

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

## **BRAZIL**

### **LOW CARBON AGRICULTURE FOR AVOIDED DEFORESTATION AND POVERTY REDUCTION IN BRAZIL. PHASE II - SUSTAINABLE RURAL DEVELOPMENT IN THE CAATINGA**

**(BR-T1378)**

#### **TECHNICAL COOPERATION**

This document was prepared by the project team consisting of: Octavio Damiani (RND/CBR), team leader, Barbara Brakarz (CCS/CBR), alternate team leader, Cristina Celeste Marzo (LEG/SGO), David Salazar and Carlos Carpizo (VPC/FMP); Adriana da Cruz, Yuka Maekawa, Lorayne de Oliveira Santos, Paula Valente Lins (CSC/CBR), and Elizabeth Chavez (CSD/RND).

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## Technical Cooperation Document

### I. Basic Information for TC

▪ Country/Region:	Brazil/CSC
▪ TC Name:	Low Carbon Agriculture for Avoided Deforestation and Poverty Reduction in Brazil. Phase II - Sustainable Rural Development in the Caatinga
▪ TC Number:	BR-T1378
▪ Team Leader/Members:	Octavio Damiani (RND/CBR), team leader, Barbara Brakarz (CCS/CBR), alternate team leader, Cristina Celeste Marzo (LEG/SGO), David Salazar and Carlos Carpizo (VPC/FMP); Adriana da Cruz, Yuka Maekawa, Lorayne de Oliveira Santos, Paula Valente Lins (CSC/CBR), and Elizabeth Chavez (CSD/RND)
▪ Taxonomy:	Client Support
▪ Date of TC Abstract authorization:	Nov 2, 2018
▪ Beneficiary:	Federative Republic of Brazil, through the Ministry of Agriculture, Livestock, and Food Supply of Brazil (MAPA)
▪ Executing Agency:	Brazilian Foundation for Sustainable Development (FBDS)
▪ Donor providing funding:	Phase II: Low-carbon Agriculture for Avoided Deforestation and Poverty Reduction Fund (LCA)
▪ IDB Funding Requested:	US\$5,000,000.00
▪ Local Counterpart funding:	None
▪ Disbursement period:	42 months (36 months of execution)
▪ Required start date:	July, 2019
▪ Types of consultants:	Firms and individual consultants
▪ Prepared by Unit:	Environment, Rural Development and Disaster Risk Management Division (CSD/RND)
▪ Unit of Disbursement Responsibility:	Bank Office in Brazil (CSC/CBR)
▪ TC included in Country Strategy:	Yes
▪ TC included in CPD:	Yes
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Productivity and Innovation; Climate Change and Environmental Sustainability

### II. Objectives and Justification of the TC

- 2.1 The objective of this Technical Cooperation (TC) is to mitigate Greenhouse Gas (GHG) emissions and increase income of small and medium-sized farmers in the *Caatinga* (semiarid) biome by promoting their adoption of low carbon technologies.<sup>1</sup> It will improve farmers' access to technical assistance and training, strengthen capacities of local extension services on climate change mitigation and adaptation technologies, and support farmer organizations to strengthen their role in value chains, particularly the marketing of production. It will also implement studies about the *Caatinga* biome and the main conditions for the development of low-carbon models of production.
- 2.2 This project is one of three TCs that comprise the second phase of the Low Carbon Agriculture and Avoided Deforestation and Poverty Reduction in Brazil (BR-X1028) project, financed by the International Climate Fund (ICF) through the Department of Environment, Food and Rural Affairs (DEFRA) of the United Kingdom of Great Britain and

<sup>1</sup> The *Caatinga* biome is a semiarid region in Brazil considered as one of the most biodiverse and populated semi-arid regions in the world, with 27 million inhabitants. Its area corresponds to 11% of the Brazilian territory or 84 million hectares and covers ten states in Brazil's Northeast region and the North of Minas Gerais.

Northern Ireland. The IDB was responsible for the administration and financial management of the funds, having formulated the project and supervised its implementation. The project, with a total cost of US\$39,2 million, had the objective of recovering degraded pastures and forests and implementing low carbon agriculture among small and medium-size farmers in seven states in the Amazon and Atlantic Forest biomes. It was approved by the IDB Board of Executive Directors on April 3, 2013 and finalized its implementation on May 14, 2019. In 2016, the IDB and DEFRA agreed to carry out a second phase of the project, signing an Administrative Agreement on December 16 of that year creating the “Phase II: Low-carbon Agriculture for Avoided Deforestation and Poverty Reduction Fund” (LCA fund), with a contribution from DEFRA of GBP 30 million (thirty million British pounds Sterling). The objective of the LCA fund is to finance operations that promote sustainable low-carbon land use and forest management in small and medium-scale farms by encouraging technological progress, ensuring that agriculture continue to develop while preserving natural resources, reducing deforestation, and reducing GHG emissions in the largest biomes in Brazil. While the BR-X1028 project focused on the Amazon and Atlantic Forest biomes, the second phase will focus on the *Caatinga* (through this TC) and the *Cerrado* biome (through another TC).<sup>2</sup>

