Public Investment Analysis for Disaster Risk Reduction: A Case Study in Ecuador) (IDB, 2022).

⁴⁶ Wilhite and Svoboda, 2000.

⁴⁷ Wethli, 2014.

⁴⁸ Act for the Savings and Monetization of Economic Resources to Finance the Fight Against Corruption, published in the Second Supplement to Official Gazette 496 of 9 February 2024 and its implementing regulations, Decree 206/2024, which included amendments to Ecuador's common public procurement system.

investment, optimizing and simplifying contract administration, and developing tools to prevent disputes, all within a framework of transparency and integrity. This operation will help build capacity at the MTOP to use international standards of contractor selection for the first time in the transportation sector in Ecuador (two-envelope procedure), applying new bid evaluation techniques under value-for-money models,⁴⁹ and using selection criteria other than price, including comparison of bids based on quality, innovation, sustainability, gender,⁵⁰ and other factors.

- 1.18 **Effective planning and prioritization for national road system maintenance.** Difficulties persist at the MTOP relating to the collection and systematic documentation of information for road inventories, which is a key input for planning and prioritization of investments in the national road system (paragraph 1.14). One of the main barriers is the absence of up-to-date information on the condition of the national road system using uniform technical evaluation criteria, which hinders assessment of the national road system and decision-making. To address this, the project proposes building the MTOP's technical capacity by implementing Pavimenta2, a low-cost, high-impact software that uses artificial intelligence to gather accurate and systematic information on the inventory and condition of road infrastructure, thus facilitating more efficient planning based on concrete, up-to-date data.⁵¹
- 1.19 **Road safety.** Ecuador faces a worrying rate of road accidents, and road safety is a recurrent concern for the authorities. According to data from the World Health Organization, in 2022 the mortality rate per 100,000 inhabitants was 23, the third highest in the region after Haiti and the Dominican Republic.⁵² The Loja-Zumba highway (E682) has seen 308 injuries and 17 deaths due to accidents since 2020.⁵³ The number of injuries and deaths increased in 2022 and 2023, recording the highest levels in the last seven years. In 2022 the road safety audit, financed by the IDB and following its guidelines, was conducted for the project.⁵⁴ It identified proposed improvements relating to the road's cross-section, safe infrastructure in school zones, intersection treatment, signage and markings, and consideration of vulnerable users. These proposals have been considered in the project to ensure a safer road environment for users.

⁴⁹ According to international practices and IDB fiduciary guidelines, the distribution and weighting of criteria can be between 20 and 30 for quality factors (criteria other than price) and between 80 and 70 for price.

⁵⁰ The current version of the international competitive bidding document includes the following factors in the evaluation criteria (scoring): (a) sustainability: the efficient use of materials to avoid waste will be evaluated; designs must ensure that the road can withstand and recover from adverse events; value will be put on proposals that include the use of recycled or low environmental impact materials; and (b) gender: positive weighting will be given to proposals that promote gender equity in the use of technical equipment.

⁵¹ The MTOP has no experience in developing road plans based on systematic inventories of the national road system. There is previous satisfactory experience in planning processes in Ecuador under the IDB-financed Provincial Road Support Program for Decentralized Autonomous Governments ([PROVIAL 1](#)) in the national road system. Based on road inventories, provincial road plans were developed that are now being implemented or have been updated by the municipal governments.

⁵² [World Health Organization](#), 2022.

⁵³ [National accident rate of the National Traffic Agency \(ANT\)](#), 2024.

⁵⁴ Auditoría de Seguridad Vial Proyecto Eje Vial 4 Bellavista-Zumba-La Balsa (Road Safety Audit for the Bellavista-Zumba-La Balsa Axis Road 4 Project) (Hidalgo Vásquez, 2022).

- 1.20 **Gender gaps.** According to the census conducted by INEC in 2022, 59.2% of men were employed,⁵⁵ compared to 40.8% of women,⁵⁶ nationwide. These employment gaps are larger in the rural area of Chinchipe Canton, where 27% of women work, versus 44% of men.⁵⁷ In the canton's rural area, moreover, more women (65%) than men (36%) are reported to be outside the labor force and have little training in nontraditional trades. Data from Universidad Técnica Particular de Loja show that 126 of the 1,851 graduates in heavy machinery operation are women.⁵⁸ A reported 26% of the workers of road maintenance microenterprises are women.⁵⁹ In the project's area of influence, women's participation in coffee and cocoa producer organizations is also limited. A 2021 study with one of these organizations found that women represent 16.2% of members.⁶⁰ This project will therefore seek to promote women's inclusion through: (i) a program to strengthen women's leadership in the community and in sustainable processes with coffee and cocoa producer associations in the project's area of influence through training, support, and awareness-raising; (ii) an internship program for women students in science, technology, engineering, and mathematics (STEM) courses of study and with training in professional machine operation, to gain further work experience in the sector; and (iii) advisory services to incentivize the creation of women-led road maintenance companies and expand women's participation.
- 1.21 **Persons with disabilities.** According to the National Council for Disability Equality there are a total of 480,776 persons with disabilities in the country. In Zamora Chinchipe, there are 3,814 persons with disabilities, and in Chinchipe, 433 persons with disabilities. According to a United Nations Population Fund survey, most organizations of persons with disabilities consider that universal accessibility to transportation services⁶¹ remains a hard-to-reach goal, with 26.1% stating that there is no universal accessibility to transportation, and 60.9% describing it as limited.⁶² In Ecuador, according to the National Council for Disability Equality (CONADIS), traffic accidents are the fourth leading cause of disability, mainly physical disability.⁶³ Both the Constitution of the Republic of Ecuador and the Disability Act (796/2012) make it mandatory to provide access for persons with disabilities to the physical environment and services, including transportation in both urban and rural areas. Accordingly, the project will take some of the findings of the road safety audit into consideration, including adequate infrastructure for pedestrians following universal accessibility criteria as well as accessible bus stops at the points of access to the towns along the road. In

⁵⁵ According to the INEC, employed persons are those engaged in producing goods or providing services in exchange for remuneration or services.

⁵⁶ [Population and Housing Census 2022](#) (INEC, 2024).

⁵⁷ Ibid.

⁵⁸ Data provided by Universidad Técnica Particular de Loja to the MTOP, 2024.

⁵⁹ Data provided by the MTOP, 2024.

⁶⁰ Design and implementation of a pilot project to build technical, productive, and commercial capacities in the coffee and cocoa chains, targeting women from families located along the Bellavista-Zumba-La Balsa Axis Road 4 in the province of Zamora Chinchipe, Ecuador (Universidad Técnica Particular de Loja, 2022).

⁶¹ Universal accessibility is the condition whereby an environment is fully accessible to all individuals, regardless of whether they have a motor disability that hinders their movement. ([Inclúyeme, 2013](#)).

⁶² [United Nations Population Fund](#), page 33.

⁶³ [CONADIS, 2023](#).

addition, training on the rights of persons with disabilities will be provided to MTOP technical staff, to promote these concepts at the national level.

