Strategic Climate Fund
Forest Investment Program
Grant Agreement

(Development of Systems to Prevent Forest Fires and Monitor Vegetation Cover in the Brazilian Cerrado Project - Desenvolvimento de Sistemas de Prevenção de Incêndios Florestais e Monitoramento da Cobertura Vegetal no Cerrado Brasileiro)

between

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
acting as Implementing Entity of the Forest Investment Fund under the Strategic Climate Fund

and

RESEARCH DEVELOPMENT FOUNDATION (FUNDAÇÃO DE DESENVOLVIMENTO DA PESQUISA)

Dated April 6, 2016
AGREEMENT dated ________________, 2011 entered into between the INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT ("World Bank"), acting as Implementing Entity of the Forest Investment Fund under the Strategic Climate Fund and RESEARCH DEVELOPMENT FOUNDATION (Fundação de Desenvolvimento da Pesquisa) ("Recipient").

WHEREAS the Federative Republic of Brazil ("Member Country"), through its Ministry of Science, Technology and Innovation, on May 13, 2013, has endorsed the Project and appointed FUNDEP as the Recipient.

The Recipient and the World Bank hereby agree as follows:

Article I
Standard Conditions; Definitions

1.01. The Standard Conditions constitute an integral part of this Agreement.

1.02. Unless the context requires otherwise, the capitalized terms used in this Agreement have the meanings ascribed to them in the Standard Conditions or in this Agreement.

Article II
The Project

2.01. The Recipient declares its commitment to the objectives of the project described in Schedule 1 to this Agreement ("Project"). To this end, the Recipient, in close collaboration with MCTI, shall carry out the Project in accordance with the provisions of Article II of the Standard Conditions.

2.02. Without limitation upon the provisions of Section 2.01 of this Agreement, and except as the Recipient and the World Bank shall otherwise agree, the Recipient shall ensure that the Project is carried out in accordance with the provisions of Schedule 2 to this Agreement.
Article III
The Grant

3.01. The World Bank agrees to extend to the Recipient, on the terms and conditions set forth or referred to in this Agreement, a grant in an amount equal to nine million two hundred fifty thousand Dollars ($9,250,000) ("Grant") to assist in financing the Project.

3.02. The Recipient may withdraw the proceeds of the Grant in accordance with Section IV of Schedule 2 to this Agreement.

3.03. The Grant is funded out of the abovementioned Strategic Climate Fund (SCF) for which the World Bank receives periodic contributions from the donors to the trust fund. In accordance with Section 3.02 of the Standard Conditions, the World Bank’s payment obligations in connection with this Agreement are limited to the amount of funds made available to it by the donors under the abovementioned SCF, and the Recipient’s right to withdraw the Grant proceeds is subject to the availability of such funds.

Article IV
Effectiveness; Termination

4.01. This Agreement shall not become effective until evidence satisfactory to the World Bank has been furnished to the World Bank that the conditions specified below have been satisfied:

(a) that the Operational Manual has been adopted by the Recipient;

(b) that the execution and delivery of the Technical Cooperation Agreement on behalf of the Recipient, MCTI, INPE (as represented by MCTI), UFG, and UFMG, have been duly authorized or ratified, executed and delivered by all parties and by all necessary action; and

(c) that the execution and delivery of this Agreement on behalf of the Recipient have been duly authorized or ratified by all necessary corporate action.

4.02. As part of the evidence to be furnished pursuant to Section 4.01 (b) and (c) of this Agreement, there shall be furnished to the World Bank an opinion or opinions satisfactory to the World Bank, of counsel acceptable to the World Bank or, if the World Bank so requests, a certificate satisfactory to the World Bank of a competent official of the respective party, showing that:
(a) the Recipient has duly authorized or ratified, executed and delivered this Agreement on its behalf, and this Agreement is legally binding upon the Recipient in accordance with its terms; and

(b) the Recipient, MCTI, INPE (as represented by MCTI), UFG, and UFMG, have each duly authorized or ratified, executed and delivered the Technical Cooperation Agreement on their behalf, respectively, and the Technical Cooperation Agreement is legally binding upon each party in accordance with its terms.

4.03. Except as the Recipient and the World Bank shall otherwise agree, this Agreement shall enter into effect on the date upon which the World Bank dispatches to the Recipient notice of its acceptance of the evidence required pursuant to Section 4.01 of this Agreement ("Effective Date"). If, before the Effective Date, any event has occurred which would have entitled the World Bank to suspend the right of the Recipient to make withdrawals from the Grant Account if this Agreement had been effective, the World Bank may postpone the dispatch of the notice referred to in this Section until such event (or events) has (or have) ceased to exist.