- 2.3 The *Caatinga* biome is located in Northeast Brazil, the region with the lowest Human Development Index (HDI) in the country that concentrates 18% of the country’s poorer rural population and 10% as a whole. Near 60% of the municipalities are under the poverty line of US\$1,25 per day<sup>3</sup>. Agriculture plays a key role in the *Caatinga* biome. Nearly 12% of Brazil’s population live in the region and depend on agricultural activities.<sup>4</sup> Approximately 32% of the 5 million farms in Brazil are located in the *Caatinga*.<sup>5</sup> Traditional agricultural practices, such as the use of slash and burn and overgrazing, are common, causing land degradation and increasing desertification.<sup>6</sup> The native vegetation of the *Caatinga* has been transformed by deforestation, with geoprocessing monitoring indicating that 45% of the biome has been deforested and degraded.<sup>7</sup> As a result, the *Caatinga* has become the third most degraded biome in Brazil after the Mata Atlântica and the *Cerrado* biomes.<sup>8</sup>
- 2.4 The preparation of this TC has considered the existing experience with government rural development programs and the lessons learned from the BR-X1028 project. They stress that family farmers—which represent more than 90% of the farmers in the *Caatinga*—are the most vulnerable to climate change. The specific experience of the TC BR-X1028 has shown that: (i) lack of access to appropriate technical assistance and to financing have been major barriers to the adoption of low carbon technologies by small and medium-size

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<sup>2</sup> A third TC (in preparation, for US\$1.2 million, to be executed by the Bank) will provide implementation support to the executing agencies of the other two TCs, it will implement their baseline and evaluation studies, and it will carry out knowledge management activities.

<sup>3</sup> Torres, Marcelo de O. et al. Spatial patterns of rural poverty: an exploratory analysis in the São Francisco River Basin, Brazil. *Nova Economia*, Belo Horizonte, v. 21, n. 1, Abril. 2011.

<sup>4</sup> MDA, 2017. *Caatinga: a Região mais Ruralizada do Brasil*.

<sup>5</sup> IBGE (2017). Censo Agropecuário. Resultados preliminares (<https://sidra.ibge.gov.br/tabela/6635>) and Pereira Filho, A., Giongo, V., Cunha, T.J.F., Texeira Filho, J., Santos, T.D.L. and Leite, L.F.C., 2016. Low-carbon Technology in Brazilian Semiarid Ecosystems. *Embrapa Meio-Norte-Capítulo em livro científico (ALICE)*.

<sup>6</sup> Santos, J. M. 2011. Estratégias de convivência para a conservação dos recursos naturais e mitigação dos efeitos da desertificação no semiárido. In: Lima, R. da C.C.; Cavalcante, A. de M.B.; Marin, A.M.P. (Orgs). *Desertificação e mudanças climáticas no semiárido brasileiro*. Campina Grande: INSA-PB, 2011. p. 163-184.

<sup>7</sup> MMA, 2012. *Caatinga and MMA 2018, Caatinga*.

<sup>8</sup> de Souza, B.I., Artigas, R.C. and de Lima, E.R.V., *Caatinga e Desertificação*, and Observatório do Clima, 2016. *Brasil tem dois biomas na lista dos ameaçados pela mudança do clima*.

farmers; (ii) direct subsidies to farmers have posed operational difficulties and may have implications for the sustainability of technology adoption; and (iii) small farmers face significant constraints in the marketing of production, which may compromise their adoption of new technologies. In addition, recent studies demonstrate that agroforestry systems in the Caatinga have the potential to store approximately 11.72 tons of CO<sub>2</sub>.<sup>9</sup> However, in spite of this potential, there is limited knowledge available about the conditions and potential capacity for implementing climate change mitigation and adaptation agendas in the Caatinga biome, including relevant issues such as the potential of small farmers and the constraints that they face to adopt low carbon technologies and the capacities of technical assistance providers and other local institutions to support farmers in learning and adopting these technologies.

- 2.5 The TC is consistent with the Update to the Institutional Strategy 2010-2020 (AB-3008), being aligned with the development challenge of productivity and innovation, as it promotes the adoption by small and medium-size farmers of new agricultural technologies and production systems. It is also aligned with the cross-cutting issue of climate change adaptation and mitigation, as it aims at promoting the adoption of climate change and adaptation technologies, and it contributes to the IDBG Corporate Results Framework 2016-2019 (GN-2727-6). According to the joint MDB approach on [climate finance tracking](#), an estimated 100% of total IDB funding for this program is invested in climate change mitigation and adaptation activities. These resources contribute to the IDB Group's target of increasing the financing of climate-change-related projects to 30% of all operational approvals by the end of 2020. In addition, the TC is aligned with the cross cutting issues of the Country Strategy with Brazil 2016-2018 (GN-2850), as it promotes strategies to expand investments aimed reducing greenhouse gas emissions, as well as innovative mechanisms and instruments to mobilize national and international resources to reduce carbon emissions and socio-economic vulnerabilities. The TC is also consistent with the Integrated Strategy for Climate Change Adaptation and Mitigation, and Sustainable and Renewable Energy (GN-2609-1), the Climate Change Sector Framework Document (GN-2835-8), the Agriculture and Natural Resources Management Sector Framework Document (GN-2709-5) and the Food Security Sector Framework Document (GN-2825-8). Finally, the TC is aligned with the objectives and eligibility criteria of the "Phase II: Low-carbon Agriculture for Avoided Deforestation and Poverty Reduction Fund" (LCA), according with the provisions set in the Administrative Agreement signed between IDB and the Government of the United Kingdom on December 16, 2016.<sup>10</sup>
- 2.6 The TC also supports the implementation of Brazilian policies, such as: (i) Agriculture Climate Change Adaptation and Mitigation Plan (ABC Plan)<sup>11</sup> that sets sustainable agriculture production actions to reduce GHG emission in the agriculture sector (crops and cattle rising); (ii) the Forest Code 2012,<sup>12</sup> which establishes norms for protected forest areas, including exploration of commodities, forest fires and sets economic and financial

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<sup>9</sup> Azevedo, A. et al. Caminhos para uma Agricultura Familiar sob Bases Ecológicas: Produzindo com Baixa Emissão de Carbono.