- 1.22 **The Bank's experience in regional integration.** At operational level, the Bank has experience supporting key projects for regional integration, focusing on financing improvements in road corridor standards, access to ports or other commercial nodes, border crossing enhancements, as well as regulatory and institutional reforms in the logistics sector.⁶⁴ Key investments by the Bank include designs to improve the control of the border crossings at Huaquillas on the Peruvian border and Rumichaca on Ecuador's border with Colombia ([ATN/JF-14202-RG](#)), border control optimization ([3324/OC-EC](#)), and National Route 19 ([3836/OC-AR](#)) in the province of Córdoba, Argentina, as part of the Bioceanic corridor. The Bank has also been a leader in the design of border crossing operations in Ecuador–Colombia, Argentina–Chile, Costa Rica–Nicaragua, and Costa Rica–Panama, as well as in the execution of these last two. These interventions add value around regional integration because they both shorten travel times between border links and lay the groundwork for improved productive and commercial development of the areas of influence by promoting synergies between countries around value chains or regional tourism routes. Additionally, a resilience study under operation [ATN/JF-15752-EC](#) for Ecuador's national road system after the 2016 earthquake highlighted measures, such as promoting crossborder cooperation with Colombia and Peru, to consolidate land road connectivity and the implementation of a pilot monitoring system on roads that are a highly landslide-prone.⁶⁵ These actions sought to strengthen national road system integration, innovation, and redundancy, thus improving its natural disaster resilience and ensuring connectivity and safety even in extreme weather conditions.
- 1.23 **The Bank's experience in the transportation sector in Ecuador.** In the last 15 years the Bank has played a major role in developing the transportation sector in Ecuador through the execution of operations totaling US\$546.5 million in road interventions. Notable among these operations is the First Road Infrastructure and Maintenance Program ([2201/OC-EC](#))⁶⁶ (US\$350 million) with level of service maintenance executed by the MTOP (rehabilitation of 975 kilometers, approximately 10% of the national road system).⁶⁷ This operation has driven knowledge generation about this type of contracting for future financing with multilateral banks.⁶⁸ Additionally, the MTOP has demonstrated satisfactory experience in the past in executing projects with the Bank, such as the Emergency Program for an Immediate Response to the Earthquake in Ecuador ([3751/OC-EC](#)), launched following the April 2016 earthquake.⁶⁹ Two loans have

⁶⁴ Annual reports (2017-2023) of the Regional and Global Integration Infrastructure Group's Corporate Input Product (BK-C1106).

⁶⁵ [Resilience Study for Ecuador's National Road System](#) (AECOM, 2019).

⁶⁶ The program was evaluated as successful based on the development effectiveness rating of the [project completion report](#) (IDB, 2019).

⁶⁷ The [project completion report](#) showed that program performance was moderately satisfactory (IDB, 2018).

⁶⁸ The MTOP has a loan in execution with the CAF using performance-based maintenance contracting (CFA10730) for US\$192 million.

⁶⁹ The MTOP is also executing the Emergency Resilient Reconstruction Project with the World Bank (P187019).

also been financed with the Development Bank of Ecuador (BDE) as a second-tier bank for the provincial road system: the Provincial Road Support Program for Decentralized Autonomous Governments (PROVIAL 1) ([3135/OC-EC](#)), which rehabilitated approximately 366 kilometers of rural roads; and the Rural Roads Program (PROVIAL 2) ([5811/OC-EC](#)), which will help improve the rural population's social inclusion and productivity. Not only have these experiences built the institutional capacity of the MTOP, they have also laid the foundations for future strategic interventions, positioning the Bank as a key partner in the modernization of the transportation sector in Ecuador.

- 1.24 **The Bank's value added for the project.** The IDB has focused on national road system and provincial road system projects in an effort to transfer international best practices. These practices have been welcomed at government institutions (MTOP, BDE, local governments, etc.) and include, for example, performance-based maintenance contracts at the MTOP and the development of provincial road inventories and plans at local governments. The Bank's value-added for this project is a focus on regional integration and the accessibility of health and education services for isolated populations, MTOP institutional capacity-building in proactive DRM, implementation of innovative public contracting mechanisms, and improved road maintenance planning and prioritization processes. As an exit strategy, once the project is completed, the MTOP will be in a better position to expand and replicate these practices in the national road system.
- 1.25 **Loan approved by the Bank's Board of Executive Directors in 2019 (RG-L1132).** It should be noted that this project was previously approved by the Bank's Board of Executive Directors in December 2019,⁷⁰ but the loan agreement was never signed. In 2022, the MTOP decided that the project would be executed through an agreement with the public enterprise of the Zamora Chinchipe provincial government.⁷¹ In 2024, the Government of Ecuador asked the Bank to prepare a new loan, given the project's importance and the fact that no agreement had ever materialized with the provincial government.⁷² Following this request, several actions have been taken in the operation's design, such as including considerations relating to integration, accessibility of social services, and climate resilience measures; MTOP capacity-building for gathering information to prioritize road maintenance; enhancing knowledge in international contracting processes; and applying new environmental policies relating to the Bank's new socioenvironmental management framework. These considerations have been adopted when updating the project's social and environmental impact studies. The adaptations reflect the MTOP's current needs, delivering greater benefits derived from the project.

⁷⁰ Border Integration Project – Axis Road 4, Bellavista-Zumba-La Balsa Road, Zamora Chinchipe Province ([RG-L1132](#)) with the IDB. The project to be financed is located entirely within Ecuador, extending to the border with Peru. This makes it a key regional integration initiative with benefits for both countries. The Government of Ecuador has requested this loan to comply with its bilateral commitments. Although the operation, approved in 2019, was initially classified using a regional code (RG), the borrower of the loan has always been exclusively Ecuador.

⁷¹ MTOP, Official Notice MTOP-DVIT-22-457-OF of 25 July 2022.

⁷² Ministry of Economy and Finance, Official Letter MEF-MEF-2024-0001-O of 2 January 2024.

- 1.26 **Lessons learned.** The main lessons learned from projects with the Bank, derived from operations [3135/OC-EC](#) and [2201/OC-EC](#), have been incorporated into the design of this operation. These lessons include: (i) adopting a holistic, complementary approach in interventions; and (ii) ensuring effective coordination both in the overall management of the project and at the technical and interagency levels. These lessons have been incorporated into the project through the establishment of missions and working groups by the Bank that have confirmed government coordination and support for the operation, reviewed the planning and structure of the project proposed by the MTOP, and coordinated across the board with national and subnational government entities related to the project.
- 1.27 **The Ecuadorian government's strategy.** The project is consistent with objective 8 of the Development Plan for the New Ecuador 2024-2025,⁷³ on promoting connectivity as a source of development and sustainable economic growth. The project is aligned with the plan's policy 8.2 on optimizing infrastructure for sustainable, appropriate, and safe domestic and international movement of people, goods, and merchandise. The plan's target 8.6 seeks to improve the condition of the national road system.⁷⁴
- 1.28 **The Bank's country strategy.** The project is aligned with the IDB Group Country Strategy with Ecuador (2022-2025) (GN-3103-1) through the strategic objectives to: (i) expand the coverage and quality of physical and technological infrastructure; and (ii) expand access to and improve coverage of basic and social services. It is aligned with the priority areas of: (i) development of the productive sector as a driver of sustainable growth, by helping to close physical infrastructure gaps through investment in access to rural transportation services; and (ii) strengthening of social progress with emphasis on reducing gender gaps, by supporting the improvement of rural roads and promoting social progress.
- 1.29 **Strategic alignment.** The project is aligned with the IDB Group Institutional Strategy (CA-631) and is consistent with the objectives to: (i) reduce poverty and inequality by expanding the accessibility of opportunities for vulnerable communities through increased trade dealings between Ecuador and Peru; (ii) address climate change, by adjusting the design of embankments, bridges, and culverts to reduce the potential impacts of climate events; and (iii) bolster sustainable regional growth and productivity, by providing a strategic road corridor for regional integration. The project is also aligned with the following operational focus areas: (i) gender equality and inclusion of diverse population groups; (ii) institutional capacity, rule of law, and citizen security; (iii) sustainable, resilient, and inclusive infrastructure; and (iv) regional integration. In addition, the project is consistent with: (i) the Strategy of Sustainable Infrastructure for Competitiveness and Inclusive Growth (GN-2710-5); and (ii) the following sector frameworks: (a) Transportation (GN-2740-12); (b) Gender and Diversity (GN-2800-13); (c) Climate Change (GN-2835-13), (d) Integration and Trade (GN-2715-12); and

⁷³ [Development Plan for the New Ecuador 2024-2025](#).

