Report Number: ICRR0023366

1. Project Data

Project ID P147272	**Project Name** Bahia Road Rehabilitation and Maintenanc
Country Brazil	**Practice Area(Lead)** Transport

L/C/TF Number(s)	Closing Date (Original)	Total Project Cost (USD)
IBRD-85800	30-Jun-2020	193,352,881.92
Bank Approval Date	**Closing Date (Actual)**	
29-Jan-2016	30-Jun-2022	

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	200,000,000.00	0.00
Revised Commitment	193,352,881.92	0.00
Actual	193,352,881.92	0.00

Prepared by	Reviewed by	ICR Review Coordinator	Group
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2. Project Objectives and Components

a. Objectives

According to the Project Appraisal Document (PAD) (p. 3) and the Financing Agreement of May 31, 2016 (p. 6) the objective of the project was “to enhance, in a sustainable fashion, road accessibility and safety in selected regions of the Borrower's territory”.

b. Were the project objectives/key associated outcome targets revised during implementation?

No

c. Will a split evaluation be undertaken?

No

d. Components

The project included five components:

Component 1: Institutional strengthening (appraisal estimate US$18.0 million, actual US$5.56 million). This component included five sub-components:

Subcomponent 1.1: New options for road financing: This subcomponent was to carry out studies on: i) setting-up a self-standing road maintenance fund; ii) exploring possibilities for private sector financing of transport infrastructure; and iii) exploring opportunities of land-value capture stemming from the valorization of transport infrastructure public right-of-way.

Subcomponent 1.2: Road Asset Management: This subcomponent was to finance: i) operationalizing the Bahia State Secretariat of Infrastructure's Department for Transport Infrastructure (SEINFRA/SIT) Pavement Management System; ii) designing and building automatic traffic counting stations; iii) designing and operationalizing a state-wide automatic weighing system for heavy vehicles; iv) implanting a state-wide kilometric mark-points system, for more precise location of traffic crashes and other events; v) geo-referencing Bahia's right-of-way asset; and vi) setting up a database of Bahia's geological conditions and of potential quarries for road construction and rehabilitation.

Subcomponent 1.3: Road administration efficiency: This sub-component was to provide support for the setting-up and operationalization of SEINFRA/SIT, including: i) defining its mission, monitoring framework, processes, and required resources; ii) providing training and capacity building for SEINFRA/SIT technical and administrative staff; and iii) supporting project implementation in specific areas, specifically on road safety, socio-environmental management, and engineering.

Subcomponent 1.4: Logistics planning: This sub-component was to provide support for carrying out studies and surveys to: i) update Bahia's transport and logistics master plan; ii) promote railway transport in Bahia; iii) identify maritime port development opportunities in Bahia; iv) analyze the Borrower's waterway development; and v) plan urban logistics and mobility in the Itabuna-Ilheus conurbation.

Subcomponent 1.5: Transport investment impact assessment: This sub-component was to carry out surveys and studies to assess the impact of transport infrastructure investment in Bahia, including: i) establishing a tool to inform the decision-making process for transport infrastructure investment; ii) setting up an appraisal model aiming at quantifying the wider impact of transport investments and policies in Bahia; iii) defining the methodology and undertaking the impact evaluation of local roads improvement on rural communities focused on the rural areas addressed through component 3 of the project; and iv) carrying out yearly road user surveys to obtain citizen feedback on the condition and services of Borrower's highways.

Component 2: Performance-based State Highway Rehabilitation and Maintenance (appraisal estimate US$199.5 million, actual US$206.89 million). This component included two subcomponents:

Subcomponent 2.1: This subcomponent included rehabilitation and maintenance work through performance-based contracts for rehabilitation and road maintenance (CREMA) on about 1,685 kilometers of identified sections of Bahia's paved highways, including road rehabilitation and maintenance.