4.04. **Termination for Failure to Become Effective.** This Agreement and all obligations of the parties under it shall terminate if it has not entered into effect by the date 90 days after the date of this Agreement (the Effectiveness Deadline), unless the World Bank, after consideration of the reasons for the delay, establishes a later date for the purpose of this Section. The World Bank shall promptly notify the Recipient of such later date.

### Article V

**Recipient's Representative; Addresses**

5.01. The Recipient's Representative referred to in Section 7.02 of the Standard Conditions is its President.

5.02. The Recipient's Address referred to in Section 7.01 of the Standard Conditions is:

Fundaçao de Desenvolvimento da Pesquisa (FUNDEP)
Atenção: Presidente
Avenida Presidente Antônio Carlos, N° 6.627
Unidade Administrativa II – 4º andar
Bairro Pampulha
Belo Horizonte, Minas Gerais - 31.270-901

Tel: +55(31) 3409.4201
Email: presidencia@fundep.ufmg.br
With copy to:

Ministério da Ciência, Tecnologia e Inovação – MCTI
Atenção: Andréa Ferreira Portela Nunes
Coordenadora Geral de Gestão de Ecossistemas
Coordenação Geral de Gestão de Ecossistemas - CGEC/SEPED
Brasilia, Distrito Federal - 70.067-900

Tel: +55(61)2033-7401/8455
E-mail: aportela@mcti.gov.br
Secretárias: Luterra Freire/ e-mail: luterra.freire@mcti.gov.br
Cicera Thais/ e-mail: clima@mcti.gov.br

5.03. The World Bank’s Address referred to in Section 7.01 of the Standard Conditions is:

International Bank for Reconstruction and Development
1818 H Street, N.W.
Washington, D.C. 20433
United States of America

Cable: INTBAFRAD  Telex: 248423 (MCl) or 64145 (MCI)
AGREED at [Location], as of the day and year first above written.

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
acting as Implementing Entity of the Forest Investment Fund under the Strategic Climate Fund.

By

Authorized Representative

FUNDAÇÃO DE DESENVOLVIMENTO DA PESQUISA (FUNDEP)

By

Authorized Representative
SCHEDULE 1

Project Description

The objective of the Project is to enhance the Member Country’s institutional capacity in monitoring deforestation, in providing information on fire risks, and in estimating related GHG emissions in the Cerrado.

The Project consists of the following parts:

Part 1: Deforestation Monitoring

Strengthening the monitoring of deforestation in the Cerrado by:

(a) designing and implementing a deforestation monitoring system of the Cerrado, including annual deforestation mapping and near real-time deforestation detection based on the PRODES and DETER systems;

(b) training selected stakeholders on access, interpretation and use of the information generated by the deforestation monitoring system for the Cerrado; and

(c) designing and implementing a data quality control system for the deforestation monitoring system for the Cerrado.

Part 2: Information Systems on Forest Fire Risk and GHG Emissions Estimation

(a) Improving INPE’s fire risk information system by designing, implementing and providing, inter alia: (i) localized fire risk warning barometers; (ii) applications for interactive fire risk updates, (iii) higher fire risk resolution maps; (iv) instruments for fire risk statistical analysis; and (v) automatic status updates.

(b) Adapting a fire ignition, spread and carbon model to the Cerrado, including the integration of daily-updated, on-line fire spread forecast information on INPE’s Queimadas website, and applying such model in selected conservation units as a fire management tool.

(c) Adapting INPE’s GHG emissions estimation system to the Cerrado.

(d) Carrying out a program of hands-on training on the practical application of fire risk modelling tools to selected stakeholders.
Part 3: Project Management, Monitoring and Evaluation

Managing the technical and administrative aspects of the Project, including financial management, procurement, the carrying out of audits, overall Project coordination, monitoring and evaluation of Project implementation.
SCHEDULE 2

Project Execution

Section I. Institutional and Other Arrangements

A. Implementation Arrangements

1. To facilitate the carrying out of the Project, the Recipient shall enter, prior to the Effective Date, into a Technical Cooperation Agreement with MCTI, INPE (as represented by MCTI), UFG and UFMG, under terms and conditions approved by the World Bank, therein setting forth the roles and responsibilities of each party in the implementation of the Project, including, *inter alia*, the following:

(a) The Recipient's obligations to:

(i) carry out the Project, including, *inter alia*, procurement and financial management under the Project;

(ii) monitor and report on the Project, together with MCTI; and

(iii) transfer the goods purchased under the Project to MCTI, INPE, UFG, and/or UFMG, after the Closing Date, in accordance with instructions from MCTI.