⁷⁴ The PBDRF annual report was presented, and briefings given on efforts to build the second segment of Axis Road 4 as part of the Peace Accords, at the June 2024 Sixteenth Meeting of the Peru-Ecuador Neighborly Relations Commission in Peru. In July 2024, the Presidential Declaration of the Presidential Meeting and Fifteenth Ecuador-Peru Binational Cabinet Meeting in Lima outlined an action plan with the Axis Road 4 project on the Ecuadorian side and construction of the CEBAF on the Peruvian side as top priorities.

(e) Employment Action Framework with Gender Perspective (GN-3057). The project is also consistent with the IDB Group's Amazonia Forever program,⁷⁵ and aligned with the sustainable infrastructure and connectivity pillar since the project is within the program's zone, and resilience considerations will be taken into account in building the road.

- 1.30 **Paris alignment.** This operation 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. The project's estimated climate finance is 20.65% of the resources contributed by the IDB financing. These resources will be used to finance adaptation measures to respond to the project's climate risks.

B. Objectives, components, and cost

- 1.31 **Objective.** To improve border regional integration between the southern and central highlands of Ecuador and northern Peru and to improve the quality of life of the border populations. The specific objectives are: (i) to improve efficiency and road safety on the Bellavista-Zumba-La Balsa road; (ii) to improve the accessibility of health and education services for border populations; and (iii) to improve the MTOP's institutional capacity and labor inclusion with gender equity criteria in the project's area of influence.
- 1.32 **Component 1. Civil works, supervision, and maintenance (US\$145.9 million).** This component will finance: (i) improvement of the 54.57 km Bellavista-Zumba-La Balsa segment, which includes the main road and the accesses to Isimanchi, Progreso 1, and Progreso; (ii) supervision of the work; (iii) maintenance for a two-year period;⁷⁶ and (iv) price adjustments and contingencies of the work. The component includes the cost of eminent domain actions and environmental and social action measures.
- 1.33 The road to be built will be paved with asphalt surfacing. It will be 7 meters wide, in addition to the shoulders (0.5 meters) and ditches (0.75 meters) on either side of the road, which corresponds to a Class III road design.⁷⁷ The estimated driving speed is 60 km/h. Improvements to the segment will include slope stabilization works to reduce the risk of landslides, reflecting climate change scenarios. The road will incorporate road safety and universal accessibility criteria from the design stage.

⁷⁵ The project is aligned because it is a holistic intervention that addresses multidimensional and multitemporal regional transformation in a way that reflects land use planning. It is aligned with the mitigation and adaptation goals of the Paris Agreement. At the same time, it does not make populations more vulnerable, and so pursues resilient and sustainable development. The specific activities aligned with the initiative are: (i) improved accessibility of education and health services in the project's area of influence; and (ii) positive net socioeconomic impact related to improved connectivity by promoting regional integration and trade in the border area.

⁷⁶ The Bank will finance the performance-based maintenance of Axis Road 4 for the loan execution period up to a maximum of two years within the term of the loan contract. After this period, the MTOP will generate a performance-based maintenance contract using its own funds for up to three years after loan closing.

⁷⁷ [Geometric Design Standards Manual](#) (MTOP, 2003).

- 1.34 **Component 2.⁷⁸ Landslide-related DRM (US\$2 million).** This component will focus on consulting services and procurement of goods, including: (i) implementation of the EWS⁷⁹ for road infrastructure users and residents living near it; (ii) study on the detection of potential landslide zones using artificial intelligence; (iii) study of the efficiency and utility of green and hybrid infrastructure to establish slopes and reduce the risk of landslides on the road; and (iv) feasibility study and final design proposal for landslide risk mitigation works on the Vilcabamba-Bellavista segment. These activities will be performed in the project's area of influence, but their execution thereof is independent of Component 1.
- 1.35 **Component 3. Institution-strengthening and crosscutting issues of gender and diversity (US\$1 million).** This component includes activities for: (i) strengthening of MTOP management by updating the national road system resilience strategy and training for MTOP employees to incorporate climate change criteria into the life cycle of projects at the national level; (ii) training of MTOP employees in best practices for contracting works with international standards and improvements in transparency processes;⁸⁰ (iii) innovation for the development of road inventories through the use of Pavimenta2, including the purchase of video cameras and other data collection equipment; (iv) an internship program for women students in STEM courses of study with training in professional machine operation to gain further work experience in the sector; (v) advisory services to incentivize the creation of women-led road maintenance companies and expand women's participation; and (vi) a program to strengthen women's community leadership and sustainable processes with coffee and cocoa producer organizations in the project area through training, support, and awareness-raising. Activities (iv), (v), and (vi) will be performed in the project's area of influence.⁸¹ Training will also be provided to MTOP technical staff on the rights of persons with disabilities and road safety.
- 1.36 **Administrative costs. Audit, administration, evaluations, and other (US\$1.1 million).** This component will finance operational and administrative expenditures, such as coordination of execution, including MTOP staff dedicated to the project. It will also finance project audits, the midterm and final evaluations, and a social and productive impact assessment, including baseline and monitoring.

C. Key results indicators

- 1.37 **Main results indicators.** The indicators for the general objective are: (i) commercial trade of goods moving through the border crossing of Axis Road 4;

⁷⁸ The Component 2 activities are independent of execution of the Component 1 work.

⁷⁹ In Ecuador, the EWS is being strengthened through loan project 5787/OC-EC with the Environment, Rural Development, and Disaster Risk Management Division (RND). The lessons learned from this EWS will be shared with the EWS to be implemented in the MTOP. The Office of Disaster Risk Management (SGR), as executing agency of operation 5787/OC-EC, would participate in this project as an observer, supporting its complementarity and possible synergies.

⁸⁰ Additionally, the MTOP is interested in engaging international transparency observers for public contracting processes, which could be implemented in the contracting process for this work. There have been similar positive experiences in Ecuador, and the project team will work closely with the Office of Institutional Integrity (OII) to transmit its recommendations to the executing agency.

⁸¹ See the Gender and diversity annex (optional link 2) for the scope of activities (iv), (v), and (vi). The estimated amounts for each of the contracts are given in the project's [multiyear execution plan/annual work plan](#).

and (ii) poverty in the targeted segment in Chinchipe Canton. The outcome indicators for the specific objectives are: (i) travel times by type of vehicle; (ii) vehicle operating costs by type of vehicle; (iii) star ratings to reflect the risk as it relates to an individual road user following the iRAP methodology;⁸² (iv) people with a travel time of less than four hours to a level C public health facility; (v) population of Chinchipe Canton with a travel time of less than four hours to a level C public health facility; (vi) population of Chinchipe Canton in the age range of 18 to 20 with a travel time of less than four hours to a public higher education center; (vii) annual number of warnings issued by the EWS; (viii) MTOP contracting processes using international standards in the contracting of public works with transparency criteria; (ix) plans developed using investment planning tools based on systematically documented and up-to-date information on the condition of the national road system; and (x) average number of women participating in representative spaces in the coffee and cocoa organizations participating in the strengthening program.