Subcomponent 2.2: This subcomponent included rehabilitation and maintenance works through CREMA-PPP (Public-Private Partnership) or CREMA contracts on about 685 km of identified sections of the Borrower's paved highways, including, road rehabilitation and maintenance.

Component 3: Feeder Road Improvement (appraisal estimate US$50.0 million, actual US$25 million). This component was to finance support to improve road accessibility in Bahia through the carrying out of works to eliminate about 900 critical spots on selected municipal rural roads in 62 Selected Municipalities (the Municipal Road Subprojects), including, among other things: i) improving the drainage of the platform; ii) constructing and/or reconstructing culverts and longitudinal drainage; and iii) constructing fords and eliminating quagmires.

Component 4: Road Safety (appraisal estimate US$15.0 million, actual US$3.82 million). This component included two sub-components:

Sub-component 4.1: Institutional strengthening: This sub-component was to provide support to improve road safety in Bahia, including: i) defining Bahia's road safety strategy; ii) providing training and capacity building to SEINFRA/SIT on road safety; iii) creating a traffic accident database for Bahia; and iv) supporting the creation of a Lead Committee for Road Safety in the State.

Sub-component 4.2: Road safety corridors: This sub-component was to provide support for establishing two Road Safety Corridors as well as: i) carrying out small-scale work and providing materials for road safety infrastructure improvement; ii) providing and maintaining equipment for traffic law enforcement; iii) carrying out communication campaigns for road safety; and iv) providing training of road police officers for monitoring, reporting, and disseminating road safety results on the Road Safety Corridors.

Component 5: Project Management (appraisal estimate US$4.0 million, actual US$1.97 million). This component was to finance the Project Coordination Unit consulting and operating costs for project monitoring, supervision, and evaluation, including audits.

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project cost: The project was estimated to cost US$300.0 million. Actual cost was US$243.7 million.

Financing: The project was financed through an IBRD loan in the amount of US$200 million of which US$193.3 million disbursed.

Borrower contribution: The Borrower was to contribute US$100 million. Actual contribution was US$50.4 million due to the fiscal effects of the COVID-19 pandemic and the devaluation of the Brazilian Real against the US Dollar had on the funding capacity of the Bahia State.

Dates: The project was restructured twice:

- On January 9, 2020, the project was restructured to i) extend the project closing date by 24 months, from June 30,2020 to June 30, 2022 to ensure consistency between the loan agreement and the Board-approved closing date; and b) reallocate loan proceeds among expenditure categories to accommodate a cost overrun in component 2 and a cost underrun in component 3.
- On September 23, 2021, the project was restructured to: i) reallocate US$11 million from component 1 to component 2; ii) reallocate US$5 million from component 3 to component 2; iii) reallocate US$6 million from component 4 to component 2; iv) reallocate US$2 million from component 5 to component 2; v) reduce US$50 million of the counterpart funding under component 2; and vi) revise the Results Framework to correct the baseline for PDO indicator 3 “reduction in fatalities and serious injuries on the selected road safety corridors”, revise intermediate outcome indicator “establishment of a business model for Secretariat of Infrastructure’s Department of Transport (SEINFRA/SIT) and add a new corporate PDO indicator “people with enhanced access to transportation services”.

3. Relevance of Objectives

Rationale

Country Context. According to the PAD (p. 1) during the two decades before project appraisal, Brazil had made significant advances in economic management, poverty reduction, and social indicators. Growth in employment and labor income, and implementation of targeted social assistance programs contributed to a reduction in the share of Brazilians living below the extreme poverty line of R$70 a month from 9.9 percent in 2001 to 4.0 percent in 2013. Also, the country experienced a reduction in inequality as reflected in a drop in the Gini coefficient from 0.59 to 0.53 over the same period.

