Technical Cooperation Document

I. Basic Information for TC

▪ Country/Region:	Brazil/CSC
▪ TC Name:	InfraInvest: Sustainable Infrastructure in Brazil
▪ TC Number:	BR-T1377
▪ Team Leader/Members:	Barbara Brakarz (CCS/CBR) and Karisa Ribeiro (TSP/CBR), Co-Team Leaders; Giovanni Frisari, Alternate Team Leader; Raúl Delgado; Marcela Jaramillo Gil, Adrien Vogt-Schilb, Luciana Carrijo, Eduarda Zoghbi, Juan Carlos Gomez (CSD/CCS); Jason Anthony Hobbs (CSD/HUD); Ricardo De Vecchi Galindo, Ivan Corbacho Morales (INO/NFP); Fernanda Oliveira de Sousa, Adriana Almeida Da Cruz (CSC/CBR); Carlos Ignacio Carpizo Riva Palacio (VPC/FMP); Carolina Maria Lembo (INE/TSP).
▪ Taxonomy:	Client Support
▪ Date of TC Abstract authorization:	October, 2017
▪ Beneficiary:	Federal Republic of Brazil through the Ministry of Planning, Development and Management
▪ Executing Agency and contact name:	Inter-American Development Bank Barbara Brakarz (barbarab@iadb.org)
▪ Donors providing funding:	Sustainable Energy and Climate Change Multi-Donor Fund (MSC)
▪ IDB Funding Requested:	US$600,000
▪ Local counterpart funding, if any:	N/A
▪ Disbursement period (Execution):	24 months (24 Months)
▪ Required start date:	December 2017
▪ Types of consultants:	Firms and individual consultants
▪ Prepared by Unit:	CCS
▪ Unit of Disbursement Responsibility:	CBR
▪ TC Included in Country Strategy:	Yes
▪ TC included in CPD:	No
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Social inclusion and equality, productivity and innovation, and climate change and environment sustainability.

II. Description of the Associated Loan/Guarantee

2.1 This Technical Cooperation (TC) is not directly associated with a loan. However, it will build the necessary foundation to guide loans in preparation in Brazil, such as loan operation BR-L1503 and the IDB Country Strategy with Brazil to be developed in 2018.

III. Objectives and Justification of the TC

3.1 The objective of InfraInvest is to support Brazil's Ministry of Planning to plan and design sustainable infrastructure programs, as well as to enable the financial tools, regulatory and policy framework required to scale them up. Thus, contributing to implementation of its Nationally Determined Contribution (NDC) and capturing the benefits of a robust and sustainable development for the country. This operation will support upstream infrastructure planning by providing the evidence for prioritizing and programming infrastructure investments in a sustainable manner, as well as creating the conditions at local level to finance and implement that infrastructure.

3.2 Current levels of investment in infrastructure are too low to sustain growth, and often of insufficient quality. The levels of investment in infrastructure in Brazil between 2008 and 2013 didn't exceed more than three percent of the Gross Domestic Product (GDP), far less than the five percent of GDP threshold recommend in LAC.[1] Furthermore, due to the economic downturn, subnational governments in Brazil reduced their investment in infrastructure by 46 percent during the first half of 2015 (Bächtold and Britto 2015). Likewise, according to the World Economic Forum (WEF) survey, the quality of infrastructure in LAC is lagging.

3.3 Increased infrastructure investment is imperative for Brazil to fulfil its economic potential. Econometric studies of Brazilian states found a positive and statistically significant effect of investment in transport infrastructure on per capita income in the period 1986-2007, controlling for other factors. Economic modelling suggests the effects of a one percent increase in public investment as a percentage of the GDP in infrastructure, has a 0.58% effect on GDP growth in the short term, and a 1.80% effect in the medium and long term.[2] Brazil's GDP growth lags behind its comparators partly because of its underinvestment in infrastructure. Empirical evidence suggests that investment in infrastructure –particularly access to treated water and sewerage collection and treatment– can reduce income inequality and make growth more inclusive.[3]

3.4 The transport sector is the second green-house-gas emitter in Brazil, after land use and land use change. In addition, emission from cars and motorcycles have increased 192% in 2016.[4] Brazilian primary transportation infrastructure faces many challenges. According to the WEF, Brazil ranks 107th out of 144 countries, regarding the level of development of its infrastructure. Roads need to be upgraded, as the most common method of cargo transportation is trucks –via roads, due to a limited rail network.[5] The infrastructure of urban mass transportation in Brazil, relies mostly on large privately-owned bus fleets and could be decarbonized with the expansion of urban and suburban trains.