<sup>10</sup> The objective of the LCA fund is to finance eligible operations that promote sustainable low-carbon land use and forest management in small and medium-scale farms by encouraging technological progress, ensuring that agriculture can continue to develop while preserving natural resources, reducing deforestation, and reducing GHG emissions in the largest biomes in Brazil. Eligible operations are defined as non-reimbursable technical cooperation operations of the IDB in Brazil that are aligned with the objective and areas of intervention of the Fund, including mainly consulting services, training activities, travel expenses and per diem.

<sup>11</sup> The ABC Plan is one of the sectorial plans elaborated in accordance with the 3° Article of the Decree nº7.390/2010.

<sup>12</sup> The New Forest Code Law nº 12.651, of May 25, 2012. (Originated by the Law Project nº 1.876/99).

instruments to achieve this goal; (iii) the National Policy on Climate Change 2009<sup>13</sup> to establish a sustainable economic and social development; (iv) the National Action Plan for Combating Desertification, setting mitigation and recovery proposal for affected areas in the Caatinga; and (v) the Brazilian Nationally Determined Contribution (NDC) to the Paris Agreement of the United Nations Climate Change Convention (UNFCCC) that sets out the country's restoration and low carbon agriculture targets to reduce GHG emissions.

### III. Description of activities/components and budget

- 3.1 Taking into account the particular features of the Caatinga biome, the constraints in available knowledge and the lessons learned from the BR-X1028 project (see paragraphs 2.3 and 2.4), this TC will focus on: (i) implementing studies to assess environmental and social conditions of the Caatinga biome relevant to the adoption of climate change mitigation and adaptation technologies and the potential impacts of these technologies, (ii) facilitating the access of beneficiaries to adequate technical assistance; (iii) training local providers of technical assistance to strengthen their knowledge about climate change mitigation and adaptation technologies; (iv) helping farmers access existing credit lines that finance the application of low-carbon technologies; and (v) supporting the development of low-carbon value chains through the strengthening of farmer organizations, in particular in their capacities for the marketing of production.
- 3.2 **Component 1. Knowledge generation on the *Caatinga* biome (US\$500,000).** This component will finance studies to assess the characteristics and conditions of natural resources and vegetation coverage, the particular features, potential and possible constraints faced by rural producers to adopt sustainable low carbon technologies, and the capacities of local institutions (public extension services, non-government providers of technical assistance, financing institutions, etc.) to assist farmers in learning and adopting these technologies. It will include the following sub-components:
- a. **Assessments of Caatinga's environmental and social conditions.** This subcomponent will finance studies of the social and environmental conditions of the Caatinga biome, identifying and assessing available resources (water resources, land, etc.) and use, priority areas for restoration and conservation, value chains with potential for the application of climate change mitigation and adaptation technologies, available practices most suitable for family farmers, and constraints for their adoption.
  - b. **Assessment of impact of low carbon technology in the restoration and conservation of the Caatinga biome.** This subcomponent will finance research carried out jointly between universities and research institutions from the region<sup>14</sup> focused on assessing the impact of low carbon agriculture technologies in the restoration and conservation of the Caatinga and in carbon dioxide emissions.
- 3.3 **Component 2. Promoting Sustainable Low Carbon Productive Arrangements (US\$3,467,000).** This component aims at promoting the development of low Carbon agriculture-based clusters.<sup>15</sup> It includes the following activities:

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<sup>13</sup> Law nº 12.187, from December 29, 2009.

<sup>14</sup> FBDS has produced an assessment of the most relevant institutions acting in the region, and some examples include the Federal University of Pernambuco (UFPE), the Federal University of Rio Grande do Norte (UFRN), the Adapta Sertão Program, Articulação no Semiárido Brasileiro (ASA), and Embrapa, among others.

<sup>15</sup> Clusters are territorial and institutional productive arrangements in the defined project area, including the range of agricultural producers, suppliers, service providers, processing facilities, etc. that operate in the specific geographical area. Cluster development aims to improve the performance of the productive activities as a whole.