- 1.38 **Economic evaluation.** The economic evaluation was based on the following parameters: (i) use of the 2024 traffic count as a starting point for projections; (ii) 20-year evaluation horizon; and (iii) traffic growth rate equal to 3.6%, which is the simple average of each country’s individual average GDP growth rate (3.2% for Ecuador and 4% for Peru). The benefits in each type of vehicle are due to: (i) travel time savings; and (ii) savings in vehicle maintenance. In the base case, the annualized net value (ANV) is US\$36.27 million, and the internal rate of return (IRR) is 15.53%. Sensitivities show that the project is robust against negative percentage changes in costs and traffic, measured as the annual average daily traffic (AADT), and that negative changes in costs and traffic reduction have symmetrical effects on the project’s social return. In no case does the project’s social return fall below 13%.

Table 1. Summary of sensitivity analysis (ANV in US\$ millions and percent IRR)

Base case		+20% costs		-20% AADT		+10 costs and -10% AADT	
ANV	IRR	ANV	IRR	ANV	IRR	ANV	IRR
36.27	15.53	9.83	12.86	9.61	12.97	9.72	12.91

- 1.39 **Project beneficiaries.** The beneficiaries of the border regional integration will be the areas in the southern highlands of Ecuador and the northern region of Peru. The direct beneficiaries will be the 10,800 inhabitants of Chinchipe Canton. The indirect beneficiaries will be the population of Zamora Chinchipe with around 114,300 inhabitants.⁸³ As an initial estimate, an average of 60 freight trucks per day will pass through the border crossing, benefiting traders of both countries. The project will help optimize the movement of people and vehicles, promoting

⁸² The International Road Assessment Program (iRAP) is an international standard methodology for assessing the road safety of a project. The baseline value is estimated.

⁸³ Population data from the 2021 census, using the annual growth rate of 1.5% for Ecuador, which corresponds to the average for the last five years. ([INEC, 2022](#)).

regional integration within Ecuador, as well as commercial trade and trade in services with Peru.

II. FINANCIAL INSTRUMENTS AND MAIN RISKS

A. Financing instruments

- 2.1 **Financing modality.** The project will be financed through a specific investment loan, since it is an operation with a fully defined scope whose components cannot be divided without affecting its logic.
- 2.2 **Cost and financing.** The project's total cost is US\$150 million, which will be financed by the Bank using Ordinary Capital resources (see Table 2). The itemized budget is included in the multiyear execution plan and annual work plan ([required link 1](#)). The disbursement period will be five years, based on prior experience in similar projects in the country (see Table 3).

Table 2. Estimated project costs (US\$ millions)

Components	IDB	Total	%
<u>Component 1. Civil works, supervision, and maintenance</u>	145.90	145.90	97.27
Rehabilitation and construction of the bypasses on the Bellavista-Zumba-La Balsa segment	122.60	122.60	81.73
Maintenance for two years	1.90	1.90	1.27
Supervision of the work	6.00	6.00	4.00
Contingencies	13.10	13.10	8.73
Eminent domain actions	2.30	2.30	1.53
<u>Component 2. Landslide-related DRM</u>	2.00	2.00	1.33
Landslide-related DRM	2.00	2.00	1.33
<u>Component 3. Institution-strengthening and crosscutting issues of gender and diversity</u>	1.00	1.00	0.67
Institution-strengthening	0.85	0.85	0.57
Crosscutting issues of gender and diversity	0.15	0.15	0.10
<u>Administrative costs. Audit, administration, evaluations, and other</u>	1.10	1.10	0.73
Total	150.00	150.00	100.00

Table 3. Disbursement schedule (US\$ millions)

Source/year	1	2	3	4	5	Total
Total	24.72	46.82	61.29	15.57	1.6	150.00
%	16.48%	31.21%	40.96%	10.38%	1.07%	100.00%

B. Environmental and social safeguard risks

- 2.3 The project is classified as Category "A" under the Bank's Environmental and Social Policy Framework because significant negative environmental and social impacts associated with the improvement, rehabilitation, and construction of the Bellavista-Zumba-La Balsa road segment have been identified, such as impacts on the inhabitants in the land acquisition process (requiring eminent domain

actions, compensation, and payment for adverse impacts), involuntary resettlement, moderate impacts on critical habitat that do not represent a quantifiable adverse impact, use of areas to store excess materials, and the use of quarries in accordance with the supplemental [environmental and social impact assessment](#) and the due diligence review.

- 2.4 The operation is rated as having a high environmental and social risk due to the contextual risks related to distrust by the communities, since outreach and dissemination actions have been conducted previously and there is a high expectation that the project will be performed this time. There is also the performance risk of building and operating works in critical habitats and in remote, hard-to-access communities, as well as the fact that the executing agency does not have experience in the application of the Environmental and Social Policy Framework. Consequently, the Bank, acting through the Environmental and Social Solutions Unit, will provide ongoing support for the project to train and strengthen the executing agency in the management and implementation of the measures established in the various environmental and social instruments developed for the project. The project's disaster and climate change risk score is high, considering that the area of interest is highly landslide-prone, exposed to heavy rainfall due to climate change, and moderately prone to seismic activity. The criticality and vulnerability of the planned infrastructure works are high, since the works are exposed to landslides that can affect the road and drainage structures. There is a quantitative assessment of disaster risk with structural and nonstructural measures for risk reduction. Based on the identification of socioenvironmental risks and impacts, as part of the environmental and social management system (the main tool for controlling, monitoring, and mitigating risks and impacts), the MTOP also has an emergency preparedness and response program and a DRM plan for the project.
- 2.5 The same alignments of the engineering designs prepared in 2020 by the MTOP were used in preparing this project. To reflect the Environmental and Social Policy Framework, the MTOP has supplemented the [environmental and social impact assessment](#), the environmental and social management plan, the involuntary resettlement plan, the assessment of impacts on critical natural habitat, and its biodiversity action plan. For this reason, the probability of occurrence of resettlement risk is low because a resettlement plan is in place that includes an analysis of the affected dwellings, vulnerability analysis, and a grievance mechanism. The project has an environmental and social management system with the seven elements established in Environmental and Social Performance Standard 1. The project also has a stakeholder participation plan, and the public consultation process was carried out on 2 and 3 August 2024. The main concerns related the impact on existing infrastructure, the environment, and natural resources, as well as potential impacts on properties. All the issues raised were addressed by the MTOP. The consultation report and final versions of the environmental and social documents were published on the IDB's website. Importantly, the stakeholder engagement process conducted in 2024 has been based on the background of the three outreach events held by the MTOP in September 2019 for the same project. In 2019 concerns focused on the updating of technical studies, timelines, socioenvironmental impacts, compensations, and the project's alignment. In 2024 concerns focused on local socioenvironmental impacts, mitigation measures, road maintenance, community inclusion, and protection of biodiversity and water resources. The project's socioenvironmental

measures were presented, and the opinions of the affected community gathered, during these consultations.