Bahia was the largest state in the Brazilian northeast, which was able to improve its economic performance and achieve a remarkable track record in reducing poverty and boosting shared prosperity. Due to strong economic growth, Bahia experienced a sharp decline in moderate and extreme poverty between 2002 and 2013, dropping from 44.3 percent to 16.5 percent, and from 17.2 percent to 6.9 percent, respectively. However, Bahia still lagged behind national averages, and continued to be the state with the largest absolute number of poor and extreme poor in the country.

Sector Context. According to the PAD (p. 2) road infrastructure was key to Bahia’s economy since trucks moved more than 90 percent of all goods in Bahia, and the agriculture and industry sectors represented in 2013 about 35 percent of Bahia’s GDP and a third of its jobs. High dependence on road transport entailed high logistic costs, jeopardized the state’s economic productivity, and resulted in negative externalities, such as local and global air pollution, vehicle crashes, road fatalities, and congestion in cities. At the time of appraisal, only 38 percent of Bahia’s State paved network was in good condition. To address this issue, Bahia identified an ambitious investment program for highway rehabilitation and maintenance, the “Bahia Highway Program, which covered about 4,200 km of the main State network, with an investment of approximately US$520 million over a five to six years period.

Bahia included about 120,000 km of rural municipal roads that fed the state’s main highway network. Those roads linked small and poorer communities to markets and social services and were key for farmers to get their production to markets, and consumers. However, these were, typically, unsealed roads with reduced geometric conditions and with poor or no drainage structures and lacked maintenance. Also, the human

and economic toll on roads was a key problem in Bahia. From 2007 to 2013, accidents and fatalities have increased by 45 percent and 21 percent respectively just on State roads.

Alignment with the Bahia State Strategy. The objectives of the project supported The Bahia's development agenda "Plano Plurianual de Investimentos", a multi-year investment plan, (2020-2023) which promotes economic and social development by supporting underserved and poor areas. According to the ICR (p. 15) the roads selected, particularly under the CREMA contracts, were based on their socioeconomic importance. Priority was given to areas with high rehabilitation needs and poverty levels.

Alignment with the Bank State Strategy. The objectives of the project were in line with the Bank's most recent Country Partnership Framework (CPF) (FY18-23) and its Focus Area 3 "inclusive and sustainable development" and objective 3.3 "promote socio-economic development of small rural producers and vulnerable groups". The first objective of the project ("enhance, in a sustainable fashion, road accessibility") was also relevant for the CPF's Focus Area 2 "private sector investment and productivity growth" and objective 2.3 "mobilize greater investment in infrastructure to improve services".

The objectives of the project were ambitious including multi sectors and going further than the first phase and adding innovative elements such as such as performance-based contracts (CREMA), public private partnerships (PPP), and the feeder roads component.

Taking everything together, the relevance of objective is rated **High**.

Rating
High

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1
Objective
Enhance, in a sustainable fashion, road accessibility in selected regions of the State of Bahia territory.

Rationale
Theory of Change: The project's theory of change envisioned that project activities/outputs such as implementing rehabilitation and maintenance work through performance-based contracts (CREMA), setting up and operationalizing SEINFRA/SIT, conducting studies on new options for road financing as well as operationalizing the SEINFRA/SIT pavement management system were to result in the outcome of increasing the sustainability of road accessibility in selected regions of the State of Bahia territory.

The project's theory of change envisioned that project activities/outputs such as carrying out works to address critical spots on selected municipal roads in selected municipalities through improving the platform's drainage, constructing and/or reconstructing culverts and longitudinal drainage as well as constructing fords and

eliminating quagmires were to result in the outcome of enhancing road accessibility in selected regions of the State of Bahia territory.

According to the ICR (p. 21) the selected regions were identified through public consultations in 64 municipalities (out of a total of 47 municipalities in Bahia State), which belonged to four intermunicipal consortia.