3.5 Due to the current low levels of public investment, along with fiscal challenges faced by the region, as well as limited funding available from Multilateral Development Banks, the role of private investment must increase in the coming years. If public investment reaches two percent of GDP (best case scenario), private investment would need to triple (from one percent to three percent of GDP) to reach the threshold of five percent of the GDP required to close the existing infrastructure gap at the regional level. The range of barriers to mobilize private financing for sustainable infrastructure include unfavorable and uncertain regulations and polices, as well as the lack of bankable projects with adequate risk-adjusted returns.[6]

3.6 Given limited public investment funding, the Government of Brazil has focused on transferring billions in state–owned assets (airports, roads, railways, and ports) to private investors through long term (up to 30 years) infrastructure concession agreements and Public-Private Partnerships (PPP). However, there are some

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[1] Inter-American Development Bank, Financing Infrastructure in Latin America and the Caribbean: How, How much and by Whom? (2015).
[2] http://periodicos.ufpb.br/ojs2/index.php/economia/article/view/3849/3061
[3] https://publications.iadb.org
[4] http://epoca.globo.com/
[5] https://www.export.gov/apex/article2?id=Brazil-Transportation
[6] IDB-Mercer, Crossing the bridge to sustainable infrastructure investing, exploring ways to make it across (2017).

challenges for the implementation of PPP, such as: (i) adequate legal and institutional framework for the development of this market; (ii) capacity to identify and develop PPP; and (iii) funding. Therefore, even if valuable opportunities are presented, the lack of technical capacity translates into project gaps, hindering continuity, which is evidenced during the preparation phase. In this context, the Federal Government issued a Provisional Measure (MP 786), to create and capitalize a fund of up to BRL$180 million to finance technical services for the structuring and development of concession projects and PPP.

3.7 The NDC of Brazil under the Paris Agreement includes ambitious targets for a major shift in its approach to conceive, build, finance, and use its infrastructure; including energy, transportation and water, mitigation of emissions and resilience to climate impacts. Also, under the Sustainable Development Goals (SDG) agenda, Brazil has defined infrastructure as an important growth factor for the coming years, by having relevant positive externalities to the rest of the economy and fostering innovation. To that effect, the Brazilian Government is currently working on an agenda of regulatory changes to re-attract investors for long-maturing projects.[7] Efforts should be directed at infrastructure investments that are sustainable, low-carbon and climate-resilient.

3.8 This TC will build readiness at the federal and municipal levels, for the implementation of sustainable infrastructure in Brazil. It intends to: (i) identify and measure the economic opportunities associated with the implementation of the Brazilian NDC's infrastructure targets, as well as build evidence and recommendations for a low carbon development pathway; (ii) plan sustainable infrastructure at city level; (iii) strengthen regulations and procurement guidelines for concessions and PPP; (iv) design and structure a PPP model project; and (v) mobilize investors into sustainable infrastructure assets by facilitating the dialogue between them and the government, on the longer-term transition pathway.

3.9 The definition of well aligned policy packages and investment priorities can then lead to the design of adequate project pipelines and financial instruments to catalyze private sector investments into sustainable infrastructure. IDB's strategic partners in the Brazilian Government include the Ministry of Planning, particularly the secretariats of Planning and Economic Affairs, Infrastructure Development, and International Affairs.