- a. **Strengthening capacities of local technical assistance providers.** Training will be provided to extensionists of local providers of technical assistance, both public and private, on mitigation and adaptation technologies adapted to the conditions of small farmers in the semi-arid region.
  - b. **Provision of training and technical assistance to farmers and rural organizations.** The project will provide training and technical assistance to farmers and their organizations to raise their awareness and knowledge about low carbon technologies and to support their adoption of these technologies. Both modern low carbon and social/traditional technologies will be considered.<sup>16</sup> Technical assistance will also support beneficiaries to access available credit.
  - c. **Supporting value chains and access to markets.** This subcomponent will strengthen the capacities of small farmer organizations through the co-financing of collective benefits, such as water storage, seedling nurseries, small-scale storage facilities, and tools for compost production. The project Operating Regulations (see paragraph 4.7) will detail eligibility criteria and investments, including the prioritization of the participation of women and youth.
- 3.4 **Component 3. Creating a Sustainable Legacy in the *Caatinga* (US\$335,000).** This component focuses on creating an enabling environment to ensure the continuity of low carbon and sustainable practices in the *Caatinga*. This will be delivered by:
- a. **Designing a *Caatinga* Facility/Fund.** It will consist of designing a financial mechanism, in form of a fund or facility, which would provide grants and credit to small and medium-sized farmers, aimed at ensuring project sustainability after its completion.
  - b. **Engaging with Strategic Stakeholders.** Promote a network of government and non-government institutions and players in the *Caatinga*, involving them in the project to create multiplying actions aimed at scaling up project results.
  - c. **Disseminating Knowledge and Best Practices.** Organization of workshops and seminars to share project results with academia, government and private sector, exchanges with technical and scientific institutions in the Northeast, and development of an online platform to disseminate information about low carbon agricultural and social technologies.
- 3.5 **Project management (US\$498,000).** It includes the contracting of consultants of the Project Management Unit.
- 3.6 **Auditing (US\$100,000).** It includes costs of auditing.
- 3.7 **Other administration costs (US\$100,000).** It includes utilities, equipment, etc.

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<sup>16</sup> Examples of modern low carbon technologies are the use of Integrated Crop-Livestock Forestry Systems, biological Nitrogen fixation, and no till farming. Examples of traditional technologies are the use of communal seeds and the reuse of rainwater.

Indicative Budget (US\$)

Component	IDB/LCA	Counterpart Funding	Total Funding
Component 1. Assessment of the Caatinga biome	500,000	0	500,000
Component 2. Implementing Low Carbon Technologies in the Caatinga	3,467,000	0	3,467,000
Component 3. Creating a Sustainable Legacy in the Caatinga	335,000	0	335,000
Project management	498,000	0	498,000
Auditing	100,000	0	100,000
Other administration costs	100,000	0	100,000
<b>Total</b>	<b>5,000,000.00</b>	<b>0</b>	<b>5,000,000.00</b>

- 3.8 The project area includes three territories with a total of 37 municipalities in five states in Northeast Brazil: Alagoas, Bahia, Pernambuco, Piaui and Sergipe (see [Intervention Area](#)). The selection of municipalities was based on three indicators: poverty, natural-vegetation cover, and exposure to future climate change. All the selected municipalities have been prioritized in early 2019 by Brazil's Ministry of Agriculture, Livestock and Food Supply (MAPA) for the implementation of an action plan for the Northeast semi-arid region.
- 3.9 Direct project beneficiaries include 1,500 family farmers who will benefit from their participation in awareness raising, training and technical assistance activities. Other project beneficiaries include extensionists working in local institutions who will improve their knowledge about low carbon agricultural practices. The expected project results include at least 600 hectares of sustainable managed land (ICLF), 200 hectares of restored pastures and 200 hectares of preserved vegetation in private properties to pilot low carbon agricultural technologies and practices in the Caatinga. This will lead to 20 thousand tons of CO<sub>2</sub> avoided<sup>17</sup> and the adoption of innovative low carbon technologies for energy (4), water (4) and land use (12). In addition, it will also support production chains, such as fruit for exports (melon, grape, mango), goat meat and milk and improve annual income of beneficiary families by at least 25%. The executing agency will submit the following evaluations to the Bank, in accordance with the scope agreed with the Bank: (i) a mid-term review, once 50% of the TC funds have been disbursed and justified or after 24 months of execution, whichever occurs first; and (ii) a final report, no later than 90 days after the date of the last disbursement. The bank-executed TC (see footnote 2) will finance a baseline study and an impact evaluation to measure project results and identify lessons learned.

<sup>17</sup> According to Saatchi *et al.* (2011)\*, the Caatinga biome has the potential to stock around 0 to 25 tons of carbon per hectare. This TC aims to ensure the protection of 1 thousand ha –200 ha will be restored, and 800 ha will be protected through low carbon agricultural practices. Based on the methodology used by Saatchi *et al.* (2011), the value of 15 to 20 tons per hectare was considered, which would give a total of 15,000 to 20,000 tons of avoided CO<sub>2</sub> emissions in five years. It is estimated that in three years (project lifespan), the project will contribute to 9,000 to 12,000 of CO<sub>2</sub> emissions avoided. \*Saatchi SS, Harris NL, Brown S, Lefsky M, Mitchard ETA, Salas W, Zutta BR, Buermann W, Lewis SL, Hagen S, Petrova S, White L, Silman M, Morel A (2011). Benchmark map of forest carbon stocks in tropical regions across three continents. *Proceedings of the National Academy of Sciences* 108(24): 9899-9904.