(b) MCTI's obligations to carry out the technical supervision under the Project, including:

(i) approving the POAs and budgets;

(ii) carrying out institutional coordination under the Project;

(iii) assisting the Recipient in monitoring and reporting on Project implementation;

(iv) carrying out the necessary due diligence for quality assurance and results evaluation;

(v) maintaining, at all times during Project implementation, professional staff in adequate numbers and with terms of reference, qualifications and functions in accordance with the Project Operational Manual to perform its obligations under the Project; and

(vi) establishing and maintaining the PICC.
INPE, UFG, and UFMG’s obligations to:

(i) execute and deliver the Project products and results respectively assigned to each INPE, UFG, and UFMG, all in accordance with the Project Operational Manual;

(ii) prepare the technical specifications for the purchase of goods for the Project, request the purchase of said goods to the Recipient, and certify said goods contain said technical specifications upon delivery; and

(iii) prepare the terms of reference of consultants to be retained under the Project, request the hire of said consultants to the Recipient, monitor the services to be provided by said consultants, and carry out quality control of the consultants’ deliverables prior to payment for said services by the Recipient.

2. The Recipient shall exercise its rights and carry out its obligations under the Technical Cooperation Agreement in such manner as to protect the interests of the Recipient and the World Bank and to accomplish the purposes of the Grant. Except as the World Bank shall otherwise agree, the Recipient shall not assign, amend, abrogate, terminate, waive or fail to enforce the Technical Cooperation Agreement or any of its provisions.

3. For the purposes of carrying out the Project, the Recipient shall, at all times during Project implementation, maintain professional staff in adequate numbers, with terms of reference, qualifications and functions acceptable to the World Bank, including, but not limited to, a Project leader, and a procurement specialist, to perform all Project related functions, including, inter alia, procurement and financial management.

4. The Recipient shall, at least once a year during Project implementation on or about December 1, commencing on the first such date after the Effective Date, prepare and furnish to the Bank the POA, including financial management, in terms and conditions acceptable to the Bank, for the Project’s operation during the following twelve months.

5. The Recipient shall cause MCTI to establish, by no later than 90 days after the Effective Date, and thereafter operate and maintain at all times during Project implementation, the PICC, an advisory committee which shall consist of representatives of the Recipient, MCTI, INPE, UFG, UFMG, with functions, powers, resources and competencies acceptable to the World Bank as set forth in the Project Operational Manual, to ensure institutional coordination under the Project.
B. Project Operational Manual and Safeguards

1. The Recipient shall adopt the Project Operational Manual, satisfactory to the World Bank, and, thereafter, carry out the Project in accordance with said manual, which shall include the rules, methods, guidelines, standard documents and procedures for the carrying out of the Project, including the following: (a) the detailed description of Project implementation activities and the detailed institutional arrangements of the Project; (b) the Project administrative, accounting, auditing, reporting, financial management, procurement and disbursement procedures; (c) the monitoring indicators for the Project; (d) a Project evaluation strategy; and (e) screening and mitigation procedures for unexpected negative social impact arises during Project implementation; and in the event that any provision of the Project Operational Manual shall conflict with this Agreement, the terms of this Agreement shall prevail.

2. The Recipient shall ensure that the terms of reference for any consultancies related to the technical assistance provided under the Project shall be satisfactory to the World Bank and, to that end, such terms of reference shall require that the advice conveyed through such consultancies and technical assistance be consistent with the World Bank's environmental and social safeguard requirements.

C. Anti-Corruption

The Recipient shall ensure that the Project is carried out in accordance with the provisions of the Anti-Corruption Guidelines.

Section II. Project Monitoring, Reporting and Evaluation

A. Project Reports; Completion Report

1. The Recipient shall monitor and evaluate the progress of the Project, with MCTI’s assistance and collaboration, and prepare Project Reports in accordance with the provisions of Section 2.06 of the Standard Conditions and on the basis of indicators acceptable to the World Bank. Each Project Report shall cover the period of one calendar semester, and shall be furnished to the World Bank not later than 45 calendar days after the end of the period covered by such report.