3.10 This operation is consistent with the Update to the Institutional Strategy 2010-2020 (AB-3008) and is aligned with the development challenges of: (i) social inclusion and equality, as it aims at strengthening the capacity of the state to provide inclusive infrastructure and infrastructure services. It is known that inclusive growth, human well-being and poverty reduction depend critically on the type, extent and quality of the infrastructure that supports key services: food, energy, water supply, safe and resilient cities, and sustainable industrialization; and (ii) productivity and innovation, as it seeks to facilitate smart institutional frameworks and financial instruments to foster urban planning and sustainable infrastructure. According to the World Economic Forum survey the quality of infrastructure in LAC is lagging, particularly compared with advanced economies and high-growth Asian economies; bringing LAC's infrastructure up to date with cutting edge sustainable considerations, can enhance Brazil's competitiveness with regards to other high growth economies. It is also aligned with the cross-cutting theme of climate change and environment

[7] Brazil, Voluntary National Review on the SDG (2017).

sustainability, as it seeks to facilitate scaled-up investment in sustainable infrastructure, which is critical to deliver on the SDG, and to respond to the objectives of the Paris Agreement to limit a dangerous global temperature rise of 2ºC, and manage climate related risk. Additionally, the program will contribute to the Corporate Results Framework 2016-2019 (CRF) (GN-2727-6) by providing means (economical assessments, action plans, capacity enhancement for regulations and procurement guidelines, relevant information, etc.) to institutions and decision makers, aimed at the generation of capacities and the creation of policies that enable the mobilization of public and private investments into sustainable infrastructure.[8]

3.11 The project is aligned with the objectives of the Sustainable Energy and Climate Change Multidonor Fund, in that it aims to mainstream and incorporate mitigation and adaptation policies and programs across government development strategies. Particularly, it is consistent with the objectives of: (i) expand the IDB sustainable energy portfolio; and (ii) increasing attention to adaptation to climate change and climate-proofed IDB portfolios, by aiming at developing low carbon infrastructure in energy sectors, including transport, and the generation of economic analysis which will contribute to a sustainable development in the country.

3.12 The project is also aligned with the IDB's Infrastructure Strategy (document GN-2710-5) in four pillars: (i) foster financing mechanisms and leverage the participation of the private sector in infrastructure; (ii) adopt and promote a multisector agenda; (iii) support the construction and maintenance of environmentally and socially sustainable infrastructure; and (iv) promote ongoing improvements in infrastructure governance.

3.13 The project is consistent with the IDB Country Strategy with Brazil 2016-2018 (GN-2850), which seeks to support Brazil in six strategic objectives: (i) stimulate social and productive inclusion; (ii) improve the condition of the country's infrastructure; (iii) promote the development of sustainable cities; (iv) improve the institutional capacity of public entities; (v) increase the sustainable management of natural resources and climate change mitigation and adaptation actions; and (vi) promote development through the private sector. This operation is consistent with objectives (ii), (iv) and (vi) of the Country Strategy, as well as the Bank's focus in a subnational agenda. The IDB also expects to keep working with the three levels of government, focusing on the states and municipalities.

IV. Description of Activities/Components and Budget

4.1 **Component 1. Upstream planning at federal level (US$215,000).** The analysis will provide a framework for the Ministry of Planning to identify opportunities for a greener growth pathway in line with Brazil's NDC. It will be shared with other ministries, the private sector, civil society and other infrastructure stakeholders (including energy, transport, logistics, mobility, and mining sectors) to assist planning and the political decision-making process, leading to increased sustainable infrastructure projects, critical driver for the growth of a low carbon economy in Brazil. This will include a comprehensive economic evaluation, based on both micro and macroeconomic analyses and will include quantitative and qualitative evidences of infrastructure and its interlinkages with land-use and forestry. This assessment will be delivered by Climate Policy Initiative Brazil, due to the firm's proven expertise in

[8] Country Development Results Indicator Nº 25 of the CRF: "Government agencies benefited by projects that strengthen technological and managerial tools to improve public service delivery".

projects on climate finance, energy finance and land use that serve as a basis for the reformulation of policies and national frameworks. The selected firm will be hired directly because it possesses the unique knowledge to carry out this analysis, consistent with the Operational Guidelines for the Selection and Contracting of Consulting Firms in Bank Executed Operational Work (OP-1155-4).

