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Report No: PAD2015

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANTS FROM THE GLOBAL ENVIRONMENT FACILITY TRUST FUND

IN THE AMOUNT OF US$30.00 MILLION

TO THE

FUNDO BRASILEIRO PARA A BIODIVERSIDADE

AND IN THE AMOUNT OF US$30.33 MILLION

TO

CONSERVATION INTERNATIONAL DO BRASIL

FOR THE

AMAZON SUSTAINABLE LANDSCAPES PROJECT

November 6, 2017

Environment and Natural Resources
Latin America and Caribbean

CURRENCY EQUIVALENTS

(Exchange Rate Effective October 27, 2017)

Currency Unit	=	Brazilian Real (BRL)
BRL 3.27	=	US$1
US$0.31	=	BRL 1

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ABC Plan	Low Carbon Economy in Agriculture Plan (*Plano Setorial de Mitigação e de Adaptação às Mudanças Climáticas para a Consolidação de uma Economia de Baixa Emissão de Carbono na Agricultura*) **(***Plano ABC*)
AC	Advisory Council (*Conselho Consultivo*)
APM	Mutual Support Arrangement (*Arranjos de Apoio Mútuo*)
ARPA	Amazon Region Protected Areas Program (*Programa Áreas Protegidas da Amazônia*)
ASL	Amazon Sustainable Landscape
BAU	Business-As-Usual
BC	Benefit-Cost
BNDES	National Bank for Economic and Social Development (*Banco Nacional de Desenvolvimento Econômico e Social*)
Brazil-ASL	Brazil Amazon Sustainable Landscapes Project
CAR	Rural Environmental Registry (*Cadastro Rural Ambiental*)
CBD	Convention on Biological Diversity
CI-Brazil	Conservation International-Brazil (*Conservação Internacional-Brazil*)
CFT	Transition Fund Committee (*Comitê do Fundo de Transição*)
CONAVEG	National Commission for the Recovery of Native Vegetation (*Comissão Nacional para Recuperação da Vegetação Nativa*)
CRA	Environment Reserve Quotas (*Cotas de Reserva Ambiental*)
CSO	Civil Society Organization
DIBIO	Department of Biodiversity Monitoring, Evaluation and Research (*Diretoria de Pesquisa, Avaliação e Monitoramento da Biodiversidade*)
DIMAN	Department of Creation and Management of Protected Areas (*Diretoria de Criação e Manejo de Unidades de Conservação*)
DISAT	Directorate of Socio-environmental Actions and Territorial Consolidation (*Diretoria de Ações Socioambientais e Consolidação Territorial*)
ECI	Conservation Investment Strategy (*Estratégia de Conservação e Investimento*)
ESMF	Environmental and Social Management Framework
EX-ACT	Ex Ante Carbon Balance Tool

FAO	Food and Agriculture Organization of the United Nations
FAP	Protected Areas Fund (*Fundo de Áreas Protegidas*)
FAUC	Protected Areas Evaluation Tool (*Ferramenta de Avaliação de Unidades de Conservação*)
Flona	National Forest (*Floresta Nacional*)
FM	Financial Management
FUNAI	Indigenous National Foundation (*Fundação Nacional do Índio*)
FUNBIO	Brazilian Biodiversity Fund (*Fundo Brasileiro para a Biodiversidade*)
GDP	Gross Domestic Product
GEF	Global Environment Facility
GF	Financial Manager (*Gestor Financeiro*)
GHG	Greenhouse Gas
GOB	Government of Brazil
GRS	Grievance Redress Service
IBAMA	Brazilian Institute of the Environment and Renewable Natural Resources (*Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis*)
ICMBio	Chico Mendes Institute for Biodiversity Conservation (*Instituto Chico Mendes de Conservação da Biodiversidade*)
IFR	Interim Financial Report
IPPF	Indigenous Peoples Policy Framework
ISP	Implementation Support Plan
KBA	Key Biodiversity Areas
KfW	*Kreditanstalt fur Wiederaufbau*
MAPA	Ministry of Agriculture, Livestock, and Food Supply (*Ministério da Agricultura, Pecuária e Abastecimento*)
MDSA	Special Secretariat for Family Agriculture and Agricultural Development (*Secretaria Especial de Agricultura Familiar e Desenvolvimento Agrário*)
METT	Monitoring Evaluation Tracking Tool
M&E	Monitoring and Evaluation
MMA	Ministry of Environment (*Ministério do Meio Ambiente*)
NDC	Nationally Determined Contribution
NBSAP	National Biodiversity Strategy and Action Plan
NGI	Integrated Management Nucleus (*Núcleo de Gestão Integrada*)
NPCC	National Policy for Climate Change
OG	Protected Area Management Agencies (Federal or State) (*Órgãos Gestores das Áreas Protegidas*)
NGO	Nongovernmental Organization
NPV	Net Present Value
NTFP	Non-timber Forest Product
PA	Protected Area
PAD	Project Appraisal Document

PCU	Project Coordination Unit
PDO	Project Development Objectives
PEP	Multiyear Strategic Planning (*Planejamento Estratégico Plurianual*)
PEU	Project Execution Unit
PLANAVEG	National Plan for Recovery of Native Vegetation (*Plano Nacional de Recuperação da Vegetação Nativa*)
PMABB	Program for Environmental Monitoring of Brazilian Biomes (*Programa de Monitoramento Ambiental dos Biomas Brasileiros*)
POC	Project Operational Committee
POM	Project Operational Manual
PPSD	Project Procurement Strategy for Development
PRA	Environmental Regularization Program (*Programa de Regularização Ambiental*)
PRADA	Plan for the Recovery of Degraded and Altered Areas (*Plano de Recuperação de Áreas Degradadas e Alteradas*)
PRODES	Legal Amazon Deforestation Monitoring Project (*Programa de Monitoramento da Floresta Amazônica Brasileira por Satélite*)
PRONAF	National Program for Strengthening Family Agriculture (*Programa Nacional de Fortalecimento da Agricultura Familiar*)
PROVEG	National Policy for Recovery of Native Vegetation (*Política Nacional de Recuperação da Vegetação Nativa*)
RFQ	Request for Quotation
SBio	Biodiversity Secretariat (*Secretaria de Biodiversidade*)
SCD	Systematic Country Diagnostic
SECEX	Executive Secretariat of the Ministry of Environment (*Secretaria Executiva/MMA*)
SEDR	Secretariat of Extractivism and Sustainable Rural Development (*Secretaria de Extrativismo e Desenvolvimento Rural Sustentável*)
SFB	Brazilian Forest Service (*Serviço Florestal Brasileiro*)
SICAR	Rural Environmental Registry System
SMCF	Secretariat for Climate Change and Forests (*Secretaria de Mudança do Clima e Florestas*)
SNUC	National Protected Area System (*Sistema Nacional das Unidades de Conservação*)
SOE	Statement of Expenditure
SORT	Systematic Operations Risk-Rating Tool
STAP	Scientific and Technical Advisory Panel
STEP	Systematic Tracking of Exchanges in Procurement system
TOR	Terms of Reference
WWF	World Wide Fund for Nature