Outputs:

This project tried to enhance sustainability of two aspects:

(i) Financial sustainability: The State Infrastructure Road Fund was established, achieving the target. The Fund is supporting the construction, maintenance, and rehabilitation of the State's logistics and transport infrastructure. The Fund receives its resources from the State Treasury, public and private institutions, contributions, and donations. From its operationalization in 2018 until 2022, 76 percent of the state's road maintenance investments came from the Fund.

(ii) Institutional sustainability:

- An appraisal tool to inform decision making for transport infrastructure investments was established, achieving the target.
- The SEINFRA/SIT's Pavement Management System was operationalized, achieving the target. The State has been using the system for improving the network performance. The system aims to optimize the allocation public resources for roads and continuously monitoring the condition of the State's paved road network. Between 2018 and 2022, the system performed pavement condition diagnostics of about 12,800 kilometers of the State's highway network.
- 7,600 hours of capacity building for improving the business model for SEINFRA/SIT was conducted, exceeding the target of 3,000 hours. In total, more than 400 people received training. In addition, 167 courses and workshops were provided in relation to environmental and social topics, reaching more than 30,000 people across different state regions during project implementation.
- A state-wide automatic weighing system for heavy vehicles and automatic traffic stations were designed and operationalized.
- A statewide kilometric mark-point system and geo-referencing of Bahia's right-of-way-assets was developed.
- Three yearly meetings were conducted by the Infrastructure Committee on the Bahia Industries' Federation, exceeding the target of two-yearly meetings.

Road accessibility:

- The percentage of state paved road network being under performance-based rehabilitation and maintenance contracts increased from three percent in 2015 to 34 percent in 2022, exceeding the target of 25 percent.
- 2,979 kilometers of roads were rehabilitated, exceeding the target of 2,370 kilometers.
- In 64 municipalities citizens engaged in road investment definition and prioritization, exceeding the target of 62 municipalities.
- The size of total classified networks increased from 10,900 kilometers in 2015 to 12,800 kilometers in 2022, exceeding the target of 10,900 kilometers.

Outcomes:

- The project was able to increase the financial and institutional sustainability of road accessibility and safety. Also, the project achieved all of its output targets and its target for increasing state paved road network being under performance-based rehabilitation and maintenance contracts.
- Share of rural population with access to an all-season road increased from 45 percent in 2015 to 65 percent in 2022, exceeding the target of 60 percent.
- The number of rural people with access to an all-season road increased from 490,000 in 2015 to 852,000 people in 2022, achieving the original target of 787,000 people but not achieving the revised target of 1.315 million people.
- The percentage of roads in good and fair condition as a share of total classified roads increased from 70 percent in 2015 to 88 percent in 2022, exceeding the target of 80 percent.
- The number of people with enhanced access to transportation services was 5.3 million, not achieving the target of 6.18 million.
- An Impact Evaluation on local road improvements in rural communities showed that on average, between 2000 and 2022, access to schools improved by 29.65 percent. Access to health services improved by 9.55 percent, access to business and other activities improved by 22.80 percent, access to work increased by 24.53 percent, and access to personal travel facilities improved by 10.83 percent in the four consortia.

While the project was able to achieve an increase in access across all dimensions considered in the four intermunicipal consortia, it was not able to achieve the targets for enhancing access to all-season roads and enhancing access to transportation services. As a result, achievement of the objective is rated **Substantial**.

Rating
Substantial

OBJECTIVE 2

Objective

Enhance, in a sustainable fashion, road safety in selected regions of the State of Bahia territory.

Rationale

Theory of Change: The project's theory of change envisioned that project activities/outputs such as defining Bahia's road safety strategy, providing road safety training and capacity building to SEINFRA/SIT, undertaking small-scale work, and providing material for road safety infrastructure as well as providing and maintaining equipment for traffic law enforcement was to result in the outcome of enhancing road safety in selected regions of the State of Bahia territory.