4.2 **Component 2. Planning and regulatory framework strengthening at city level (US$365,000).** This will include activities to strengthen planning and institutional capacity at city level to identify the right investments, policy framework and financial instruments required. Moreover, activities shall facilitate the concession process of PPP, reducing transaction costs and identify regulatory improvements to accelerate concessions. This work will include:

a. Planning of sustainable infrastructure investments at city level: This output will support government's capacity to identify appropriate investments, required policy framework and financial instruments. This includes a mapping exercise of key areas of investments in infrastructure at city level given the NDC, and support to mainstream climate into cities' policies and investment plans. This study will be delivered by Climate Bonds Initiative (CBI), given the firm's expertise in promoting low carbon investment projects worldwide with sustainable infrastructure experience in Brazil. CBI is a world reference mobilizing the largest capital market of all, the US$100 trillion bond market, for climate change solutions, having worked on these themes in Brazil for the past two years. Moreover, the government has requested CBI to implement this component due its large experience and knowledge of the Brazilian financial system and important stakeholders. The selected firm will be hired directly because it possesses unprecedented experience with financial instruments and investment plans, which represents exceptional value for the assignment, consistent with the Operational Guidelines for the Selection and Contracting of Consulting Firms in Bank Executed Operational Work (OP-1155-4).

b. Strengthening legal and regulatory frameworks for concessions and PPP for sustainable infrastructure: This output will: (i) identify the improvements needed regarding norms and regulations for the delivery effective concessions and PPP; and (ii) assess how the public and private sector could address the main challenges faced by cities when preparing a project, focusing on sustainability aspects.

c. Sustainable small-scale infrastructure PPP pilot project: This output will design and structure a small-scale sustainable infrastructure project to be used as a model by the government (federal, state and municipal levels), which will comprise the technical, economic and environmental feasibility drawn from the findings of the studies financed with this component.

4.3 **Component 3. Structured dialogues (US$20,000).** The TC will finance knowledge dissemination events and dialogues between the government (national and sub-national) and private financial institutions to develop a joint agenda to scale up investments of low carbon sustainable infrastructure, working as follow up discussions that initiated during the *InfraInvest* event in Rio de Janeiro.

4.4 The total cost of the operation is US$600,000 financed with resources from the Sustainable Energy and Climate Change Multi-Donor Fund (MSC).

Indicative Budget (US$)

Component	IDB/Fund	Counterpart	Total
Component 1. Upstream planning at federal level	215,000	0	215,000
Component 2. Planning strengthening at city level	365,000	0	365,000
Component 3. Structured dialogues	20,000	0	20,000
Total	**600,000**	**0**	**600,000**

V. Executing Agency and Execution Structure

5.1 As requested by the beneficiary, the IDB will act as the Executing Agency through its Climate Change Division (CCS). CCS will coordinate with the Infrastructure and Energy Department (INE), particularly with the Transport Division to ensure the activities financed by the TC are aligned with other IDB operations. The project team has already identified the most appropriate consultants to carry out specific studies, namely Climate Policy Initiative (Component 1) and Climate Bonds Initiative (Component 2a). Thus, the IDB will be able to reduce implementation risks and define a more strategic action plan to meet this TC's objective, and identify future synergies with larger projects, such as the "Sustainable Infrastructure Program" funded by the United Kingdom.

5.2 Although such consultants have been identified, the IDB will still manage the activities herein described, and take advantage of its institutional capacity and experience to ensure the workability and linkages between the components of this TC.

5.3 As the executing agency, the IDB will follow its procurement policies and guidelines related to hiring processes: (i) individual consultants will be hired in accordance with the guidelines set out in policy AM-650; (ii) consulting firms of an intellectual nature will be hired in accordance with policy GN-2765-1 and its related Operational Guidelines (OP-1155-4); and (iii) logistics and other related services in accordance with document GN-2303-20 (Corporate Procurement Policies).

5.4 The TC monitoring will seek the success of the timely implementation of the activities, assessing its effectiveness in the long-term and ensuring timely implementation, budget control, delivery and quality of goods and services, and other aspects related to project management. The IDB will deliver quarterly reports to assess the performance during the execution, and identify potential problems and possible corrective measures. The Bank will prepare a final evaluation of the results of all the activities carried out under this TC.