C. Fiduciary risks

2.6 The Bank updated the Institutional Capacity Assessment Platform (ICAP) analysis during the operation's design phase, to reveal the executing agency's main weaknesses, opportunities for improvement, and strengths, and also conducted a risk workshop that identified, inter alia, the main fiduciary risks. Among the risks assessed as medium-high are potential delays in project execution because: (i) the team responsible for the project does not have knowledge of, or experience in, procurement and financial management processes under the Bank's policies; (ii) the allocation of room in the budget and the multiyear budget certification of the project will not be secured until March 2025; and (iii) the MTOP may fail to create a clear, functional execution mechanism with defined roles and responsibilities and sufficient capacity in fiduciary policies before the loan contract is signed. The following proposed mitigation measures require no investment of monetary resources: (i) strengthening and training of the project management team designated by the MTOP on IDB fiduciary policies, to be provided by Bank fiduciary specialists in procurement and financial management; (ii) inclusion of the project in the annual investment plan in advance of preparation of internal budgetary reports, and working groups involving the MTOP, the Ministry of Economy and Finance, and the National Planning Department to coordinate all associated internal processes; and (iii) an execution mechanism in place centrally at the MTOP's Office of the Vice Minister of Transportation Infrastructure, which also has a consulting team in functional and fiduciary areas, all fully reflected in clear procedures in the project Operating Regulations.

D. Other key issues and risks

2.7 **Opportunities.** Regarding social safeguards, there is an opportunity to leverage the population's high expectations surrounding the project, in order to increase the chances of success and sustainability over time. The following actions are proposed, to exploit these opportunities: prepare a national and local communication and outreach strategy to communicate the project's benefits to the population, national authorities, and other stakeholders; and implement public consultations in a timely manner and apply the Bank's action mechanisms for social and environmental safeguards.

2.8 **Other risks.** Risks related to the macroeconomic context and political environment have been rated medium-high. These risks are: (i) delays in project execution due to a change in priorities in the event that support for the project does not continue, or the 2025 presidential elections result in a change of authorities; (ii) delays in project execution and planned disbursements due to failure to secure room in the budget and budget certifications on time for the project; and (iii) delays in project execution and problems meeting its objectives due to project implementation and execution risks related to a lack of internal coordination and coordination between the MTOP, contractor, and oversight authority, knowledge of procurement processes, inadequate organizational structure, and high staff turnover. To mitigate these risks, activities will be conducted to: (i) maintain an ongoing dialogue with the authorities, to ensure that the contract is signed within the agreed time frame and to meet the commitment the two countries made to each other under the 1998 Peace Accords and the Presidential Agreement of

July 2024; (ii) include the investment project in the Annual Investment Plan and issue the budget certification in a timely manner, coordinating agreements with all actors to track these processes, and holding working groups between the MTOP, the Ministry of Finance, and the National Planning Department to coordinate progress and budget allocation; and (iii) strengthen the MTOP team with supporting consultants; provide training on the operation and management of construction contracts with international standards; clarify the responsibilities of all parties in the project Operating Regulations; keep project progress reports regularly updated by systematically formalizing the aide-mémoires of agreements and missions, to apprise stakeholders of progress and information; and hold monthly monitoring meetings to issue early warnings.

- 2.9 Additionally, the Bank will finance the performance-based maintenance of the project for the loan execution period up to a maximum of two years within the term of the loan contract. After this period, the MTOP will generate a performance-based maintenance contract using its own funds for up to three years after loan closing.

III. IMPLEMENTATION AND MANAGEMENT PLAN

A. Summary of implementation arrangements

- 3.1 **Borrower and executing agency.** The borrower will be the Republic of Ecuador, and the executing agency will be the Ministry of Transportation and Public Works (MTOP), acting through the Office of the Vice Minister of Transportation Infrastructure, which will be responsible for project planning, monitoring, evaluation, and execution and will have a group of professionals exclusively dedicated to the project, contracted with proceeds of the loan, who will provide support to the MTOP in the various areas involved.
- 3.2 **Execution mechanism.** The MTOP is responsible for contracting the execution of the work and the related supervision. Using its own staff, the MTOP's organizational structure will be responsible for preparing documents for competitive bidding processes, for supervision and control of consulting contract execution, and for the execution of the works. The Office of Loans and International Cooperation will work to coordinate the project with the MTOP's internal units. Lastly, the MTOP will follow the project Operating Regulations, which will define the responsibilities and coordination mechanisms.
- 3.3 **Project Operating Regulations.** The project Operating Regulations will define operational aspects of technical, environmental and social, fiduciary, and other responsibilities, including: (i) intra- and inter-agency coordination mechanisms and reporting between the MTOP and the IDB; (ii) roles and responsibilities in the procurement procedures for works, goods, and consulting services; (iii) guidelines for the use of resources and fiduciary management of the project; (iv) disbursement procedures; (v) personnel provided for project execution; (vi) environmental and social requirements; and (vii) best practices in promoting transparency and managing integrity risk and conflicts of interest ([optional link 5](#)).
- 3.4 **Institutional Capacity Assessment Platform (ICAP).** The ICAP analysis concluded that the MTOP has the necessary capacity for the fiduciary and technical management of the project, given its institutional strengths and prior experience in project management with other multilaterals. However, weaknesses

and areas for improvement have been identified and will be mitigated with a clear process of institution-strengthening through the hiring of supporting consultants in key units of the MTOP, ongoing training on IDB policy, effective risk management, and close Bank support during project execution.

- 3.5 **As special contractual conditions precedent to the first disbursement of the loan proceeds:** The first disbursement of the loan proceeds will be contingent on meeting the following conditions to the Bank's satisfaction: (i) approval of the project Operating Regulations ([optional link 5](#)) on the terms previously agreed with the Bank, including: work flows, internal controls, and environmental and social requirements, including the environmental and social management system, environmental and social management plan, and environmental and social action plan as annexes detailing the requirements and procedures applicable to project execution; and (ii) appointment of a management team exclusively dedicated to project execution based on the job descriptions included in the project Operating Regulations. These measures are necessary because, based on the Bank's experience in the region, approval of the program Operating Regulations prior to the first disbursement contributes to the executing agency's internal organizational structure for implementation of the operation, and the project should have specifically dedicated human resources in place, to achieve the planned development objectives.
- 3.6 **Fiduciary agreements and requirements.** The principles and criteria contained in the Financial Management Guidelines for IDB-financed Projects (OP-273-12) will be followed, and the framework for financial management and planning and for procurement supervision during project execution have also been established. The loan proceeds will be disbursed into an exclusive bank account in U.S. dollars at the Central Bank of Ecuador (BCE), which will be used to manage them. In the case of advances of funds, disbursements will be based on actual liquidity needs, according to the project's financial planning for up to six months. The Bank may make a new advance when justification has been provided for at least 80% of the total cumulative balances pending justification. Disbursement requests will be reviewed on an ex post basis (Annex III).
- 3.7 **Procurement of works, goods, and services.** The Policies for the Procurement of Goods, Works, and Nonconsulting Services Financed by the IDB (GN-2349-15) and the Policies for the Selection and Contracting of Consultants Financed by the IDB (GN-2350-15), or their updated versions will be followed. The procurement plan ([required link 4](#)) lists the planned procurements. This is in line with the Fiduciary Agreements and Requirements annex.
- 3.8 **Audits.** The external audit of the project will be performed by an external audit firm acceptable to the Bank. The external audit will be commissioned by the MTOP and may be financed with loan proceeds following procedures, terms of reference, and a request for proposals that have received the Bank's no objection. During execution, the audited financial reports will be delivered: (i) annually to the Bank within 120 days after the closing date of each fiscal period; and (ii) at project closing no later than 120 days after the last disbursement. Additionally, the IDB may require audited or unaudited financial statements or reports relating to the project when deemed necessary.