#### IV. Executing agency and execution structure

- 4.1 **Executing Agency (EA).** The EA for the program will be the Brazilian Foundation for Sustainable Development (FBDS), a Non-profit Organization (NGO) based in Rio de Janeiro specialized in environmental research and extension projects in the *Caatinga*. Founded in 1992, it has extensive experience with sustainable development and sustainable agriculture projects. FBDS has supported the implementation of Brazil's Forest Code and has been working since 2015 in the project "*High Resolution Mapping of Brazilian Biomes*", which has produced relevant primary data on land use, watercourses and Permanent Preservation Areas, supporting public policies and the implementation of the Environmental Rural Registry (CAR).
- 4.2 FBDS will be responsible for the technical, financial and fiduciary execution and administration of the Project. The IDB carried out an institutional capacity assessment of FBDS, finding that it has experience with project administration, adequate managerial and technical capabilities, and manuals defining organization and functions for procurement. The weaknesses identified relate with constraints of the existing financial management system, absence of specific procedures for evaluating results and improving processes, and insufficient personnel for monitoring project activities.
- 4.3 A Steering Committee including representatives of DEFRA, IDB, MAPA, EMBRAPA,<sup>18</sup> FBDS, and selected experts in the Caatinga biome will provide strategic guidance. Local committees with representatives of public and private institutions, NGOs, and other institutions involved in rural development will contribute to disseminate information about the project, mobilize farmers and other local actors, and will discuss ideas and help identify priorities. The project Operating Regulations (see paragraph 4.7) will provide details about the composition and responsibilities of the Steering and local committees.
- 4.4 **Project Execution Mechanism.** Consistent with the results of the institutional capacity assessment of FBDS carried out by IDB (see paragraph 4.2), FBDS will execute the project using its internal administrative, technical and overall organizational and internal control capabilities. To strengthen its technical execution function, FBDS will execute the project through a Project Management Unit (PMU) to be created within its organizational structure and will allocate the necessary human and technical resources needed for project execution. The PMU will include five full-time technical staff: (i) one general coordinator or project director; (ii) one scientific analyst to coordinate studies and research activities; (iii) one technical analyst to support program and sub-project planning and monitoring; (iv) one administrative assistant; and (v) one financial specialist. The project will use FBDS's existing systems for integrated project planning, procurement, financial administration, internal controls, reporting, and monitoring, while ensuring compatibility with Bank norms, procedures and control systems.
- 4.5 Calls for proposals will be made by FBDS to select groups of beneficiaries and institutions that will provide them with technical assistance, carry out awareness raising activities, encourage rural producers' participation in the project activities, help rural producers to access credit and other financial resources, implement Demonstration Units and Multiplying Units,<sup>19</sup> and provide capacity building. FBDS will give support to the local

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<sup>18</sup> EMBRAPA (*Empresa Brasileira de Pesquisa Agropecuária*) is a federal government agricultural research agency created in 1973, under the Ministry of Agriculture, Livestock, and Food Supply (MAPA), well-known in Brazil for its excellence in agriculture research.

<sup>19</sup> Demonstration Units are areas of rural properties used as a model to test and demonstrate low carbon practices. Multiplication Units are rural properties where low carbon and environmental management technologies are applied in an integral manner, becoming a reference to other farmers.



institutions, as well as technically monitor the technical assistance activities carried out by the selected institutions. Calls for proposals' terms of reference will be reviewed by the IDB for non-objection. The details of the calls for proposals and their procedures will be included in the project operating regulations (see paragraph 4.7).

- 4.6 EMBRAPA will provide technical inputs to the project by participating in the Steering Committee and through the Integrated Crop-Livestock Forest (ILPF) Network Association, a public-private partnership created by EMBRAPA in 2012 to promote the adoption of integrated crop-livestock-forest systems.<sup>20</sup> The ILPF Network Association and EMBRAPA will provide technical support for the setting up of a monitoring system of the project effects on CO<sub>2</sub> emissions.
- 4.7 **Operating Regulations.** The TC's Operating Regulations will describe the execution arrangements for the operation, including: (i) organizational structure; (ii) technical and operational arrangements for program execution; (iii) operating procedures; and (iv) detailed description of the expected results.
- 4.8 **Special contractual conditions prior to the first disbursement:** (i) evidence of the establishment of the PMU within the FBDS's organizational structure; (ii) hiring of the PMU technical staff; and (iii) preparation and approval by IDB of the project Operating Regulations.
- 4.9 **Procurement and financial management.** Procurement administration of the project will take place in accordance with established private sector and commercial practices acceptable to the IDB, as per the terms of IDB Procurement Policies (GN-2349-9 and GN-2350-9). Use of private sector procurement regulations is warranted due to FBDS private sector nature. The procurement of goods and services, including the selection and contracting of consultants with resources from the IDB will follow the norms and procedures of FBDS, as contained in the FBDS Procurement Manual. Any change or revision of the Procurement Plan by FBDS will be submitted to the Bank for non-objection. With the exception of auditing, the supervision of the procurement function by the IDB will be based on the "ex post" modality. The Bank will advance funds to FBDS based on the project's real cashflow needs, as established in the project's financial plan. All advances, except the first one, will be subject to a minimum 80% justification of all accumulated unjustified balances from previous advances. The Bank will initially advance resources to cover 120 days of project expenditures; throughout project execution though, the Bank could increase this funding-period up to a level of 180 days if deemed adequate. The disbursements of the project will be subject to ex post supervision by the Bank and by the external auditors. At the end of each fiscal year, FBDS will submit the project's financial statements audited by an eligible audit firm and in accordance with IDB terms of reference and regulations.