Outputs:

- A State Committee for road safety was established, achieving the target of doing so.
- An integrated traffic accident database was in operation and supported strategic decisions on where to strengthen traffic enforcement, achieving the target of operationalizing such data base.
- 986 critical spots were rehabilitated including bridges, culverts and drainage works, exceeding the target of 900 critical spots.
- The target for eliminating physical and critical spots for road safety on selected corridors was not achieved. According to the ICR (p. 54) when the project closed, work to eliminate critical spots for road safety were still ongoing. The pilot corridors experienced delays due to procurement related issues resulting in works only starting in March 2022.

Outcomes:

- Between 2015 and 2022, injuries and fatalities decreased by 72 percent, exceeding the target of a 30 percent reduction. According to the ICR (p. 49) even though improvement works had not been completed by the time the project closed, the project achieved the target due to the introduction of enforcement policies and radar installation along the corridors. However, this might indicate that the target was not sufficiently ambitious.

At project closure not all activities/outputs had been completed under his project. Also, the change in fatalities and serious injuries was not directly attributable to project activities since the PDO also included urban stretches, with a relatively high number of accidents, that were not subject to project activities.

Taking everything together, the achievement of this objective was **Substantial.**

Rating

Substantial

OVERALL EFFICACY

Rationale

Achievement of both objectives was **Substantial**.

Overall Efficacy Rating

Substantial

5. Efficiency

Economic efficiency:

Both, the PAD and the ICR conducted a traditional economic analysis. The PAD (p. 11) included in the economic analysis Component 2 (highway rehabilitation), Component 3 (feeder roads improvement), and Component 4 (road safety), totaling 82.5 percent of the original Bank financing. The Highway Development and Management Model 4 (HDM-4) was used for the highway investment, whereas the Roads Economic Decision Model (RED) was used for the low-traffic feeder roads. The HDM-4 tool stimulates vehicle operation, road degradation, and optimal maintenance over the assets' life cycle. The analysis applied a discount rate of 12 percent for an appraisal period of 20 years. The total Net Present Value (NPV) was R$894 million (US$232.43 million), and the Economic Internal Rate of Return (IRR) was 36.8 percent.

The ICR (p. 29) used the same approach as the PAD, expressing all costs and benefits in constant prices, considering a 20-year period, and applying a discount rate of 12 percent. The analysis calculated a NPV of R$1216.2 million (US$307.0 million), and a an EIRR of 39.6 percent. The results at the ICR stage were significantly higher as a result of the depreciation of the Brazilian real, which allowed for the implementation of more activities as originally planned.

These analyses indicate that the project was a worthwhile investment.

Operational efficiency:

Even though the project was restructured once to extend the project closing date by 24 months, this was only done to ensure consistency between the loan agreement and the Board-approved closing date. According to the ICR (p. 35) the project experienced implementation delays of almost a year due to SEINFRA's lack of experience in conducting bidding processes for feeder roads which slowed the implementation of component 3. Despite this delay, the project ended up rehabilitating more feeder roads than originally planned, for half of the estimated financing amount compared to appraisal due to the devaluation of the Brazilian Real against the US Dollar. However, some contracts for feeder roads works had to be extended until September 2022 and financed by the government to allow for the completion of the activities.

Taking everything together, the project's efficiency is rated **Substantial**.

Efficiency Rating

Substantial

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	✓	36.80	82.50 ☐ Not Applicable
ICR Estimate	✓	39.60	82.50 ☐ Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

Relevance of the objective is rated High. Achievement of both objectives was Substantial. Efficiency is rated Substantial. Taking everything together, the project's overall outcome rating is Satisfactory.

a. Outcome Rating

Satisfactory

7. Risk to Development Outcome

Government/Financing: The government remains committed to the objective of the project as demonstrated by the approval of a new Bank operation, the proactive safe and resilient investment and maintenance program for roads in Bahia (P180555, financing amount US$150 million) by the Brazilian External Financing Commission (COFIEX). The new project builds on this project and aims to improve access to services and markets for the rural population in Selected Regions of Bahia State in a safe, climate-resilient, inclusive, and sustainable form, which will be critical for the sustainability of this project's outcomes since feeder roads were only identified by members of the community resulting in them being dispersed across the state and making road maintenance for the consortia challenging. According to the ICR (p. 43) the creation of the Road Fund (FELT) and the new Bank operation will ensure road maintenance and financing. However, government commitment could decrease in the case of a leadership change at SEINFRA, which could result in a capacity decline of civil servants.