2. The Recipient shall prepare the Completion Report in accordance with the provisions of Section 2.06 of the Standard Conditions. The Completion Report shall be furnished to the World Bank not later than six months after the Closing Date.
B. Financial Management; Financial Reports; Audits

1. The Recipient shall ensure that a financial management system is maintained in accordance with the provisions of Section 2.07 of the Standard Conditions.

2. The Recipient shall ensure that interim unaudited financial reports for the Project are prepared and furnished to the World Bank as part of the Project Report not later than 45 calendar days after the end of each calendar semester, covering the semester, in form and substance satisfactory to the World Bank.

3. The Recipient shall have its Financial Statements for the Project audited in accordance with the provisions of Section 2.07 (b) of the Standard Conditions. Each such audit of the Financial Statements shall cover the period of one fiscal year of the Recipient. The audited Financial Statements for each such period shall be furnished to the World Bank not later than six months after the end of such period.

Section III. Procurement

A. General

1. Procurement and Consultant Guidelines. All goods, non-consulting-services and consultants’ services required for the Project and to be financed out of the proceeds of the Grant shall be procured in accordance with the requirements set forth or referred to in:


   (b) the provisions of this Section III, as the same shall be elaborated in the procurement plan prepared and updated from time to time by the Recipient for the Project in accordance with paragraph 1.18 of the Procurement Guidelines and paragraph 1.25 of the Consultant Guidelines (“Procurement Plan”).

2. Definitions. The capitalized terms used below in this Section to describe particular procurement methods or methods of review by the World Bank of particular contracts, refer to the corresponding method described in Sections II and III of the
Procurement Guidelines, or Sections II, III, IV and V of the Consultant Guidelines, as the case may be.

B. Particular Methods of Procurement of Goods and Non-consulting Services

1. **National Competitive Bidding.** Except as otherwise provided in paragraph 2 below, goods and non-consulting services shall be procured under contracts awarded on the basis of National Competitive Bidding, including the method known as “pregão eletrônico” as provided in the Member Country’s law No. 10.520 of July 17, 2002, under any e-procurement system acceptable to the Bank, subject to the following additional procedure, namely, that the bidding documents shall be acceptable to the Bank.

2. **Other Methods of Procurement of Goods and Non-consulting Services.** The following methods, other than National Competitive Bidding, may be used for procurement of goods and non-consulting services for those contracts specified in the Procurement Plan:

   
   | (a) Shopping (including the method known as “pregão eletrônico”, as provided in the Member Country’s Law No. 10.520, of July 17, 2002, under any e-procurement system acceptable to the World Bank) |
   | (b) Direct Contracting |

C. Particular Methods of Procurement of Consultants’ Services

1. **Quality- and Cost-based Selection.** Except as otherwise provided in paragraph 2 below, consultants’ services shall be procured under contracts awarded on the basis of Quality- and Cost-based Selection.

2. **Other Methods of Procurement of Consultants’ Services.** The following methods, other than Quality- and Cost-based Selection, may be used for procurement of consultants’ services for those assignments which are specified in the Procurement Plan: (a) Quality-based Selection; (b) Selection under a Fixed Budget; (c) Least Cost Selection; (d) Selection based on Consultants’ Qualifications; (e) Single-source Selection of consulting firms; and (f) Selection of Individual Consultants.

D. Review by the World Bank of Procurement Decisions

The Procurement Plan shall set forth those contracts which shall be subject to the World Bank’s Prior Review. All other contracts shall be subject to Post Review by the World Bank. Supervision of procurement would be carried out through prior review supplemented by supervision missions with post review at least once a year. A yearly external procurement audit satisfactory to the Bank or yearly
independent procurement review will be required to assess and verify a sample of processes carried out under this Project.

Section IV. Withdrawal of Grant Proceeds

A. General

1. The Recipient may withdraw the proceeds of the Grant in accordance with the provisions of: (a) Article III of the Standard Conditions; (b) this Section; and (c) such additional instructions as the World Bank may specify by notice to the Recipient (including the “World Bank Disbursement Guidelines for Projects” dated May 2006, as revised from time to time by the World Bank and as made applicable to this Agreement pursuant to such instructions), to finance Eligible Expenditures as set forth in the table in paragraph 2 below.

