

CASE STUDY

The Pará Sustainable Municipalities Project, Brazil

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Executive Summary

Pará is the second largest state in Brazil by total land area. Population influx during the construction of large infrastructure projects in 1970s and 2010s has not seen commensurate improvement in urban development. The Pará Sustainable Municipalities Project was designed to address the long-standing deficits in urban roads, drainage, sanitation, and digital connectivity in underserved municipalities of the state.

Approved by NDB with financing of USD 50 million in March 2018 as part of a USD 125 million project co-financed with CAF, it marked both NDB's first sovereign guaranteed project in Brazil and its first co-financed operation globally. The project focused on urban road paving and drainage, solid waste management, and fibre-optic expansion. Early results from NDB-financed activities indicate strong development impact, including improved access to paved roads, reduced flooding, better access to public services, increased local economic activity, and higher municipal tax revenues.

Overall, the project offers an important example of how targeted infrastructure project can deliver inclusive and resilient growth, supported by strong institutions, partnerships and adaptive implementation. At the same time, it also highlighted the importance of better design, risk management, and capacity building for future projects.

1. DEVELOPMENT CONTEXT

The Pará Sustainable Municipalities Project is situated in the State of Pará, Brazil. The state is the second largest by geographical area. The state is in the Amazon and receives heavy rainfall for about six months (3000 mm annually). At the time of conceptualisation of the project, most roads in the state were unpaved and lacked proper drainage, so they often became muddy, unusable, and unsafe. The region witnessed a population influx during the 1970s and in 2010s, particularly in municipalities along the Trans-Amazonian corridor. However, these settlements were not accompanied by adequate urban infrastructure development. As a result, many municipalities faced significant infrastructure deficits.

Apart from poorly developed and unpaved urban roads and inefficient drainage systems, the municipalities also suffered with inadequate solid waste management, and limited access to reliable internet connectivity. These deficiencies negatively impacted public health, environmental sustainability, economic productivity, and overall quality of life. Weak urban planning and insufficient municipal capacity exacerbated these issues, hindering inclusive and sustainable growth.

Recognising these challenges, the state government has initiated programs to expand urban services such as roads, sanitation, digital connectivity, and lighting. The Pará Sustainable Municipalities Project emerged as a

targeted intervention to bridge these persistent infrastructure gaps while aligning with long-term socio-economic development goals and improving living standards across underserved municipalities.

2. PROJECT DESCRIPTION

In March 2018, NDB approved a sovereign-guaranteed loan of USD 50 million for the Pará Sustainable Municipalities Project. The Project represents NDB's first sovereign guaranteed project in Brazil. Further, it was NDB's first co-financing project globally. It was co-funded with the Development Bank of Latin America and the Caribbean (CAF). NDB had approved financing for paving of 137 kilometres of urban dirt roads/streets and manage pluvial draining in several municipalities to improve their urban conditions.

Project Description	
Country operation	Brazil
Approval date	March 05, 2018
Total project cost	USD 125 million
NDB Financing	USD 50 million
Co-financier and financing amount	CAF, USD 50 million
State Government of Pará	USD 25 million
Borrower	State of Pará
Type of loan	Sovereign guaranteed
Alignment with SDGs	SDG11: Sustainable cities and communities
	SDG 6: Clean water and sanitation
	SDG 9: Industry, innovation and infrastructure

Source: NDB

The project was a multi-sector infrastructure initiative led by the state government designed to improve urban conditions and promote sustainable development across municipalities in the state of Pará. By focusing on three core infrastructure components, i.e., urban mobility, sanitation, and telecommunications development, the project aimed to reduce poverty and inequalities in the region. The first, **drainage and road paving program** aimed to upgrade approximately a total of 186 kilometres of existing urban roads across 12 municipalities, of which NDB financed 137 kilometers across nine municipalities. The project was expected to significantly increase access to paved roads, drainage, and sidewalks, from 1.5% to 30% of the population in targeted municipalities. Second, the **sanitation component** involved the construction of five waste disposal sites, addressing the lack of proper solid waste management and contributing to environmental sustainability

and public health improvements. Third, the **telecommunications program**¹ sought to extend fibre-optic infrastructure over a 1,000-kilometer, thereby enabling digital inclusion and economic opportunities.

3. DEVELOPMENT IMPACT

The Pará Sustainable Municipalities Project activities funded by NDB has generated significant early-stage development impacts across economic, social, and environmental dimensions. Infrastructure upgrades, particularly urban road paving and drainage, have enhanced mobility, reduced flooding, and improved access to public services such as education and healthcare.

By improving urban drainage systems in municipalities exposed to heavy seasonal rainfall, the project also enhanced climate resilience and reduced vulnerability to flooding events, generating long-term environmental and social benefits.

The percentage of high school pupils not completing their education decreased in the nine municipalities, suggesting that improved urban accessibility and public services may have contributed to better educational outcomes. Beneficiaries reported reduced vehicle maintenance costs and better living conditions, indicating immediate economic relief and improved quality of life.