Regional Vice President:	Jorge Familiar
Country Director:	Martin Raiser
Senior Global Practice Director:	Karin Kemper
Practice Manager:	Valerie Hickey
Task Team Leader:	Adriana G. Moreira and Claudia Sobrevila

BRAZIL
Amazon Sustainable Landscapes Project

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PAD DATA SHEET

Brazil

Amazon Sustainable Landscapes Project (P158000)

PROJECT APPRAISAL DOCUMENT

LATIN AMERICA AND CARIBBEAN

Report No.: PAD2015

Basic Information			
Project ID P158000	EA Category B - Partial Assessment		Team Leader(s) Adriana Goncalves Moreira, Claudia Sobrevila
Financing Instrument Investment Project Financing	Fragile and/or Capacity Constraints [ ] Financial Intermediaries [ ] Series of Projects [ ]		
Project Implementation Start Date 14 December-2017	Project Implementation End Date 31 October 2023		
Expected Effectiveness Date 30-April-2018	Expected Closing Date 30 April 2024		
Joint IFC No			GEF Focal Area Multifocal
Practice Manager/Manager Valerie Hickey	Senior Global Practice Director Karin Erika Kemper	Country Director Martin Raiser	Regional Vice President Jorge Familiar

Borrower: *Fundo Brasileiro para a Biodiversidade* (FUNBIO), *Conservation Internacional do Brasil* (CI-Brazil)

Responsible Agency: Ministry of Environment

Contact:	Jose Pedro Oliveira Costa	Title:	Secretary of Biodiversity
Telephone No.:	556120282058	Email:	brasl-l@mma.gov.br

Project Financing Data (in US$, millions)					
[ ]	Loan	[ ]	IDA Grant	[ ]	Guarantee
[ ]	Credit	[X]	Grant	[ ]	Other

Total Project Cost:	60.33	Total Bank Financing:	0.00
Financing Gap:	0.00		

Financing Source	Amount
Global Environment Facility (GEF)	60.33
Total	60.33

Expected Disbursements (in US$, millions)

Fiscal Year	2018	2019	2020	2021	2022	2023	2024	0000	0000	0000
Annual	12.00	12.00	12.00	8.00	7.00	6.00	3.33	0.00	0.00	0.00
Cumulative	12.00	24.00	36.00	44.00	51.00	57.00	60.33	0.00	0.00	0.00

Institutional Data

Practice Area (Lead)

Environment and Natural Resources

Contributing Practice Areas

Agriculture, Climate Change, Energy and Extractives, and Water

Proposed Global Environmental Objective(s)

The Project Development Objectives (PDO) are to expand the area under legal protection and improve management of Protected Areas, and increase the area under restoration and sustainable management in the Brazilian Amazon.

Components

Component Name	Cost (US$, millions)
Component 1: Amazon Protected Areas System	30.00
Component 2: Integrated Landscape Management	19.00
Component 3: Policies for Protection and Recovery of Native Vegetation	7.33
Component 4: Capacity Building, Cooperation, and Project Coordination	4.00

Systematic Operations Risk- Rating Tool (SORT)

Risk Category	Rating
1. Political and Governance	Substantial
2. Macroeconomic	Substantial
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Substantial
5. Institutional Capacity for Implementation and Sustainability	Moderate
6. Fiduciary	Substantial
7. Environment and Social	Substantial

8. Stakeholders	Substantial
9. Other	
OVERALL	Substantial

Compliance

Policy

Does the project depart from the CAS in content or in other significant respects?	Yes [ ]	No [X]
Does the project require any waivers of Bank policies?	Yes [ ]	No [X]
Have these been approved by Bank management?	Yes [ ]	No [ ]
Is approval for any policy waiver sought from the Board?	Yes [ ]	No [X]
Does the project meet the Regional criteria for readiness for implementation?	Yes [X]	No [ ]

Safeguard Policies Triggered by the Project	**Yes**	**No**
Environmental Assessment OP/BP 4.01	**X**	
Natural Habitats OP/BP 4.04	**X**	
Forests OP/BP 4.36	**X**	
Pest Management OP 4.09	**X**	
Physical Cultural Resources OP/BP 4.11	**X**	
Indigenous Peoples OP/BP 4.10	**X**	
Involuntary Resettlement OP/BP 4.12	**X**	
Safety of Dams OP/BP 4.37		**X**
Projects on International Waterways OP/BP 7.50	**X**	
Projects in Disputed Areas OP/BP 7.60		**X**

Legal Covenants

Name	**Recurrent**	**Due Date**	**Frequency**
Section I.A.1 (a) and (b) of Schedule 2 (FUNBIO Grant Agreement)	X	Throughout project implementation	CONTINUOUS

Description of Covenant

To facilitate the carrying out of Part I of the Project, the Recipient shall: (a) maintain a Project Execution Unit (PEU-FUNBIO) with functions, staffing and responsibilities satisfactory to the World Bank, as set forth in the Project Operational Manual; and (b) manage the Transition Fund as set forth in the Project Operational Manual.