## V. Major Issues

- 5.1 The risks of the project are considered medium. The main risks relate with issues identified by the Evaluation of Institutional Capacity -PACI (see paragraph 4.2): constraints of existing financial management system, absence of specific procedures for evaluating results and improving processes, and insufficient personnel for the monitoring of activities of this TC. Finally, state elections that will take place in 2022, which is the last year of the

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<sup>20</sup> The ILPF Network Association is a public-private partnership comprised of EMBRAPA and private companies (Bradesco, Cocamar, John Deere, Soesp, Syngenta), supporting a network of 107 Technological Reference Units distributed in all Brazilian biomes and involving the participation of 20 EMBRAPA's Research Center.

implementation period, so they could affect participation of some states in state committees and their interest in the technologies promoted by the project.

- 5.2 In order to reduce risks, a detailed project Operating Regulations will be prepared before the start of implementation, detailing project governance structure and operational procedures for contracting and financial management. In addition, FBDS will hire a full-time project financial manager, or assign a full-time FBDS employee to perform: (i) project accounting; (ii) transaction recording and book-keeping; (iii) preparation of disbursement requests and justification of expenses to IDB; (iv) bank account management and reconciliation; (v) monitoring of the schedule of payments in line with project's financial planning and in accordance with FBDS policies and levels of authorization; (vi) ensure compliance with FBDS internal controls; and (vii) coordinate all activities related to the selection and work of the external audit firm. Given the scope of the project and the volume of transactions expected, the Bank recommends FBDS to strengthen its financial records systems and data protection policy in order to minimize risks to the project in relation to data damage/loss. In addition, the Bank will execute a TC (see footnote 2) that will be responsible for providing implementation support, evaluation, and knowledge management activities. Thus, the IDB will play an instrumental role in identifying measures needed to improve processes, and it will be responsible for implementing the baseline and impact evaluation studies. Risks related with the potential influence of state elections will be mitigated by strong efforts on dialogue activities, with which FBDS has wide experience.

## **VI. Environmental and Social Strategy**

- 6.1 According to IDB's Environment and Safeguards Compliance Policy (OP-703), the TC is classified as Category "C", see ([Safeguard Screening Form](#) and [Safeguard Policy Filter Report](#)).

### **Required Annexes:**

- Annex I: [Results Matrix](#)
- Annex II: [Procurement Plan](#)

### **Required Electronic Links:**

- [Request from the client](#)
- [Terms of Reference](#)








## Results Matrix

### Outcomes

Outcome: 1 Expansion of a low Carbon and sustainable agriculture in the Caatinga biome											
Indicators	Flags*	Unit of Measure	Baseline	Baseline Year	Means of verification		2019	2020	2021	2022	EOP
1.1 Knowledge generated about low carbon and sustainable agriculture in the Caatinga		Studies and assessment reports	0.00	2019	Reports of studies completed	P	0.00	6.00	0.00	0.00	6.00
						P(a)					0.00
						A					
1.2 Capacities and awareness about low carbon and sustainable agriculture increased		Farmers	0.00	2019	Reports of technical assistance and training activities, and lists of beneficiaries	P	0.00	700.00	1,500.00	1,500.00	1,500.00
						P(a)					
						A					
1.3 Capacities about low carbon agriculture technologies increased		Rural extension agents	0.00	2018	Training activities, list of participants and evaluation questionnaire	P	0.00	50.00	100.00	125.00	125.00
						P(a)					
						A					
1.4 Climate change mitigation and adaptation technologies adopted		Technologies implemented	0.00	2019	Progress reports, mid-term evaluation and final report	P	0.00	2.00	2.00	2.00	6.00
						P(a)					0.00
						A					
1.5 Farmer organizations strengthened		Collective Social arrangements	0.00	2019	Progress reports	P	0.00	0.00	0.00	10.00	10.00
						P(a)					
						A					
1.6 Sustainably managed land (ICLF/SAF)		Hectares	0.00	2019	Progress reports of technical assistance providers	P	0.00	300.00	600.00	600.00	600.00
						P(a)					
						A					
1.7 Degraded pastures restored		Hectares	0.00	2019	Progress reports	P	0.00	100.00	100.00	0.00	200.00
						P(a)					0.00
						A					
1.8 Area of preserved vegetation		Hectares	0.00	2019	Progress reports	P	0.00	100.00	200.00	200.00	200.00
						P(a)					
						A					
Outcome: 2 Generation and dissemination of knowledge about low carbon and sustainable agriculture in the Caatinga biome											
Indicators	Flags*	Unit of Measure	Baseline	Baseline Year	Means of verification		2019	2020	2021	2022	EOP
2.1 Creation of a network of government and non-government institutions for exchange of information and learning on low carbon and sustainable agriculture in		Number of institutions	0.00	2019	Agenda of meetings, minutes, and lists of participants	P	0.00	20.00	20.00	20.00	20.00
						P(a)					
						A					