B. Summary of arrangements for monitoring results

- 3.9 **Monitoring.** The monitoring and evaluation plan ([required link 2](#)) will support execution of the operation in accordance with the targets and progress indicators set in the Results Matrix (Annex II), using the following instruments: (i) multiyear execution plan, annual work plan, procurement plan, financial plan, risk matrix, and annual external audits; (ii) six-monthly progress reports ([required link 2](#)), as well as environmental, social, and occupational health and safety reports, as described in the environmental and social management plan ([required link 3](#)); and (iii) audited financial statements. The MTOP will deliver six-monthly reports within 60 days after the end of each six-month period with the content defined in the progress monitoring reports, detailing progress on project implementation. These reports will include: physical and financial progress of the outputs, progress of the activities contained in the annual work plan, status of procurement and contracting processes, compliance with environmental and social safeguards, risk management, and updating of planning and monitoring tools, including the Results Matrix. The last six-monthly report before project completion will include an annex calculating the project's impact and outcome indicators.
- 3.10 Additionally, the MTOP will prepare monthly reports indicating the specific progress of the work based on the supervision reports, including but not limited to the report on the physical and economic progress of the work, the related projections, and expected deviations with respect to the initial planning. Warnings issued for execution of the project will be specified in this report, including a risk analysis and mitigation measures.
- 3.11 **Evaluation.** The MTOP will deliver a midterm evaluation of the project to the Bank in the form of a project completion report (when month 30 of the loan execution period is reached, or 50% of the disbursements have been made, whichever occurs first). In addition, when 90% of the project resources have been disbursed, the executing agency will deliver a final evaluation report to the Bank within 90 days after the date of the last disbursement of the loan. In the midterm and final evaluations, an ex post analysis will be done, to quantify the results of the planned project interventions based on the Results Matrix. The evaluation methodology will include at least: (i) an ex post cost-benefit analysis, using the same methodology as the ex ante analysis, as detailed in [required link 2](#); (ii) the financial execution results; (iii) the targets met, according to the agreed outcome indicators; and (iv) fulfillment of contractual commitments.

Development Effectiveness Matrix		
Summary		EC-L1295
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 -Regional integration
[Space-Holder: Impact framework indicators]		
2. Country Development Objectives		
Country Strategy Results Matrix	GN-3103-1	(i) expand coverage and quality of physical and technological infrastructure; and (ii) improve access to and coverage of social and basic services
Country Program Results Matrix	GN-3207-3	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		9.8
3.1 Program Diagnosis		2.5
3.2 Proposed Interventions or Solutions		3.5
3.3 Results Matrix Quality		3.8
4. Ex ante Economic Analysis		10.0
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		1.0
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		High
Environmental & social risk classification		A
IV. IDB's Role - Additionality		
The project relies on the use of country systems		
Fiduciary (VPC/FMP Criteria)	Yes	Budget, Treasury, Accounting and Reporting. Procurement: Information System.
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	Yes	

Evaluability Assessment Note: The general objective of this specific investment project, of US\$150 million, is to improve regional border integration between the southern-central region of Ecuador and northern Peru, and to improve the quality of life of border populations. The specific objectives are: (i) improve efficiency and road safety on the Bellavista-Zumba-La Balsa road, (ii) improve the accessibility of border populations to health and education services, and (iii) improve institutional capacity of the Ministry of Transportation and Public Works and labor inclusion with criteria of gender equity in the area of influence of the project. The main component of the project covers works on the road (US\$146 million, 53 km), with additional components focused on institutional strengthening and disaster risk management activities.

The diagnosis shows that the objective of the operation is consistent with the objective of the Binational Regional Border Development Plan between Ecuador and Peru, and that the improvement of the road is one of the main pending commitments of the plan. Although there is a high potential for cross-border trade in La Balsa, trade is currently non-existent. The diagnosis also shows the precarious socioeconomic conditions of the border population (73% poverty in rural areas), the poor condition of the road (travel times greater than 3 hours) and the importance of this road to connect the border population with health and education services.

The proposal presents extensive empirical evidence on the impact of road improvements on cross-border trade volumes and the population's quality of life. The results matrix presents adequate indicators that cover all dimensions of the objectives and whose goals are consistent with the assumptions of the economic evaluation.

The economic evaluation of the project uses conservative assumptions about the potential increase in traffic on the road and obtains an internal rate of social return of 15.5%. The main benefits of the project come from the reduction of travel times and vehicle operation costs, with additional benefits from reduced maintenance costs and improved road safety.

The evaluation plan proposes to carry out a before and after analysis to evaluate the effectiveness of the general and specific objective indicators, and an ex-post cost-benefit analysis to evaluate the social return of the project at closure.

RESULTS MATRIX

Program objective:	To improve border regional integration between the southern and central highlands of Ecuador and northern Peru and to improve the quality of life of the border populations. The specific objectives are: (i) to improve efficiency and road safety on the Bellavista-Zumba-La Balsa road; (ii) to improve the accessibility of health and education services for border populations; and (iii) to improve the MTOP's institutional capacity and labor inclusion with gender equity criteria in the project's area of influence.
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GENERAL DEVELOPMENT OBJECTIVE

Indicators	Unit of measure	Baseline value	Baseline year	Expected year achieved	Target	Means of verification	Comments
General development objective: To improve border regional integration between the southern and central highlands of Ecuador and northern Peru and to improve the quality of life of the border populations							
Commercial trade of goods moving through the border crossing of Axis Road 4	Tons/day	0	2024	2035	283	AADT report for the border crossing prepared by the MTOP	
Poverty in the targeted segment in Chinchipe Canton	Rate	100	2024	2035	95	Project completion report (MTOP)	The indicator is based on the ratio between the level of accessibility and the level of poverty.

SPECIFIC DEVELOPMENT OBJECTIVES

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	
Specific development objective 1: To improve efficiency and road safety on the Bellavista-Zumba-La Balsa road												
R.1.1 Travel time by type of vehicle	Minutes	225	2024					2029	50	Project completion report (MTOP)	Light vehicles	
		225									50	Buses
		225									50	Tri-axle trucks
R.1.2 Vehicle operating cost by type of vehicle	US\$/km	0.40	2024					2029	0.20	Project completion report (MTOP)	Light vehicles	
		0.54									0.27	Buses
		3.30									1.65	Tri-axle trucks
R.1.3 Star ratings to reflect the risk as it relates to an individual road user	Number of stars	2	2024					2029	3	Project completion report (MTOP)	The International Road Assessment Program (iRAP) is an international standard methodology for assessing	

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
following the iRAP methodology											road safety. The baseline value is estimated.
Specific development objective 2: To improve the accessibility of health and education services for border populations											
R.2.1 Population of Chinchipe Canton with a travel time of less than four hours to a level C public health facility	Number of people	0	2024					2029	10,800	Project completion report (MTOPI)	
R.2.2 Population of Chinchipe Canton in the age range of 18 to 20 with a travel time of less than four hours to a public higher education center	Number of people	0	2024					2029	5,300	Project completion report (MTOPI)	
Specific development objective 3: To improve the MTOPI's institutional capacity and labor inclusion with gender equity criteria in the project's area of influence											
R.3.1 Annual number of warnings issued by the EWS	Number of warnings	0	2024					2029	3	Project completion report (MTOPI)	
R.3.2 MTOPI contracting processes using international standards in the contracting of public works with transparency criteria	Number of contracting processes using international standards	0	2024					2029	3	Project completion report (MTOPI)	
R.3.3 Plans developed using investment planning tools based on systematically documented and up-to-date information on the condition of the national road system	Number of plans	0	2024					2029	1	Project completion report (MTOPI)	
R.3.4 Average number of women participating in representative spaces in the coffee and cocoa organizations participating in the strengthening program	Number of women	7	2024					2029	11	Project completion report (MTOPI)	There are currently seven women in decision-making positions in one of the organizations. The target is to increase the number by at least 50%.