Name	**Recurrent**	**Due Date**	**Frequency**
Section I.A.2 (a), (b), (c), (d), (e), (f), (g), and (h) of Schedule 2 (FUNBIO Grant Agreement)	X	Throughout project implementation	CONTINUOUS

Description of Covenant

To facilitate the carrying out of Part I of the Project, the Recipient shall contractually cause MMA, through the FUNBIO-MMA Coordination Agreement to organize, coordinate and maintain: (a) the Technical Forum with functions, staffing and responsibilities satisfactory to the World Bank, as set forth in the Project Operational Manual; (b) the Managers Commission with composition and responsibilities satisfactory to the World Bank, as set forth in the Project Operational Manual; (c) the Scientific Advisory Panel with composition and responsibilities satisfactory to the World Bank, as set forth in the Project Operational Manual; (d) the Program Committee with composition and responsibilities satisfactory to the World Bank, as set forth in the Project Operational Manual; (e) the Transition Fund Committee with composition and responsibilities satisfactory to the World Bank, as set forth in the Project Operational Manual; (f) the Advisory Council with composition and responsibilities satisfactory to the World Bank, as set forth in the Project Operational Manual; (g) the Project Operational Committee with composition and responsibilities satisfactory to the World Bank, as set forth in the Project Operational Manual; and (h) the Project Coordination Unit with composition and responsibilities satisfactory to the World Bank, as set forth in the Project Operational Manual.

Name	Recurrent	Due Date	Frequency
Section I.B.1 (a), (b), and (c) of Schedule 2 (FUNBIO Grant Agreement)	X	Throughout project implementation	CONTINUOUS

Description of Covenant

To facilitate the carrying out of Part I of the Project, the Recipient shall enter into or amend, as the case may be, and thereafter maintain: (a) an agreement with MMA (the FUNBIO-MMA Coordination Agreement); (b)an agreement with ICMBio and MMA (the FUNBIO-ICMBio Cooperation Agreement); and (c) an agreement with each State (the FUNBIO-State Cooperation Agreements); all under terms and conditions acceptable to the World Bank (the FUNBIO Implementation Agreements).

Name	Recurrent	Due Date	Frequency
Section I.A.1 of Schedule 2 (CI-Brazil Grant Agreement)	X	Throughout project implementation	CONTINUOUS

Description of Covenant

To facilitate the carrying out of Parts II, III and IV of the Project, the Recipient shall maintain a Project Execution Unit (PEU-CI-Brazil) with functions, staffing and responsibilities satisfactory to the World Bank, as set forth in the Project Operational Manual.

Name	Recurrent	Due Date	Frequency
Section I.A.2 (a), (b), and (c) of Schedule 2 (CI-Brazil Grant Agreement)	X	Throughout project implementation	CONTINUOUS

Description of Covenant

To facilitate the carrying out of Parts II, III and IV of the Project, the Recipient shall contractually cause MMA, through the CI-Brazil-MMA Coordination Agreement, to organize, coordinate and maintain: (a) the Project Coordination Unit (PCU) with functions, staffing and responsibilities satisfactory to the World Bank, as set forth in the Project Operational Manual, including its responsibility to supervise the technical aspects of Project implementation; (b) the Project Operational Committee (POC) with composition and responsibilities satisfactory to the World Bank, as set forth in the Project Operational Manual, including: (i) its composition with representatives of *inter alia* MMA, ICMBio, SFB, the States, FUNBIO and the Recipient; and (ii) its responsibility to foster compliance with the Project objectives; and (c) the Advisory Council (AC) with composition and responsibilities satisfactory to the World Bank, as set forth in the Project Operational Manual, including: (i) its composition with representatives of *inter*

alia MMA, ICMBio, SFB, the States, civil society, FUNBIO and the Recipient; and (ii) its responsibility to provide strategic recommendations on integrated landscape management.

Name	Recurrent	Due Date	Frequency
Section I.B.1 (a), (b), (c), and (d) of Schedule 2 (CI-Brazil Grant Agreement)	X	Throughout project implementation	CONTINUOUS

Description of Covenant

To facilitate the carrying out of Parts II, III and IV of the Project, the Recipient shall enter into: (a) an agreement with MMA (the CI-Brazil-MMA Coordination Agreement); (b) an agreement with ICMBio and MMA (the CI-Brazil-ICMBio Cooperation Agreement); (c) an agreement with SFB and MMA (the CI-Brazil-SFB Cooperation Agreement); and (d) an agreement with each State (the CI-Brazil-State Cooperation Agreements); all under terms and conditions acceptable to the World Bank.

Conditions

Source of Fund	Name	Type
GEF	FUNBIO Grant Agreement Section 5.01 (a), (b), (c) and (d)	Effectiveness

Description of Condition

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) the execution and delivery of this Agreement on behalf of the Recipient have been duly authorized or ratified by all necessary corporate action; (b) the FUNBIO State Cooperation Agreement with the State of Amapá has been executed in form and substance satisfactory to the World Bank; (c) the Project Operational Manual has been adopted by the Recipient and MMA, in a manner and with contents acceptable to the World Bank; and (d) the CI-Brazil Grant Agreement has been executed and delivered and all conditions precedent to the effectiveness of said agreement (other than the effectiveness of this Agreement) have been fulfilled.

Source of Fund	Name	Type
GEF	FUNBIO Grant Agreement Section 5.02	Effectiveness

Description of Condition

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 Recipient, showing on behalf of the Recipient, that this Agreement has been duly authorized or ratified by, and executed and delivered on its behalf and is legally binding upon it in accordance with its terms.

Source of Fund	Name	Type
GEF	CI-Brazil Grant Agreement Section 5.01 (a), (b), (c), (d), and (e)	Effectiveness

Description of Condition

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) the execution and delivery of this Agreement on behalf of the Recipient have been duly authorized or ratified by all

necessary corporate action; (b) the CI-Brazil Implementation Agreements have been executed on behalf of the respective parties thereto; (c) the Project Operational Manual has been adopted by the Recipient and MMA, all in a manner and with contents acceptable to the World Bank; (d) the Recipient has retained a procurement specialist under terms of reference acceptable to the World Bank and in accordance with the provisions set forth in Section III of Schedule 2 to this Agreement; (e) the FUNBIO Grant Agreement has been executed and delivered and all conditions precedent to the effectiveness of said agreement (other than the effectiveness of this Agreement) have been fulfilled.

Source of Fund	Name	Type
GEF	CI-Brazil Grant Agreement Section 5.02	Effectiveness

Description of Condition

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 Recipient, showing on behalf of the Recipient, that this Agreement has been duly authorized or ratified by, and executed and delivered on its behalf and is legally binding upon it in accordance with its terms.

Source of Fund	Name	Type
GEF	FUNBIO Grant Agreement Section IV.B.1(a) and (b) of Schedule 2	Disbursement

Description of Condition

Notwithstanding the provisions of Part A of this Section no withdrawal shall be made: (a) for payments made prior to the date of this Agreement; and (b)under Category (1) until: (i) the World Bank has received a copy of the Co-financing Agreements signed by the parties thereto; and (ii) a confirmation from the Recipient, in form and substance satisfactory to the World Bank, that contributions for at least one hundred million Dollars ($100 million) have been deposited in the Transition Fund.