2. The following table specifies the categories of Eligible Expenditures that may be financed out of the proceeds of the Grant (“Category”), the allocations of the amounts of the Grant to each Category, and the percentage of expenditures to be financed for Eligible Expenditures in each Category:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount of the Grant Allocated (expressed in USD)</th>
<th>Percentage of Expenditures to be Financed (inclusive of Taxes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goods, non-consulting services, consultants’ services, Training and Operating Costs under the Project</td>
<td>9,250,000</td>
<td>100%</td>
</tr>
<tr>
<td>TOTAL AMOUNT</td>
<td>9,250,000</td>
<td></td>
</tr>
</tbody>
</table>

For the purposes of this Section:

(a) the term “Operating Costs” means the reasonable incremental operational costs (which would not have been incurred absent the Project) under the Project, including, inter alia: (i) operation and maintenance of vehicles; (ii) incremental office equipment and supplies; (iii) shipment costs (whenever these costs are not included in the cost of goods); (iv) rent for office facilities; (v) utilities; (vi) travel and per diem costs for technical staff; (vii) communication costs, including advertisement for procurement purposes; and (viii) administrative and operational support staff; and
the term “Training” means expenditures (other than those for consultants’ services) incurred by the Recipient in connection with the carrying out of training, seminars, and workshops, including the reasonable travel costs (e.g. accommodations, transportation costs and *per diem*) of trainees and trainers (if applicable), catering, rental of training facilities and equipment, logistics and printing services, as well as training materials and equipment under the Project.

B. Withdrawal Conditions; Withdrawal Period

1. Notwithstanding the provisions of Part A of this Section no withdrawal shall be made for payments made prior to the date of this Agreement.

2. The Closing Date referred to in Section 3.06 (c) of the Standard Conditions is May 29, 2020.
APPENDIX

Section I. Definitions

1. “Amazon” means the territory defined in the Member Country’s Law No. 5.173, dated October 27, 1966, as amended.


3. “Category” means a category set forth in the table in Section IV of Schedule 2 to this Agreement.

4. “Cerrado” means the savannah and dry forest biome in the Brazilian Central Plateau of the Member Country’s territory which covers an area equivalent to 2 million Km$^2$.


6. “DETER” means INPE’s Sistema de Detecção do Desmatamento na Amazônia Legal em Tempo Real, a real time deforestation detection system in the Amazon.

7. “FUNDEP” means Fundação de Desenvolvimento da Pesquisa, an entity established pursuant to a public deed dated February 28, 1975, recorded at the public registry for the first notary (Tabellão Ferraz) in Belo Horizonte.

8. “GHG” means greenhouse gas, or the plural thereof.

9. “INPE” means Instituto Nacional de Pesquisas Espaciais, the Member Country’s National Institute for Space Research, or any successor thereto.

10. “INPE’s Queimadas” means the portal website, under INPE’s control, on monitoring forest fires, at www.inpe.br/queimadas/abasFogo.php.

11. “Member Country” means the Federative Republic of Brazil.

12. “MCTI” means Ministério da Ciência, Tecnologia e Inovação, the Member Country’s Ministry of Science, Technology and Innovation, and its successor thereof.
13. “MMA” means Ministério do Meio Ambiente, the Member Country’s Ministry of Environment, or any successor thereof.

14. “PICC” means Project Institutional Coordination Committee, the Project’s advisory committee referred to in Section I.A.5 of Schedule 2 to this Agreement.

15. “POA” means Project’s Annual Operational Plan referred to in Section I.A.4 of Schedule 2 to this Agreement.


17. “Procurement Plan” means the Recipient’s procurement plan for the Project, dated October 26, 2015, and referred to in paragraph 1.18 of the Procurement Guidelines and paragraph 1.25 of the Consultant Guidelines, as the same shall be updated from time to time in accordance with the provisions of said paragraphs.

18. “PRODES” means INPE’s Monitoramento da Floresta Amazônica Brasileira por Satélite, a program for measuring deforestation in the Amazon.

19. “Project Operational Manual” means the manual referred to in Section I.B.1 of Schedule 2 to this Agreement.


21. “Technical Cooperation Agreement” means the agreement to be entered into between the Recipient and MCTI, INPE (as represented by MCTI), UFMG, and UFG, pursuant to Section I.A.1 of Schedule 2 to this Agreement.

22. “UFG” means Universidade Federal de Goiás, the Federal University of the State of Goiás.

23. “UFMG” means Universidade Federal de Minas Gerais, the Federal University of the State of Minas Gerais.