CRF Indicator

### Outputs: Annual Physical and Financial Progress

1 Knowledge generation on the Caatinga biome						Physical Progress					Financial Progress					Theme			Fund	Flags
Outputs	Output Description	Unit of Measure	Baseline	Baseline Year	Means of verification	2019	2020	2021	2022	EOP	2019	2020	2021	2022	EOP					
1.1 Diagnostics and assessments completed	Studies on Caatinga's resources, needs and impact of low carbon agriculture technologies	Diagnostics (#)	0	2018	Reports presenting results of studies	P	0	4	0	0	4	P	50000	350000	0	0	400000	Sustainable Energy and Climate Change	LCA	
						P(a)	0	4	0	0	4	P(a)	50000	350000	0	0	350000			
						A						A								
1.2 Diagnostics and assessments completed	Monitoring of effects on CO2 emissions	Diagnostics (#)	0	2019	Report presenting field results	P	0	1	1	1	1	P	10000	30000	30000	30000	100000	Sustainable Energy and Climate Change	LCA	
						P(a)	0	1	1	1	1	P(a)	10000	30000	30000	30000	90000			
						A						A								
2 Creating a Sustainable Legacy in the Caatinga						Physical Progress					Financial Progress					Theme			Fund	Flags
Outputs	Output Description	Unit of Measure	Baseline	Baseline Year	Means of verification	2019	2020	2021	2022	EOP	2019	2020	2021	2022	EOP					
2.1 Project proposal developed	Proposal of a Caatinga Facility/Fund concluded	Proposals (#)	0	2018	Reports developing proposal of Caatinga Facility Fund	P	3	1	0	0	4	P	120000	0	0	0	120000	Agricultural Productivity and Food Security	LCA	
						P(a)	3	1	0	0	1	P(a)	120000	0	0	0	0			
						A						A								
2.2 Policy dialogue events organized	Meetings with relevant government agencies organized	Events (#)	0	2018	Agenda,minutes and list of participants of each meeting or event	P	2	2	2	0	6	P	12000	12000	12000	0	36000	Biodiversity and Ecosystem Conservation	LCA	
						P(a)	2	2	2	0	4	P(a)	12000	12000	12000	0	24000			
						A						A								
2.3 Workshops organized	Workshops to disseminate knowledge and best practices organized	Workshops (#)	0	2018	Agenda and list of participants of each workshop	P	0	2	2	0	4	P	0	12000	12000	0	24000	Agricultural Productivity and Food Security	LCA	
						P(a)	0	2	2	0	4	P(a)	0	12000	12000	0	24000			

[illegible]

Total Cost

	2019	2020	2021	2022	Cost
P	\$15,000.00	\$35,000.00	\$35,000.00	\$15,000.00	\$100,000.00
P(a)	\$15,000.00	\$35,000.00	\$35,000.00	\$15,000.00	\$0.00
A					
P	\$10,000.00	\$35,000.00	\$35,000.00	\$20,000.00	\$100,000.00
P(a)	\$10,000.00	\$35,000.00	\$35,000.00	\$20,000.00	\$0.00
A					
P	\$74,000.00	\$170,000.00	\$170,000.00	\$84,000.00	\$498,000.00
P(a)	\$74,000.00	\$170,000.00	\$170,000.00	\$84,000.00	\$0.00
A					

PROCUREMENT PLAN FOR NON-REIMBURSABLE TECHNICAL COOPERATIONS										
Country: Brazil						Executing agency: Fundação Brasileira para o Desenvolvimento Sustentável			Public or private sector: Private	
Project number: BR-T1378						Title of Project: Agricultura de Baixo Carbono para Desmatamento Evitado Fase II - Bioma Caatinga				
Period covered by the plan: From 2019 to 2023										
Item Nº	Ref. AWP	Description (1)	Estimated contract cost (US\$)	Procurement Method (2)	Review of procurement (3)	Source of financing and percentage		Estimated date of the procurement notice or start of the contract	Technical review by the PTL (4)	Comments
						IDB/MIF %	Local/other %			
		Component 1								
		Assets/Goods								
		Computer equipment	\$25,000	FBDS Method	Ex-post	100%		1st Mo	Ex-post	
		Other then Consulting Services								
		Air and ground travel and travel expenses	\$35,000	FBDS Method	Ex-post	100%		1st Mo	Ex-post	
		Consulting Firms								
		Study for monitoring effects of technologies on emissions	\$100,000	FBDS Method	Ex-post	100%		2nd Mo	Ex-ante	
		Individual consultants								
		Mapping Caatingas Land Use and Hydro Resource	\$270,000	FBDS Method	Ex-post	100%		1st Mo	Ex-ante	
		Studies on Low Carbon Agricultural Technologies for the Caatinga	\$29,000	FBDS Method	Ex-post	100%		1st Mo	Ex-post	
		Mapping Caatingas Social Technologies	\$9,000	FBDS Method	Ex-post	100%		3rd Mo	Ex-post	
		Mapping Financial Recourses for LCA	\$9,000	FBDS Method	Ex-post	100%		3rd Mo	Ex-post	
		Synthesis and Update of Preliminary Studies on Caatinga	\$6,000	FBDS Method	Ex-post	100%		1st Mo	Ex-post	
		Developing Capacity Building Material for LCA Technical Assistance	\$17,000	FBDS Method	Ex-post	100%		10th Mo	Ex-post	
			\$500,000							
		Component 2								
		Assets/Goods								
		Other than Consulting Services								
		Air and ground travel and travel expenses	\$45,000	FBDS Method	Ex-post	100%		1st Mo	Ex-post	
		Technical Assistance Courses/Capacity Building	\$152,000	FBDS Method	Ex-post	100%		7th Mo	Ex-post	
		Consulting Firms								
		Diagnosis of Local Needs and Stakeholder Engagement (Social Labs)	\$40,000	FBDS Method	Ex-post	100%		5th Mo	Ex-post	
		Prototyping Local Proposals	\$40,000	FBDS Method	Ex-post	100%		7th Mo	Ex ante	
		Individual consultants								
		Caatinga Specialist	\$113,000	FBDS Method	Ex-post	100%		1st Mo	Ex-post	
		Technical support to planning and monitoring of field activities	\$77,000	FBDS Method	Ex-post	100%		1th Mo	Ex-post	
		Agreements								
		5 Local Field Partners for Clusters Implementation	\$3,000,000	FBDS Method	Ex-post	100%		7th Mo	Ex-ante	
			\$3,467,000							
		Component 3								
		Assets/Goods								
		Other than Consulting Services								
		Air and ground travel and travel expenses	\$97,000	FBDS Method	Ex-post	100%		1st Mo	Ex-post	
		Workshops organization	\$8,000	FBDS Method	Ex-post	100%		3rd Mo	Ex-post	
		Consulting Firms								
		Individual consultants								
		Caatinga Fund Design and Road show	\$110,000	FBDS Method	Ex-post	100%		1st Mo	Ex-ante	
		Communication Services	\$120,000	FBDS Method	Ex-post	100%		3rd Mo	Ex-post	