Source of Fund	Name	Type
GEF	FUNBIO Grant Agreement Section IV.B.1(c) of Schedule 2	Disbursement

Description of Condition

Notwithstanding the provisions of Part A of this Section no withdrawal shall be made: (c) under Category (2) until: (i) at least one Environmental Compensation Agreement has been signed by the parties thereto, in form and substance satisfactory to the World Bank, and is effective; (ii) the World Bank has received a letter from ICMBio confirming that appropriate environmental compensation resources under said Environmental Compensation Agreement are allocated to the Protected Areas under the ARPA Program; and (iii) the conditions set forth in paragraph (b) above have been met in a manner satisfactory to the World Bank.

Source of Fund	Name	Type
GEF	FUNBIO Grant Agreement Section IV.B.1(d) of Schedule 2	Disbursement

Description of Condition

Notwithstanding the provisions of Part A of this Section no withdrawal shall be made: (d) under Category (3) until: (i) BNDES has issued its Approval of the Funding Proposal for the ARPA Program, as evidenced in form and substance satisfactory to the World Bank; and (ii) the conditions set forth in paragraph (b) above have been met in a manner satisfactory to the World Bank.

Team Composition				
Bank Staff				
Name	**Role**	**Title**	**Specialization**	**Unit**
Adriana Goncalves Moreira	Team Leader (ADM Responsible)	Senior Environmental Specialist	Environment	GEN04
Claudia Sobrevila	Team Leader	Senior Environmental Specialist	Environment	GEN01
Frederico Rabello T. Costa	Procurement Specialist (ADM Responsible)	Senior Procurement Specialist	Procurement	GGO04
Susana Amaral	Financial Management Specialist	Sr Financial Management Specialist	Financial Management	GGO22
Tatiana de Abreu	Disbursement Specialist	Finance Officer	Disbursement	WFALA
Agnes Velloso	Safeguards Specialist	Consultant	Environment	GEN04
Alberto Coelho Gomes Costa	Safeguards Specialist	Senior Social Development Specialist	Social	GSU04
Gabriela Grinsteins	Legal Specialist	Counsel	Legal	LEGLE
Jacqueline Veloz Lockward	Legal Specialist	Junior Counsel	Legal	LEGLE
Cassia Coutinho Barreto	Team Member	Consultant	Operations	GTI04
Daniela America Suarez de Oliveira	Team Member	Consultant	Monitoring	GEN04
Julia Segatto Barros	Team Member	Consultant	Communications	GEN04
Raquel Almeida Campos	Team Member	Consultant	Operations	GEN04
Sofia Keller Neiva	Team Member	Program Assistant	Operations	LCC5C
Tanya Lisa Yudelman	Team Member	Consultant	Natural Resources Management	GEN07

Extended Team

Name	Title	Office Phone	Location

Locations

Country	First Administrative Division	Location	Planned	Actual	Comments

Brazil	Acre	Acre	**X**		
Brazil	Amapá	Amapá	**X**		
Brazil	Amazonas	Amazonas	**X**		
Brazil	Maranhão	Maranhão	**X**		
Brazil	Mato Grosso	Mato Grosso	**X**		
Brazil	Pará	Pará	**X**		
Brazil	Rondônia	Rondônia	**X**		
Brazil	Roraima	Roraima	**X**		
Brazil	Tocantins	Tocantins	**X**		

Consultants (Will be disclosed in the Monthly Operational Summary)	
Consultants Required?	Consulting services to be determined

I. STRATEGIC CONTEXT

A. Country Context

1. **Brazil is a vast country and its development prospects matter globally.** The fifth largest country on earth (land area and population), Brazil contains a wealth of natural resources, including the world's largest rain forest (the Amazon), substantial freshwater resources, valuable agricultural land, and multiple minerals, metals, and other natural capital. Natural resources are an important source of income and a critical input for the country's economic development. Although rocked by recent global economic and national political crises, over the past decade, Brazil experienced an unprecedented reduction in poverty and inequality owing to a combination of sound macro policies and a favorable external environment. About 24.2 million Brazilians escaped poverty and the Gini coefficient of household incomes fell from 0.59 to 0.51 from 2001 to 2015[1]. Yet, poverty remains significant and Brazil is still one of the most unequal countries in the world. Rural Areas host a disproportionate number of poor and marginalized communities. Brazil's tropical forests and freshwater reserves are important for the rural poor, constituting a significant share of their wealth, especially in rural populations and indigenous peoples of the north and northeast, who experience the highest incidences of poverty. More widely, climate adversity and water scarcity are sources of social, food security, and economic vulnerability. Sustainable forestry, climate resilience, and agriculture are key for both poverty reduction and long-term growth.

2. **Brazil has committed to balance growth and social progress with environmental sustainability.** During the past decades Brazil has made meaningful progress toward fostering environmental protection and attaining sustainable development: establishing highly advanced environmental legislation, reducing deforestation, setting aside large areas for biodiversity protection, and creating other forms of conservation areas that reconcile conservation, development, and poverty reduction. Brazil, an early mover in developing a national climate change plan, has made significant progress in lowering—on a voluntary basis—its CO_2 emissions.

B. Sectoral and Institutional Context

3. **The Amazon biome includes over 40 percent of the remaining rain forests on earth and plays a critical role in climate regulation regionally and globally.** It also hosts at least 10 percent of the world's known biodiversity, including endemic and endangered species, and comprises the largest river basin in the world. The Amazon forest and river ecosystem is one of largest natural areas that still has the potential to remain sustainably conserved and managed.