External factors such as climate change: Extreme weather events as a result of climate change present a risk for the sustainability of road assets. According to the ICR (p. 43) damages related to erosive processes did already materialize in some areas during the final years of project implementation. Also, the State has limited institutional capacity and tools to predict, prevent and/or and manage disaster risks.

8. Assessment of Bank Performance

a. Quality-at-Entry

The project had an innovative design including several sectors and stakeholders.

According to the PAD (p. 8) the project was built on lessons learned from previous Bank engagement in the sector. These lessons included: i) enhancing the CREMA model through better balancing the share of contract payments devoted to routine maintenance versus rehabilitation activities; ii) selecting roads to be improved based on citizen engagement at the local level to raise local empowerment and to increase accountability; iii) developing a road safety awareness raising agenda.

The objective of the project was not clearly specified and left room for interpretation. It is not clear if the project consisted of two objectives: i) enhance, in a sustainable fashion, road accessibility; and ii) enhance, in a sustainable fashion, road safety in selected regions of the State of Bahia territory or if the project consisted of an additional third objective: iii) enhance (the road sector) in a sustainable fashion in selected regions of the State of Bahia territory.

The PAD (p. 10) identified several risks to project implementation as Moderate including: i) macroeconomic risk due to continued low growth and the increasingly difficult fiscal position of the Federal as well as the State governments; ii) sector strategies and policies risks since comprehensive road safety agenda was relatively weak and needed to be further developed at the State level; iii) project technical design risk since the feeder road and road safety components involved a high number of different stakeholders; iv) institutional capacity due to a recent reorganization of the State administration, including the former Road Agency; v) fiduciary risks including delayed or unsuccessful procurement processes and delayed payments for contractors.

The Bank team identified mitigation measures such as providing ongoing technical support and training. However, mitigation measures for procurement were insufficient and weak capacity resulted in implementation delays. For example, the ICR (p. 35) stated that SEINFRA's lack of experience in feeder roads slowed the implementation of component 3 down.

Also, the component's costs were estimated unrealistically, resulting in the need to significantly reduce the financing amounts for components 1, 3, and 4.

The Results Framework had minor shortcomings (see section 9a for more details).

The quality-at-entry was **Moderately Satisfactory**.

Quality-at-Entry Rating

Moderately Satisfactory

b. Quality of supervision

According to the ICR (p. 42) the Bank team conducted supervision missions and prepared implementation reports on a bi-annual basis. During the COVID-19 pandemic, no field visits were possible between March 2020 to May 2022, only allowing for virtual supervision missions. As a result, the quality of civil works implemented during this period could not be adequately supervised and during the first in-person supervision last year, environmental issues were found related to absence of slope protection, sediments slipping, and inappropriate dumping of gravel in watercourses.

The ICR (p. 36) stated that the Bank was flexible and reallocated funding among components in response to external factors that undermined the project's performance such as the state's inability to provide the agreed US$100 million of counterpart funding.

The project was restructured twice. During the 2020 restructuring it was found that several indicators required adjustment. However, these adjustments were only made during the 2021 restructuring.

According to the ICR (p. 42) the Bank was able to build environmental and social safeguard capacity in the implementing agencies through continuous monitoring and hiring a team of socio-environmental specialists. Also, the Bank introduced Environmental Technical Specifications (ETAS) (a combination of Bank rules and Brazilian legislation for road works). A total of 18 ETAS were developed to support construction companies in structuring routine socioenvironmental actions.