\$335,000

		Project management								
		Individual consultants								
		Project Director	\$237,000	FBDS Method	Ex-post	100%		1st Mo	Ex-post	
		Adm Services Assistant	\$57,000	FBDS Method	Ex-post	100%		1th Mo	Ex-post	
		Financial Assistant	\$57,000	FBDS Method	Ex-post	100%		1th Mo	Ex-post	
		Procurement Assistant	\$57,000	FBDS Method	Ex-post	100%		1th Mo	Ex-post	
		Legal Advice	\$90,000	FBDS Method	Ex-post	100%		4th Mo	Ex-post	
			\$498,000							
		Auditing								
		Consulting Firms								
		Project Auditing	\$100,000	SBQC	Ex-ante	100%		13th/25th/36th Mos	Ex-post	
		Other administration costs								
		Other than Consulting Services								
		Physical and support structure	\$100,000							
Total			\$5,000,000				22/05/2019			
<p>(1) Grouping together of similar procurement is recommended, such as computer hardware, publications, travel, etc. If there are a number of similar individual contracts to be executed at different times, they can be grouped together under a single heading, with an explanation in the comments column indicating the average individual amount and the period during which the contract would be executed. For example: an export promotion project that includes travel to participate in fairs would have an item called "airfare for fairs", an estimated total value od US\$5,000, and an explanation in the Comments column: "This is for approximately four different airfares to participate in fairs in the region in years X and X1".</p>										
<p>(2) <b>Goods and works:</b> CB: Competitive bidding; PC: Price comparison; DC: Direct contracting.</p>										
<p>(2) <b>Consulting firms:</b> FCS: Full competitive Selection; SCS: Simple Competitive Selection; SSS: Single Source Selection;</p>										
<p>(2) <b>Individual consultants:</b> IICQ: International Individual Consultant Selection Based on Qualifications; SSS: Single Source Selection.</p>										
<p>(2) <b>Country system:</b> include selection Method</p>										
<p>(3) Ex-ante/Ex-post review: In general, depending on the institutional capacity and level of risk associated with the procurement, Ex-post review is the standard modality. Ex-ante review can be specified for critical or complex process.</p>										
<p>(4) <b>Technical review:</b> The PTL will use this column to define those procurement he/she considers "critical" or "complex" that require ex ante review of the terms of reference, technical specifications, reports, outputs, or other items.</p>										

**LOW-CARBON AGRICULTURE FOR AVOIDED DEFORESTATION AND POVERTY REDUCTION IN BRAZIL.  
PHASE II - SUSTAINABLE RURAL DEVELOPMENT IN THE CAATINGA**

**BR-T1378**

**CERTIFICATION**

I hereby certify that this operation was approved for financing under the **Low Carbon Agriculture for Avoided Deforestation and Poverty Reduction Fund (LCA)** through a communication dated May 17, 2019 and signed by Felipe Caicedo (ORP/GCM). Also, I certify that resources from said fund are available for up to **US\$5,000,000** 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, representing a risk that will not be absorbed by the Fund.

Certified by:	<u>ORIGINAL SIGNED</u>	<u>May 28, 2019</u>
	Sonia M. Rivera	Date
	Chief	
	Grants and Co-Financing Management Unit	
	ORP/GCM	

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-\_\_\_/19

Brazil. ATN/ \_\_\_-\_\_\_\_\_-BR. Nonreimbursable Technical Cooperation. Low Carbon Agriculture for Avoided Deforestation and Poverty Reduction in Brazil. Phase II – Sustainable Rural Development in the *Caatinga*

The Board of Executive Directors

RESOLVES:

1. 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 Federative Republic of Brazil, through its Ministry of Agriculture, Livestock, and Food Supply – MAPA, as beneficiary, and with the Brazilian Foundation for Sustainable Development – FBDS, as the executing agency, and to take such additional measures as may be pertinent for the execution of the project proposal contained in document AT-\_\_\_ with respect to the technical cooperation “Low Carbon Agriculture for Avoided Deforestation and Poverty Reduction in Brazil. Phase II – Sustainable Rural Development in the *Caatinga*”.

2. Such nonreimbursable technical cooperation will be for an amount of up to US\$5,000,000, chargeable to the resources of the Phase II: Low-carbon Agriculture for Avoided Deforestation and Poverty Reduction Fund, as per the terms of the Administrative Agreement signed between the Bank and the Government of the United Kingdom on December 16<sup>th</sup>, 2016.

(Adopted on \_\_\_ \_\_\_\_\_ 2019)