4. **The Amazon biome ranges over 9 countries, of which 60 percent lies in northern Brazil, covering over 4 million km^2 and, possibly, harboring the world's greatest biological diversity.** Its vast forests significantly influence regional and global climates and sequester approximately 70 billion tons of carbon. Although sparsely populated, the region is inhabited by about 22 million people, mostly in urban areas, but with diverse local communities, including at

[1] World Bank "Brazil - Systematic country diagnostic". Washington, D.C.: World Bank Group (2016)

least 200,000 indigenous peoples from more than 200 ethnic groups. Such communities depend economically and culturally on natural resources. The conservation of this region and its vast cultural and biological diversity, as well as the ecological balance that underpins its crucial role in climate regulation, are of extreme importance for Brazil and the entire human population. [2]

5. **The Government of Brazil (GOB) recognizes the Amazon's important role in regulating global climate change and ensuring Brazil's social and economic development.** Over the past two decades, the GOB has established and implemented many policies to promote a new vision for development in the Amazon (see annex 6). Simultaneously it has removed many development-oriented policies that stimulated deforestation. These efforts have resulted in significant achievements. Between 2004 and 2012, Brazil reduced its annual deforestation from 27,772 km^2 to 4,571 km^2, the lowest rate on record[3].. One key program in support of this vision is the Amazon Region Protected Areas Program (*Programa Áreas Protegidas da Amazônia,* ARPA), launched in 2002 which has contributed directly to reducing 37 percent of the deforestation in the Brazilian Amazon. This has largely been achieved through expanding the protected area (PA) system, improving PA management and enforcement, strengthening local community participation, and engaging with Amazonian state governments.

6. **Despite these significant achievements, the integrity of the Brazilian Amazon continues to be threatened by deforestation and degradation.** In 2015 and 2016, a significant uptick in deforestation rates was observed, reaching almost 8,000 km^2 in 2016. Several interrelated factors underpin this trend, including export markets (for example, agricultural and forest goods, minerals, and energy) and transport infrastructure development. Aggravating factors include shortcomings of the policy frameworks to support sustainable development in various sectors and value ecosystem services; governance weaknesses, including gaps in and weak enforcement of legislation for nature conservation and other sustainable development policies; and lack of appropriate land-use planning. These threats are likely exacerbated by the lack of regional coherence in laws and policies among the Amazonian countries.

7. **Nevertheless, new opportunities are opening up to further advance efforts to reduce deforestation and degradation.** Land tenure advances over the past five years in the Amazon region including: (a) establishment and management of PAs; (b) execution of the Terra Legal Program (under which federal lands are allocated to conservation, indigenous peoples issues, small-scale farming, land titling, and colonization, in this order of priority); and (c) Forest Code implementation, open new opportunities to integrate production and protection across landscapes.

8. **Brazil has also been at the forefront of the international debate on climate change and sustainable development.** The 2015 nationally determined contribution (NDC) commits Brazil to: (a) reinforcing Forest Code implementation, at federal, state, and municipal levels; (b) strengthening policies and measures to achieve zero illegal deforestation and compensate for greenhouse gas (GHG) emissions from legal vegetation suppression by 2030, in the Brazilian

[2] See Marengo, J.A. & Espinoza, J.C. 2016. Extreme seasonal droughts and floods in Amazonia: causes, trends and impacts. Int. J. Climatol. 36:1033-1050.

[3] Bebber, D.P. & Butt, N. 2017. Tropical protected areas reduced deforestation carbon emissions by one third from 2000–2012. Scientific Reports | 7: 14005 | DOI:10.1038/s41598-017-14467-

Amazon, (c) restoring and reforesting 12 million ha of forests by 2030; and (d) enhancing sustainable native forest management systems to curb illegal and unsustainable practices.[4]

C. Higher Level Objectives to which the Project Contributes

9. **The proposed Project would: (a) support government policy and legislative objectives, particularly related to maintaining and expanding efforts to protect and restore the Amazon forest, its associated biodiversity, ecosystem services and climate resilience; and (b) promote the adoption of sustainable production and extractive management approaches.** It directly supports Brazil's NDC and National Biodiversity Strategy and Action Plan's (NBSAP). mitigation and adaptation, and conservation and sustainable use goals. The proposed Project's emphasis on regional knowledge exchange aligns with the NDC commitment to South-South cooperation in forest monitoring systems, low carbon and resilient agriculture, restoration and reforestation activities, and PA management.

10. **The proposed Project would also contribute to the World Bank Group corporate goals of ending extreme poverty and promoting shared prosperity.** Project objectives and design aim to reinforce the contribution of biodiversity and ecosystem services provided by the Amazon forest to reduce vulnerability and improve livelihoods of local communities and indigenous people, and to maintain the global environmental balance. It also aligns with the World Bank Group's Country Partnership Framework for the Federative Republic of Brazil FY18–23 (Report No. 113259-BR) discussed by the Executive Directors on July 16, 2017, particularly Focus Area 3: Inclusive and Sustainable Development, by supporting the achievement of Brazil's NDC land use targets, and promoting inclusive rural development and protection of vulnerable groups. The focus on improving the sustainable management of natural resources in the Amazon is also consistent with the 2016 Systematic Country Diagnostic (SCD) which notes that, if well managed, the country's land, forest, and water resources can yield ample economic returns, provide livelihoods, render environmental services, and buttress Brazil's global reputation.

11. **Project objectives and approaches align with the World Bank's overarching Climate Change Action Plan 2016–2020**[5], which identifies climate-smart land use, water, and food security as one of the six high-impact action areas. The proposed Project also support two focal areas of the World Bank's Forest Action Plan FY16–20[6]: sustainable forestry and forest-smart interventions; and the World Bank's general objective of promoting global knowledge exchange and partnerships.

[4] See Chiavari, J. & Lopes, C.L. 2017. Forest and Land Use Policies on Private Lands: An International Comparison. Climate Policy Initiative. https://climatepolicyinitiative.org/

[5] World Bank; IFC; MIGA. 2016. World Bank Group Climate Change Action Plan 2016-2020. World Bank, Washington, DC. © World Bank. https://www.openknowledge.worldbank.org/handle/10986/24451 License: CC BY 3.0 IGO.

[6] World Bank. 2016. Forest action plan FY16-20. Washington, D.C.: World Bank Group. http://documents.worldbank.org/curated/en/240231467291388831/Forest-action-plan-FY16-20

12. **The proposed Project sits under the Amazon Sustainable Landscape (ASL) Program**, a regional World Bank-led, GEF-financed initiative to protect globally significant biodiversity and implement policies to foster sustainable land use and restoration of native vegetation cover in Brazil, Colombia and Peru (see annex 2).

13. **Lastly, the proposed Project is estimated to contribute with 140 million tons of CO_2 equivalent in avoided emissions**, identified according to the Food and Agriculture Organization of the United Nations (FAO) Ex Ante Carbon Balance Tool (EX-ACT) methodology adopted by the Global Environment Facility (GEF).