5.5 The Beneficiary will have the intellectual property rights related to any information, data and reports resulted from the activities financed by this TC and will grant a license to the Bank (Inter-American Development Bank) to use this material.

VI. Major Issues

6.1 The following risks and mitigation measures have been identified:

a. Risk: capacity to access relevant information on planning processes and pipelines of infrastructure in Brazil can pose a risk for the effective execution of this work. Mitigation measure: The IDB, through CCS staff has been actively engaging with the Ministry of Planning and relevant secretariats, as well as key stakeholders to leverage the best knowledge in the sector. Furthermore, the ability to engage with the relevant actors at city level and within the private sector will be critical for fruitful dialogues. To mitigate this risk the team carried out an initial engagement event called *InfraInvest*, which took place in Rio de Janeiro

on August 31, 2017; alongside a roundtable that brought together local investors to discuss insights gained from an IDB-Mercer research, as per papers: *"Building a Bridge to Sustainable Infrastructure"* (2016) and "*Crossing the Bridge to Sustainable Infrastructure Investing"* (2017).

b. Risk: infrastructure concessions in Brazil have often been criticized for their lack of governance. This limits the investment appetite of international investors. Mitigation measure: This TC will support the government's evaluation of new governance models that render infrastructure and public services profitable for the private sector; for instance, it will improve regulation and increase private sector trust on investment return.

c. Risk: current political instability in Brazil delays projects or undermines governmental buy-in. Mitigation measure: the project team is closely engaged with the Ministry of Planning's most strategic Secretariats (Secretariat of Planning, Secretariat of Infrastructure Development and Secretariat of International Affairs), ensuring institutional buy-in at both technical and institutional level, and ensuring that the TC closely contributes to long-term governmental programs and priorities. This TC has been the result of a clear and institution-wide demand by the Ministry of Planning, which answers to a top priority institutional mandate. Additionally, technical officials from this ministry have actively participated in the preparation of the operation. Furthermore, the structured dialogues between the ministry and city governments will help ensure the delivery of local level activities (e.g. the development of the pilot project).

VII. Environmental and Social Strategy

7.1 The proposed project will have no environmental or social impacts as it will not finance direct investments in infrastructure, but instead it will finance feasibility studies in the sector, which will include technical, economic, legal, and environmental and social studies. Per the Environment and Safeguards Compliance Policy of the IDB (OP-703), the operation has been classified as 'Category C' (see the Safeguards Screening Form and the Safeguards Policy Filter).

VIII. Required Annexes:

Letter of Request

Results Matrix

Terms of Reference

Procurement Plan

INFRAINVEST: SUSTAINABLE INFRASTRUCTURE IN BRAZIL

BR-T1377

CERTIFICATION

I hereby certify that this operation was approved for financing under the **Sustainable Energy and Climate Change Multi-Donor Fund (MSC)** through a communication dated November 13, 2017 and signed by Felipe Caicedo (ORP/GCM). Also, I certify that resources from said fund are available for up to **US$600,000** in order to finance the activities described and budgeted in this document. This certification reserves resource for the referenced project for a period of four (4) calendar months counted from the date of eligibility from the funding source. If the project is not approved by the IDB within that period, the reserve of resources will be cancelled, except in the case a new certification is granted. The commitment and disbursement of these resources shall be made only by the Bank in US dollars. The same currency shall be used to stipulate the remuneration and payments to consultants, except in the case of local consultants working in their own borrowing member country who shall have their remuneration defined and paid in the currency of such country. No resources of the Fund shall be made available to cover amounts greater than the amount certified herein above for the implementation of this operation. Amounts greater than the certified amount may arise from commitments on contracts denominated in a currency other than the Fund currency, resulting in currency exchange rate differences, represent a risk that will not be absorbed by the Fund.

Original Signed — 12/11/17

Sonia M. Rivera
Chief
Grants and Co-Financing Management Unit
ORP/GCM

Date

Approved: Original Signed — 12/12/17

Amal Lee Amin
Division Chief
Climate Change Division
CSD/CCS

Date