The quality of supervision was **Satisfactory**.

Quality of Supervision Rating
Satisfactory

Overall Bank Performance Rating
Moderately Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design
The project's theory of change and how key activities and outputs were to lead to the intended outcomes was sound and reflected in the Results Framework.

The indicators included in the Results Framework encompassed all outcomes of the PDO statement. PDO indicator 1 ("state paved road network under performance-based rehabilitation and maintenance contracts") was used to measure the sustainability aspect of the objective. PDO indicator 2 ("share of rural population with access to an all-season road") and PDO indicator 3 ("people with enhanced access to transportation services") were used to measure "road accessibility" while PDO indicator 4 ("change in fatalities and serious injuries on the selected road safety corridors") was used to measure "road safety". However, the change in fatalities and serious injuries was not directly attributable to project activities since the PDO included urban stretches, with a relatively high number of accidents, that were not subject to project activities. Also, the indicator's baseline was an estimate derived from the former Department of Transport Infrastructure's (DERBA's) crash database since no other baseline value was available at appraisal. The

ICR (p. 38) stated that the road safety institutional capacity assessment that was conducted during project appraisal showed that not all fatalities/serious injuries were necessarily recorded, and hence, not providing an accurate incidents rate.

According to the PAD (p. 9) SEINFRA, through the Project Coordination Unit (UCP), was to be responsible for the project's M&E activities.

b. M&E Implementation

According to the ICR (p. 38) data were collected on an annual basis or when required to inform the Bank team. SEINFRA submitted monitoring reports to the Bank on a bi-annual basis. However, some indicators were not reported due to difficulties of measuring them such as PDO indicator 3 ("change in fatalities and serious injuries"). The ICR further stated that data quality "seemed adequate" but that it was hard to confirm the quality.

During the project restructuring in 2021, over five years into implementation, the Results Framework was modified to: i) correct the baseline for the two targeted project road safety corridors; ii) complement data on beneficiaries of improved access with a supplemental indicator to measure the actual number of people with access to an all-season road; and iii) include the Bank's requirement for results monitoring and include a new corporate PDO indicator to measure PDO 2 ("number of people with enhanced access to transportation services").

c. M&E Utilization

According to the ICR (p. 38) the project's M&E data was used to track progress towards the achievement of the objective. Also, data were used to inform project management of the state's road condition and to determine whether new interventions or modifications were necessary.

M&E Quality Rating

Substantial

10. Other Issues

a. Safeguards

The project was classified as category B and triggered the Bank's safeguard policies OP/BP 4.01 (Environmental Assessment), OP/BP 4.10 (Indigenous People), OP/BP 4.12 (Involuntary Resettlement), OP/BP 4.04 (Natural Habitats), OP/BP 4.09 (Pest Management), and OP/BP 4.11 (Physical Cultural Resources). According to the ICR (p. 39) the Bank team prepared all safeguard instruments including indigenous people plans, complaints monitoring and resettlement action plans for affected people in accordance with the Bank guidelines.

The ICR (p. 39) stated that during the last project supervision mission (which was the first field mission after an extensive period of remote supervision due to the COVID-19 pandemic) environmental issues were

found related to absence of slope protection, sediments slipping, and inappropriate dumping of gravel in watercourses. According to the ICR (p. 39) these shortcomings mostly resulted from inadequate supervision from the Secretariat of Infrastructure of Bahia (SEINFRA) and responsible socio-environmental bodies due to limited staff and equipment, contractors' lack of knowledge about environmental legislation, scattered location of interventions, and COVID-19 movement restrictions.

Also, BA-290 road workers experienced a surge in COVID-19 cases. In order to address this issue, the State and the Bank prepared a COVID-19 action plan, which was distributed among companies working on the project.