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

14. The proposed Project Development Objectives (PDO) are to expand the area under legal protection and improve management of Protected Areas, and increase the area under restoration and sustainable management in the Brazilian Amazon.

Project Beneficiaries

15. The direct beneficiaries of the proposed Project would be local populations living inside PAs (currently estimated to be 17,000 families living below the poverty line) and the surrounding productive landscapes. Sustainable Use PAs benefit resident traditional communities, by providing secure land and resource access. The proposed Project seeks to secure citizen engagement through adoption of a participatory approach involving key stakeholders such state and municipal governments, civil society organizations, local communities and indigenous peoples' associations. Particular emphasis is given to strengthening the role of women in project activities. This includes actions to: (a) strengthen women's participation and leadership within community decision-making processes; (b) ensure that women share in the economic benefits resulting from sustainable use of forest resources; and finally, (c) support and strengthen women's traditional role as 'forest guardians'.

16. Target area populations which adopt forest conservation, biodiversity-friendly production and enhanced agroecological production practices, would accrue broader social and environmental benefits. More broadly, the integrated Amazon PA system and productive landscape sustainable use activities would indirectly benefit natural resource dependent populations and urban communities (estimated 22 million people) by serving as repositories for ecosystem services and repopulating species with economic potential. Improved forest protection and restoration will also generate environmental benefits by counteracting GHG emissions, conserving biodiversity, and maintaining other ecosystem services.

PDO Level Results Indicators

17. The PDO level indicators and respective targets are as follows:

- New area supported by the project with status as protected areas. (Target: 3 million ha);

- Area of existing protected areas supported by the project with: (i) low, (ii) moderate and (iii) high management effectiveness as per defined criteria. (Target: 60 million ha);

- Area under restoration or reforestation supported by the project (disaggregated by: (i) assisted natural regeneration, and (ii) active restoration) according to defined criteria. (Target: 28,000 ha); and

- Forest area brought under sustainable management plans. (Target: 1.4 million ha)

III. PROJECT DESCRIPTION

A. Project Components

Component 1. Amazon Protected Areas System (GEF: US$30.00 million; parallel cofinancing[7]: US$185.00 million)

18. This component will expand and consolidate an over-60 million ha PA system in the Brazilian Amazon and advance ongoing efforts to secure its long-term financial sustainability by capitalizing the ARPA Transition Fund, an innovative financial mechanism with strong support from public and private donors (see annex 7 for details). In the context of the proposed Project, the Transition Fund will: (a) bring an additional 3 million ha of the Amazon region under legal protection; (b) strengthen the consolidation of 60 million ha of ARPA-supported PAs (new and 114 pre-existing PAs); (c) strengthen the coordination, management, monitoring, and communication of ARPA as a whole; and (d) develop and implement strategies to raise additional revenue for the ARPA Transition Fund.

Component 2. Integrated Landscape Management (GEF: US$19.00 million; parallel cofinancing: US$117.36 million)

19. This component will promote integrated landscape management in the states of Amazonas, Pará, Rondônia, and Acre through complementary strategies that: (a) foster recovery of native vegetation; (b) develop sustainable productive systems; (c) strengthen productive value chains; and (d) implement innovative management arrangements between PAs with a view to improving local communities' livelihoods, ecosystem connectivity, and resilience. In line with Component 3, activities will foster the adoption of practices which reduce deforestation, promote forest recovery, and induce adoption of sustainable agricultural and extractive practices, focusing on: (a) promoting access to innovative technologies and best practices; (b) increasing capacity for and uptake of these approaches, particularly in community and private lands; and (c) enhancing capacity of all stakeholders to sustainably manage and restore forested areas. Emphasis will be placed on encouraging adoption of practices that assure conservation of forest patches in agricultural landscapes, maintain and/or increase agricultural productivity and deliver multiple social and environmental benefits at the landscape level. Additionally, the proposed

[7] The proposed Project's parallel cofinancing commitments are summarized in the Project Cost and Financing table in Section B.

Project will seek to advance Ramsar commitments in the Amazon biome, supporting recognition and implementation of new wetland sites and promoting wetland connectivity.

Component 3. Policies for Protection and Recovery of Native Vegetation (GEF: US$7.33 million, parallel cofinancing: US$46.33 million)

20. This component will strengthen capacity of national and state governments to develop and implement sectoral policies and financial mechanisms with a view to reducing deforestation and promoting forest recovery, with a particular focus on the Law for Protection of Native Vegetation (Law No. 12.651/2012, also known as the Forest Code); the National Policy for the Recovery of Native Vegetation (Decree No. 8972/2017); the Law for the Management of Public Forests (Law No. 11.284/2006); and selected state policies. Activities will focus on three key areas: (a) strengthening implementation of key legal instruments for forest recovery, including, the Rural Environmental Registry (*Cadastro Rural Ambiental,* CAR), the related Environmental Regularization Program (*Programa de Regularização Ambiental,* PRA) and Plan for the Recovery of Degraded and Altered Areas (*Plano de Recuperação de Áreas Degradadas e Alteradas,* PRADA), and the Forest Concession Policy; (b) improving forest restoration monitoring capacity through, among others, institutional capacity building, studies, and the design and implementation of a national spatial planning and monitoring platform linked to the existing Program for Environmental Monitoring of Brazilian Biomes (*Programa de Monitoramento Ambiental dos Biomas Brasileiros,* PMABB) to support decision making for native vegetation recovery in the Amazon; and (c) improving financial incentives for farmers to invest in restoration activities.

Component 4. Capacity Building, Cooperation, and Project Coordination (GEF: US$4.00 million, parallel cofinancing: US$25.09 million)

21. This component will improve Brazilian stakeholders' implementation and collaboration capacity to increase project impact, further compliance with international commitments, and promote effective and efficient project implementation through: (a) supporting the participation of Brazilian stakeholders in knowledge exchange efforts under the regional Amazon Coordination Technical Assistance Project (P159233); (b) exploring opportunities to strengthen collaborative environmental management with official counterparts in Peru and Colombia; (c) developing and implementing training programs, seminars, and short international internships; (d) systematizing lessons learned through project implementation; and (e) establishing and implementing a system to coordinate, communicate, manage, provide technical support, and monitor implementation across components, and to maintain and operate the project's participatory structures.