Table: Percentage change in high school dropouts

Country/State/Municipality	2017	2022	% Change
Brazil	6.1	5.7	-6.56
Pará	12.2	10.8	-11.48
Itaituba	15.8	15.1	-4.43
Medicilândia	20.4	8.5	-58.33
Novo Progresso	21.6	19.2	-11.11
Placas	11.6	10.6	-8.62
Rurópolis	14.5	5.5	-62.07
Senador José Porfírio	19.2	22.6	17.71
Trairão	34.4	30.1	-12.5
Uruará	12.6	19.4	53.97
Municipal average	18.76	16.38	-12.72

Source: Independent Evaluation Report for the Project. The data was originally sourced from UNDB and Basic Education Census, Brazil (2014 to 2022).

Economically, the project has stimulated local growth by attracting new businesses, increasing property values, and generating employment opportunities. Evidence shows a substantial rise in municipal tax revenues,

¹ The sanitation and telecommunications components included within CAF-funded activities have undergone changes along project implementation which are not subject to this exercise. Overall impact assessment shall be referred to in the Project Completion Report when available.

approximately 50.79% between 2017 and 2023 in beneficiary municipalities, compared to a marginal decline of revenue in control municipalities, highlighting the project's role in strengthening local fiscal capacity.

Overall, the project is fostering sustainable urban development in historically underserved Amazonian municipalities. While long-term impacts remain to be fully realised, initial outcomes indicate strong alignment with poverty reduction, economic growth, and improved living standards.

4. SUCCESS FACTORS

Strong Alignment with Development Priorities: The project's objectives were closely aligned with Brazil's national and regional development strategies, including multi-year plans focused on sustainable development, social inclusion, and reduction of regional inequalities. This ensured political support and relevance to beneficiary needs.

Centralised Project Management Office (PMO): A key success factor was the establishment of a centralised PMO, which provided technical oversight, coordinated procurement, and ensured consistent implementation across municipalities. The PMO served as an effective institutional anchor, particularly in a context where local governments had limited technical and financial capacity.

Support from NDB's Americas Regional Office (ARO): Operational support from the ARO played a critical role in overcoming early implementation challenges. It facilitated communication between stakeholders, supported financial management, and helped resolve administrative and language barriers. This hands-on support enabled smoother project delivery, especially during complex phases.

Co-financing and Strategic Partnerships: The project benefited from a co-financing arrangement between the NDB and CAF. This approach pooled financial resources, expanded project coverage, and enabled knowledge sharing between institutions. It also marked an important milestone as NDB's first co-financed project globally, strengthening institutional collaboration.

Targeting Underserved Municipalities: By focusing on small and underdeveloped municipalities along the Trans-Amazonian Highway, the project addressed critical infrastructure gaps that would otherwise remain unaddressed.

Adaptive Implementation and Problem-Solving: The project demonstrated flexibility in responding to implementation challenges such as heavy rainfall, contractor issues, and pandemic-related disruptions. Construction teams adopted innovative approaches to continue work during rainy seasons, ensuring continuity despite adverse conditions.

Government Commitment and Financial Support: The State Government of Pará played a crucial role by covering cost overruns and ensuring continued project financing despite economic shocks. This commitment safeguarded project completion and demonstrated strong ownership.

Positive Spillover Effects: The project generated broader socio-economic benefits, including improved health outcomes, reduced environmental risks, and increased economic activity. These spillovers amplified its development impact beyond immediate infrastructure improvements.

In summary, the project's success stems from effective coordination, strong institutional support, adaptive management, and alignment with local needs creating a model for infrastructure-led development in challenging environments. Future projects should strengthen design quality, include robust risk and contingency planning, enhance local capacity, adopt better project management systems, and use local currency financing to mitigate cost volatility.

5. KEY TAKEAWAYS

The Pará Sustainable Municipalities Project demonstrates how targeted infrastructure investments can drive inclusive and sustainable development in underserved regions. By addressing critical gaps in urban mobility, sanitation, and drainage, the project has significantly improved living conditions and economic opportunities in small Amazonian municipalities.

A key takeaway is the importance of strong institutional arrangements, particularly the role of a centralised Project Management Office (PMO) and regional operational support, in ensuring effective implementation. The project also highlights the value of co-financing partnerships in mobilising resources and expanding impact.

Overall, the project is a successful example of infrastructure-led development that combines economic growth, social inclusion, and climate resilience. Its lessons provide valuable guidance for future interventions, emphasising the importance of adaptability, partnerships, and long-term sustainability planning.



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The BRICS-NDB Knowledge Portal is a joint initiative of BRICS and NDB. The Portal aims to institutionalise the existing knowledge available across BRICS Working Groups by systematically compiling them in alignment with NDB priority areas and sharing good practices from NDB's operations.

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