When the project closed, the overall safeguard compliance rating was Moderately Satisfactory.

b. Fiduciary Compliance

Financial Management (FM). According to the ICR (p. 41) the project did not encounter any major FM issues. The PIU had adequate FM capacity and was able to address all action plans satisfactorily and promptly. Also, the auditors verified that the project complied with the contract terms and applicable laws and regulations. Furthermore, the ICR (p. 41) stated that most deficiencies were addressed in a timely and adequate manner and did not impact project implementation. The supervision mission in 2018 found that the project encountered delays in the bidding process and in executing contracts in agreed counterpart activities. According to the Bank team (March 15, 2023) the external auditor's opinion was unqualified in January 2023.

Procurement. The ICR (p. 40) the project faced several procurement challenges, mostly related to delays and the complexity of conducting several transactions in parallel resulting in a high administrative workload. SEINFRA had limited capacity, which resulted in errors and inadequate terms of references and conducting ineffective tenders. Also, SEINFRA's limited procurement capacity for contract management resulted in the termination of a contract with a contractor under component 2. The contractor was unable to follow the implementation schedule due to the project's location, which was far away from the company's suppliers, rising asphalt concrete costs, and the company's financial situation. SEINFRA addressed the contractor's poor performance by suspending payments rather than suspending the approval of milestones, which would have been the appropriate contractual tool. An agreement with the contractor could not been reached which resulted in the suspension of the contract and implementation delays.

Also, in 2017, the project had to transition its procurement activities to Systematic Tracking of Exchanges in Procurement (STEP). However, SEINFRA's limited procurement capacity did not allow for registered information of adequate quality. In order to address SEINFRA's reluctance to use STEP, the Bank hired two STEP specialist to provide support in uploading all information needed, resulting in more than 90 percent of the project's procurement activities being uploaded.

The Bank team addressed the project's procurement issues by providing continuous monitoring and capacity development activities.

c. Unintended impacts (Positive or Negative)

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d. Other

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11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Highly Satisfactory	Satisfactory	Relevance of the objective is rated High. Achievement of both objectives and Efficiency were Substantial.
Bank Performance	Satisfactory	Moderately Satisfactory	Unrealistic estimates for project components, insufficient mitigation measures for procurement, and minor shortcomings in the design of the Results Framework.
Quality of M&E	Substantial	Substantial	
Quality of ICR	---	Substantial	

12. Lessons

The ICR (43-55) included several lessons learned which were adapted by IEG:

- **Providing a World Bank guarantee that would cover any delay in payment from the government to the private sector would make projects like this more attractive and feasible for private sector engagement.** In this project, the concessionaire faced difficulties in closing the commercial loan necessary for contractual investments due to the difficult fiscal situation Brazil is in, which resulted in doubts as to whether the state would be able to pay the concessionaire over 20 years. However, such guarantees come at a cost which has to be weighed against the risks.

- **Ensuring that E&S requirements for contractors, and environmental specialists are clearly specified and included in contracts is critical for compliance with the Bank's safeguard policies.** In this project, the construction companies did not follow the specifications of the Environmental and Social Specifications as this was not explicitly stated as a payment item. Also, the responsibilities of environmental specialists were not clearly defined at several work sites resulting in limited inspections only at the beginning and the end of interventions when many activities had already been completed.

- **Combining a citizen engagement approach with a technical review to identify targeted feeder roads is critical for ensuring the sustainability of project outputs.** In this project,

feeder roads were only identified by members of the community resulting in them being dispersed across the state and making road maintenance for the consortia challenging.

13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR provided an adequate overview of project preparation and implementation and included a Theory of Change of decent quality. Also, the ICR was internally consistent and sufficiently outcome driven. The lessons learned included in the ICR were interesting but would have benefitted from drawing in more detail on the project's implementation experience. Also, while the ICR assessed the project's economic efficiency, it did not assess its operational efficiency. Furthermore, the ICR was relatively lengthy. Taking everything together, the ICR's overall quality rating is **Substantial.**

a. **Quality of ICR Rating**
Substantial