B. Project Financing

22. The proposed Project would be financed by grants from the Global Environment Facility to *Fundo Brasileiro para a Biodiversidade* (FUNBIO) in the amount of US$30 million (TFA6057) and to *Conservation International do Brasil* (CI-Brazil) in the amount of US$30.33 million (TFA6056), totaling US$60.33 million. There are US$373.78 million in parallel cofinancing provided by (a) the Government of Brazil (GOB) (federal and state); (b) the ARPA Transition Fund (with contributions from *Kreditanstalt fur Wiederaufbau*, KfW; WWF-Brasil,

Fundo Mundial para a Natureza; World Wildlife Fund for Nature, WWF-US; Gordon and Betty Moore Foundation; Linden Trust for Conservation; Margaret A. Cargill Foundation; Anglo American Minerio de Ferro Brasil, S.A; Natura; O Boticário; and the original Protected Areas Fund ([*Fundo de Áreas Protegidas,* FAP], excluding GEF contributions); and (c) CI-Brazil.[8]

Project Cost and Financing

Project Components	Total Project Cost (US$, millions)	Parallel Cofinancing (US$, millions)	GEF Financing (US$, millions)
1. Amazon Protected Areas System	215.00	185.00	30.00
2. Integrated Landscape Management	136.36	117.36	19.00
3. Policies for Protection and Recovery of Native Vegetation	53.66	46.33	7.33
4. Capacity Building, Cooperation, and Project Coordination	29.09	25.09	4.00
Total Costs	434.11	373.78	60.33
Total Financing Required	434.11	373.78	60.33

C. Lessons Learned and Reflected in the Project Design

23. The proposed Project design builds upon over a decade of experience of PA establishment, management, and financing in the Brazilian Amazon; and upon the growing global experience with integrated landscape approaches, including those drawn from the recent GEF Scientific and Technical Advisory Panel (STAP) review.[9] Key lessons are presented in the following paragraphs.

24. ARPA financial sustainability concerns led to the elaboration of a Project Finance for Permanence Strategy, which through the establishment of the ARPA Transition Fund. This Fund seeks to gradually increase federal and state governments resources, while decreasing donor investments, so that, after 25 years, these governments will finance 100 percent of ARPA costs.

25. Transition Fund design (annex 7) incorporates additional Phase I and II lessons, including (a) a strong and transparent governance system, that facilitates the dialogue between the Government, civil society, donors, and the private sector, including the Transition Fund Committee (*Comitê do Fundo de Transição*, CFT), which oversees Transition Fund operations, and the ARPA Program Committee, which supervises ARPA; and (b) adoption of a planning cycle that relies on tools such as Protected Areas Evaluation Tool (*Ferramenta de Avaliação de Unidades de Conservação*, FAUC), Multiyear Strategic Planning (*Planejamento Estratégico Plurianual*, PEP), and Conservation Investment Strategy (*Estratégia de Conservação e Investimento,* ECI) to guide the development of the biannual operating plans and budgets.

[8] See annex 3, table 3.1 for detailed breakdown.

[9] Tengberg, A., and S. Valencia. 2017. "Science of Integrated Approaches to Natural Resources Management", A STAP Information Document. Global Environment Facility, Washington, DC.

26. ARPA Phases I and II institutional arrangements based on a public-private partnership between the Government (technical responsibility) and the Brazilian Biodiversity Fund ([*Fundo Brasileiro para a Biodiversidade*, FUNBIO], fiduciary responsibility), have proven successful. Similarly, the adoption of innovative operating mechanisms and procedures, such as *contas vinculadas,* adoption of standard specifications, use of the local expenses (*compras locais*) modality, and the acquisition of goods regionally, among others has been effective.

27. Beyond PAs, the preparation of the Brazil's national policy of recovery of native vegetation (*Política Nacional de Recuperação da Vegetação Nativa*, PROVEG) and its implementation mechanism, the National Plan for Recovery of Native Vegetation (*Plano Nacional de Recuperação da Vegetação Nativa,* PLANAVEG) have provided several lessons for Component 2, including the importance of (a) establishing strong institutional linkages between governmental and nongovernmental players across a range of thematic areas (environment, agriculture, science and technology, social organizations, and so on); (b) training technical staff of public agencies and farmers; (c) ensuring the economic viability of vegetation recovery projects, for example, scaling projects to reduce costs; and (d) facilitating access to appropriate financing.

28. Additionally, practical lessons from the GEF, World Bank, United Nations, and other countries highlight the benefits of an approach in which natural resource and development challenges are addressed on an integrated/multisectoral basis for a particular landscape. Such approaches have proven to be critical to sustaining the ecosystem functions and services needed to ensure local benefits such as enhancing peoples' livelihoods, security, and resilience to climate variability; and global benefits such as biodiversity conservation, carbon sequestration, and climate mitigation. Integrated landscape management approaches are increasingly recognized as essential to the attainment of the Sustainable Development Goals. In light of this, the proposed Project expands ARPA's scope, to integrate protected and productive landscapes into a single initiative to improve forest conservation and management of natural resources. The project design builds upon a clear policy and legislative framework and seeks to engage multiple stakeholders, encouraging the emergence of a shared vision, critical elements of a successful landscape approach.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

29. The proposed Project will be implemented by the MMA in partnership with the following key executing agencies: Chico Mendes Institute for Biodiversity Conservation (*Instituto Chico Mendes de Conservação da Biodiversidade,* ICMBio), Brazilian Forest Service (*Serviço Florestal Brasileiro,* SFB), state environmental agencies, FUNBIO, and CI-Brazil. Implementation will additionally involve the academic sector, NGOs, and civil society.

30. The MMA's Biodiversity Secretariat (*Secretaria de Biodiversidade,* SBio) will have overall policy-level leadership for project implementation and coordination. A multi-institutional Project Operational Committee (POC), an executive and decision-making body comprising the key implementing and executing agencies, will oversee project implementation. The POC will be supported by a Project Coordination Unit (PCU) in MMA and two Project Execution Units

(PEU), one in FUNBIO (PEU-FUNBIO) and the other in CI-Brazil (PEU-CI-Brazil), will provide fiduciary, technical and monitoring and evaluation (M&E) support. In addition, a Brazilian Amazon Sustainable Landscapes Advisory Council (Brazil-ASL AC), a cross-sectoral body comprising government and nongovernment representatives, will offer policy-level guidance, ensure sectoral linkages, and serve as a forum for problem resolution, as needed. Lastly, ad hoc Technical Working Groups will be established as needed, to provide in-depth guidance on specific issues. The Project Operational Manual (POM) will detail the roles and responsibilities of each of these institutional structures as well as the agencies involved in project implementation. Detailed implementation arrangements are presented in annex 3.