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: Civil works, supervision, and maintenance											
Number of kilometers improved on the Bellavista-Zumba-La Balsa segment and the points of access to the towns of Isimanchi, Progreso 1, and Progreso 2	km	0	2024					54.57	54.57	Report on provisional acceptance certificate for works. Project completion report (MTOPI)	
Component 2: Landslide-related DRM											
Implementation of EWS to send rainfall and landslide warnings directly to road infrastructure users' smartphones	Number	0	0	0	0	1	0	0	1	Annual project implementation report (MTOPI)	Between MTOPI, the National Institute for Meteorology and Hydrology, ECU911, and the National Risk Management Department for operation of the EWS on the Bellavista-La Balsa segment of Axis Road 4.
Detection of future potential landslide zones using artificial intelligence	Number	0	0	0	0	1	0	0	1	Annual project implementation report (MTOPI)	
Study (and testing) of the efficiency of green and hybrid infrastructure to establish environmentally friendly slopes	Number of studies and tests	0	0	0	0	1	0	0	1	Annual project implementation report (MTOPI)	
Feasibility study and final design proposal for landslide risk reduction works on Segment 1	Final design proposal	0	0	0	0	1	0	0	1	Annual project implementation report (MTOPI)	
Component 3: Institution-strengthening and crosscutting issues of gender and diversity											
Update of the national road system resilience strategy and training for the MTOPI on resilience issues at the national level	Number of employees trained	0	0	0	0	0	0	50	50	Annual project implementation report (MTOPI)	
Legal advisory services and training for the MTOPI on best practices for contracting works with international standards and transparency processes	Number of employees trained	0	0	0	0	0	0	30	30	Annual project implementation report (MTOPI)	

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
Implementation of the Pavimenta2 tool in the national road system	Tool implemented	0	0	0	0	1	0	0	1	Annual project implementation report (MTOP)	
Coffee and cocoa organizations receiving training in women's community leadership and sustainable processes under the program for strengthening coffee and cocoa organizations	Number of organizations	0	0	0	0	2	0	0	2	Annual project implementation report (MTOP)	
Women in STEM courses of study with training in professional machine operation who have completed their internships	Number of women	0	0	0	5	5	5	5	20	Annual project implementation report (MTOP)	Every year there will be one intern at the MTOP's central office and two interns at the MTOP's Area Subdepartment 7.
Women in road maintenance microenterprises that provide services to the project segments	Percentage of women	26	0	0	0	0	0	35	35	Annual project implementation report (MTOP)	
Roadway design and construction specifications that incorporate universal accessibility norms and standards for infrastructure and bus stops	Number of specifications	0	0	0	0	0	0	1	1	Annual project implementation report (MTOP)	
MTOP staff trained on the rights of persons with disabilities and providing services to them, and on road safety	Number of employees trained	0	0	0	0	0	0	50	50	Annual project implementation report (MTOP)	Certificate of participation in the training and recording of the sessions.

Country: Ecuador **Division:** TSP **Operation number:** EC-L1295 **Year:** 05/31/2024

FIDUCIARY AGREEMENTS AND REQUIREMENTS

Executing agency: Ministry of Transportation and Public Works (MTOPI), acting through the Office of the Vice Minister of Transportation Infrastructure

Operation name: Border Integration Project – Axis Road 4, Bellavista-Zumba-La Balsa Road, Zamora-Chinchipe Province

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, according to the terms of the Bank's validation.)

◆ Budget	● Reports	● Information systems	● National competitive bidding (NCB)
◆ Treasury	● Internal audit	● Shopping	● Other
◆ Accounting	● External control	● Individual consultants	● Other

2. Fiduciary execution mechanism

◆ Special features of fiduciary execution	The borrower will be the Republic of Ecuador, and the executing agency will be the Ministry of Transportation and Public Works (MTOPI), acting through the Office of the Vice Minister of Transportation Infrastructure, which is responsible for project planning, monitoring, evaluation, and execution and has extensive experience in these areas. A group of professionals, contracted with proceeds of the loan, will also be exclusively dedicated to the project and will provide support to the MTOPI in the various areas involved. The MTOPI will be responsible for fiduciary management (procurement and financial management).
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3. Fiduciary capacity

Fiduciary capacity of the executing agency	The Bank updated the Institutional Capacity Assessment Platform (ICAP) analysis during the operation's design phase, to reveal the executing agency's main weaknesses, opportunities for improvement, and strengths, and also conducted a risk workshop that identified certain fiduciary risks (see section 4 of this annex). It concluded that the MTOPI requires close support for executing the loan through effective supervision with best practices and IDB standards in procurement policies, financial management policies, and environmental and social safeguards. The fiduciary risk has been assessed as medium-high.
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4. Fiduciary risks and risk response

Risk taxonomy	Risk	Risk level	Risk response
Human resources	The team responsible for the project does not have knowledge of, or experience in, procurement and financial management processes under the Bank's policies.	Medium-High	Strengthening and training of the project management team designated by the MTOP on IDB fiduciary policies.
Economic/financial	The allocation of room in the budget and the multiyear budget certification of the project may not be secured until March 2025.	Medium-High	Inclusion of the project in the annual investment plan in advance of preparation of internal budgetary reports, information activities in the MTOP's internal units, and working groups involving the MTOP, the Ministry of Economy and Finance, and the National Planning Department to coordinate all associated internal processes.
Institutional	The MTOP may fail to create a clear, functional execution mechanism with defined roles and responsibilities and sufficient capacity in fiduciary policies before the loan contract is signed.	Medium-High	An execution mechanism in place centrally at the MTOP's Office of the Vice Minister of Transportation Infrastructure, which also has a consulting team in functional and fiduciary areas, all fully reflected in clear procedures in the project Operating Regulations.

5. **Policies and guidelines applicable to the operation:** Policies for the Procurement of Goods, Works, and Services (GN-2349-15) and Policies for the Selection and Contracting of Consultants (GN-2350-15).
6. **Exceptions to policies and guidelines:** None.

II. CONSIDERATIONS FOR THE SPECIAL PROVISIONS OF THE LOAN CONTRACT

Special conditions precedent to the first disbursement: None.
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)(i). For the purpose of determining the equivalency of expenditures incurred in local currency chargeable against the local contribution, or of the reimbursement of expenditures chargeable against the loan, the exchange rate will be the rate in effect on the effective date when the borrower, the 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: During execution, the audited financial reports will be delivered annually within 120 days after the closing date of each fiscal year, or the date of the last disbursement, or as extended, for the final audit.

III. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION

◆ Bidding documents	<p>Works, goods, and nonconsulting services procured under the Bank's procurement policies (GN-2349-15) and requiring international competitive bidding (ICB) will use the Bank's standard bidding documents or those agreed upon between the executing agency and the Bank for the specific procurement. Consulting services will be selected and contracted in accordance with the consultant selection policies (GN-2350-15) using the standard request for proposals issued by the Bank or a request for proposals agreed upon between the executing agency and the Bank for the specific selection. The project sector specialist will be responsible for reviewing the technical specifications and terms of reference for procurements during the preparation of selection processes. This technical review may be ex ante and is independent of the procurement review method.</p> <p>The bidding document for the principal work of the program is being structured by the execution agency with Bank support. A preliminary integrated version will be available in September 2024, and the selection will be based on value-for-money and best-and-final offer criteria in a single-stage, two-envelope process.</p>
◆ Recurrent expenditures	<p>The required recurrent expenditures for project implementation that are to be financed and have been approved by the Project Team Leader will be incurred following the executing agency's administrative procedures. Such procedures will be reviewed and accepted by the Bank, provided that they do not violate the principles of economy, efficiency, and competition (Eligibility of Expenditures Policy (GN-2331-5, as updated)).</p>
◆ Special procurement provisions applicable to the operation	<p>The operation will rely on design-build contracts in a single-stage, two-envelope process.</p>
◆ Procurement supervision	<p>The supervision method will be ex post, except where ex ante supervision is justified. For procurements executed using the country system, supervision will be conducted using the country supervision system. Use of the (i) ex ante, (ii) ex post, or (iii) country system supervision method will be determined for each selection process based on the complexity of the specific process. Ex post reviews will be each year, according to the project supervision plan, subject to change during execution. The ex post review reports will include at least one physical inspection visit, selected from the procurements subject to ex post review. The threshold amounts for ex post review are as follows:</p>

		<table border="1"> <tr> <th>Executing agency</th> <th>Works</th> <th>Goods/ services</th> <th>Consulting services</th> </tr> <tr> <td>MTOP</td> <td>US\$2 million</td> <td>US\$180,000</td> <td>US\$100,000</td> </tr> </table>	Executing agency	Works	Goods/ services	Consulting services	MTOP	US\$2 million	US\$180,000	US\$100,000
Executing agency	Works	Goods/ services	Consulting services							
MTOP	US\$2 million	US\$180,000	US\$100,000							
♦	Records and files	The MTOP will retain program documentation and files for a period of seven years after the end of each contract.								

Main procurements:

Procurement description	Selection method	New procedures/ tools	Estimated date	Estimated amount (US\$000)
Goods				
Early warning system (EWS)	NCB		3/15/2026	200
Works				
Improvement of Bellavista-Zumba-La Balsa segment	ICB		4/15/2025	124,347.9
Nonconsulting services				
Firms				
Feasibility and final design of the Vilcabamba-Bellavista segment I mitigation work	Quality- and cost-based selection (QCBS)		5/1/2026	700
Study/assessment of green or hybrid infrastructure	QCBS		6/1/2026	800
Software development and EWS training	QCBS		3/1/2026	300
Supervision/inspection of the principal work	QCBS		3/1/2025	6,093
Individuals				
Road engineer	Individual consultant selection (3CV)		3/1/2025	99
Geotechnical engineer	3CV		3/1/2025	99
Technical coordinator (road expert)	3CV		3/1/2025	174.3
Financial specialist	3CV		3/1/2025	141.4
Procurement specialist	3CV		3/1/2025	141.4
Monitoring and evaluation specialist	3CV		3/1/2025	141.4

Procurement description	Selection method	New procedures/ tools	Estimated date	Estimated amount (US\$000)
Environmental specialist	3CV		3/1/2025	99
Social specialist	3CV		3/1/2025	99

To access the procurement plan, click [here](#).

IV. AGREEMENTS AND REQUIREMENTS FOR FINANCIAL MANAGEMENT

◆	Programming and budget	<p>The Planning and Public Finance Code establishes the rules governing budget programming, formulation, approval, execution, control, evaluation, and performance. These rules are applied to the execution of Bank-financed programs in the country. The e-SIGEF Integrated Financial Management System uses these rules and standardizes their application throughout the national public management apparatus. The MTOP will ensure that the investment project is entered and/or updated in the system, to ensure the respective budget allocations and other prerequisites for the procurement and contracting necessary for the project. The MTOP will comprehensively control and monitor budget execution through the mandatory systems available to the public sector developed by the Ministry of Economy and Finance.</p>
◆	Treasury and disbursement management	<p>Disbursements will be made electronically through the Client Portal.</p> <p>The loan proceeds will be disbursed into an exclusive bank account in U.S. dollars at the Central Bank of Ecuador (BCE), which will be used to manage them. From there, they will be transferred the same day to the Treasury Single Account, which will be used to make project payments and record them in the e-SIGEF system.</p> <p>The Bank will make advances in U.S. dollars based on the project's actual liquidity needs, according to the financial plan and cash flow, for a maximum period of six months. The MTOP will prepare disbursement requests and account for them as established in OP-273-12 or its updates. Except for the first advance, justification will be provided for at least 80% of the total cumulative balances pending justification.</p> <p>The review of supporting documents of payments made is conducted by the Bank and/or external auditors subsequent to the use of the proceeds.</p>
◆	Accounting, information systems, and reporting	<p>The accounting rules to be followed will be government accounting standards, which are converging toward the International Public Sector Accounting Standards. The legal tender and reporting currency in Ecuador is the U.S. dollar.</p> <p>The MTOP uses the Integrated Financial Management System, which integrates the processes of: (i) budget for execution of the expenditure; (ii) accounting for recording transactions using the accrual method; and (iii) treasury for making payments to vendors and contractors.</p> <p>The project accounting will be recorded in e-SIGEF. However, the project's financial statements, which must use the cash method, will not</p>

		<p>be automatically generated through that system. The MTOP will prepare the project financial statements monthly by hand based on the accounting reports generated by e-SIGEF. The project's financial statements are the Statement of Cash Received and Disbursements Made and the Statement of Cumulative Investments with the related notes.</p> <p>The policies and guidelines applicable to the operation will be supplemented by the project Operating Regulations with the documented definition of workflows and internal controls.</p>
◆	Internal control and internal audit	<p>The Constitution of the Republic of Ecuador establishes the Office of the Comptroller General of the Nation (CGE) as the supreme authority for governmental control and audit of the public administration. As part of this sector, the MTOP has its own internal audit unit reporting directly to the CGE and working independently for external control purposes.</p>
◆	External control and financial reports	<p>The CGE has the authority to audit public sector entities and may audit the execution of projects financed by multilateral banks in accordance with the programming of the Annual Audit Plan. The project will be audited by an independent audit firm acceptable to the Bank in accordance with IDB requirements (OP-273-12 or current version). The firm will be engaged by the MTOP based on terms of reference previously agreed upon with the IDB and may be financed with loan proceeds. The audit firm will be engaged no later than 31 August of the year to be audited, and a single contracting process for the entire execution of the project until its closing is highly recommended. During execution, the audited financial reports will be delivered annually within 120 days after the closing date of each fiscal year, or the date of the last disbursement, or as extended, for the final audit.</p> <p>Additionally, the IDB may require audited or unaudited financial statements or reports relating to the project, when deemed necessary.</p> <p>There is no national policy for public disclosure of audit reports. Nevertheless, the CGE issues the report of approval of the special examination within 180 days, as required by Article 56 of the Act Establishing the Office of the Comptroller General of the Nation, on its institutional website. Under the Bank's current information access and disclosure policy, the project's audited financial statements must be published in the Bank's systems.</p>
◆	Financial supervision of the operation	<p>The Bank's financial specialist will conduct at least one onsite review annually, and desk reviews of the audited financial statements. The auditor will verify that the resources are being executed according to the Bank's fiduciary rules and policies and the terms and conditions stipulated in the project Operating Regulations. Visits for fiduciary supervision in financial management will include verification of the fiduciary arrangements used for project administration and monitoring of the implementation of recommendations issued by the independent audit firm, when applicable.</p>

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/24

Ecuador. Loan ____/OC-EC to the Republic of Ecuador. Border Integration Project –
Axis Road 4, Bellavista-Zumba-La Balza Road, Zamora Chinchipe Province

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 Republic of Ecuador, as borrower, for the purpose of granting it a financing to cooperate in the execution of the Border Integration Project – Axis Road 4, Bellavista-Zumba-La Balza Road, Zamora Chinchipe Province. Such financing will be for the amount of up to US\$150,000,000 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)