B. Results Monitoring and Evaluation

31. A project M&E unit will be established within the MMA's PCU. This unit will lead the project's M&E, with support on the fiduciary aspects from FUNBIO, CI-Brazil, and each of the components' implementing partners. Progress will be tracked against the Results Framework indicators (annex 1) and the project's Operation Plans agreed annually with the POC and partners.[10] Quarterly financial and annual progress and M&E reports will be submitted to the World Bank. In addition, (a) semiannual progress reviews will be conducted by both the POC and World Bank implementation support missions; (b) a midterm review of the project's implementation will be conducted jointly by the GOB, the POC, the PCU, FUNBIO, CI-Brazil, and the World Bank; and (c) an independent end-of-project evaluation will be completed and a completion report prepared.

C. Sustainability

32. The proposed Project outcomes are likely to be sustainable beyond the project's life cycle given the strong ownership of project objectives by the GOB and that project activities are designed to support implementation of existing government policies and priorities, including international commitments. From a technical perspective, sustainability of the project's impact will be promoted through a variety of measures. Sustainability of PAs will be enhanced by efforts to increase capacity among the Government and other stakeholders implicated in PA management; advancing consolidation of PAs in support of their objectives; and furthering Brazil's goal to transition from almost exclusive dependency on donor financing to a long-term sustainable public financing mechanism. The development of instruments for and capacity of government, rural, and indigenous organizations and farmers to advance implementation of the Forest Code requirements to restore native vegetation and to increase the adoption of sustainable productive and extractive practices within and around PAs, together with the capacity to identify degraded forest landscapes and monitor restoration, will contribute to improved landscape-level planning processes and increase ecosystem connectivity. these approaches could be replicated in other areas of the Brazilian Amazon and the lessons shared with and adapted in other Amazon countries.

[10] Work programming for activities under Component 1 will be completed on a two-year cycle in line with the operating policies and procedures of the Transition Fund.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

33. The overall risk rating of the proposed Project is assessed as Substantial. The description of the principle risks and planned mitigation actions are detailed in the following paragraphs.

34. **Political and governance**. The current political situation might pose a risk to the proposed Project. In May 2017, the Brazilian Congress, for the first time since the 1988 Constitution, approved the reduction and degazetting of federal PAs in the Amazon and Atlantic Forest regions. This decision was subsequently vetoed by the President, following concerns expressed by civil society and the international community. While this risk remains, experience under ARPA I and II demonstrates that these challenges can be successfully overcome. Continuity with the proposed initiatives is likely even in the event of political changes given that the project (a) is grounded on long-standing public-private partnerships for channeling grant funds (for example, ARPA); (b) focuses on well-established conservation and forest restoration national legislation (for example, National System of Protected Areas [*Sistema Nacional das Unidades de Conservação,* SNUC] Law and Forest Code); (c) focuses strongly on local communities; and (d) promotes conservation and sustainable use of Amazon forests.

35. **Macroeconomic.** The current macroeconomic situation in Brazil could potentially have an impact on the committed counterpart funding due to a potential decreased budget to federal agencies and reduced transfers from federal to state levels. This risk is mitigated under the proposed Project as (a) project indicators and targets are based on the available donor grant funding, (b) the Transition Fund and project financing strategy which (i) front-load the fund with donor contributions and gradually transitions from donor to government funding over 25 years and (ii) require allocation of Environmental Compensation Funds (state and federal funds which are earmarked for PAs) as a Disbursement Condition, and (c) the demonstrated institutional capacity and commitment observed during implementation of the two prior projects (ARPA I and II). Another macroeconomic concern is agricultural expansion (grain production and cattle ranching), which poses an increasing risk to forest resources. To manage this risk, the proposed Project would continue to be implemented together with administrative policies, land tenure regularization, and other policies that have made deforestation rates plunge in the last several years.

36. **Technical design of the project.** The main technical risks are associated with forest restoration activities as these involve coordination of multiple institutional partners and policies. The existing legal framework mitigates this but government implementation capacity could be a limiting factor. The proposed Project design includes activities to strengthen government and nongovernment stakeholder's capacity and to promote an enabling environment for private sector compliance. The proposed Project also would seek to enhance revenue generation from the restored areas, which is a new area of intervention, outside of the traditional roles and

responsibilities of the environmental agencies. To mitigate this risk, the proposed Project would support cross-sectoral collaboration and integration with private sector initiatives.[11]

37. **Institutional capacity for implementation and sustainability.** The sheer geographic scale of the Brazilian Amazon challenges the ability of government institutions to implement and enforce policies and legislation. PA staffing is an issue in remote areas, leading to high staff rotation, and state environmental agency capacity is variable, but weak staffing, inadequate training and limited resource availability are common issues. To address these concerns, the project will maintain the staffing criteria applied by ARPA for PAs receiving project support and will seek to strengthen the capacity of federal and state agencies to implement their respective mandates by supporting the development and deployment of tools and training and the establishment of partnerships with other local institutional actors

38. **Fiduciary.** The World Bank performed an FM assessment of both FUNBIO and CI-Brazil, in accordance with OP/BP 10.00 and the Financial Management Manual for World Bank-Financed Investment Operations (effective March 1, 2010 and revised February 10, 2017). Considering the proposed Project design and seeking effective and efficient management and monitoring over the use of funds, each PEU will have its own FM arrangements. Despite the parallel arrangements, this design ensures that all FM aspects of the project will be well monitored. The FM arrangements (described in detail in annex 3 and annex 7) are acceptable.[12]. The FM assessments identified the main risks as PEU-CI-Brazil's lack of experience with World Bank procedures and expected delays in the beginning of implementation. Mitigation measures include: system customization to automatically produce the reports needed for project accounting, monitoring and disbursements, with a close support, including training from the World Bank's Financial Management team throughout project implementation.

39. **Environment and social.** Overall the proposed Project's environmental and social impacts are expected to be positive, enhancing ecosystem connectivity and resilience and improving the management of and benefits derived from natural resources on which local communities, indigenous peoples, and others depend. The project is not expected to require any involuntary resettlement. Nevertheless, there is a possibility that project-supported PA and restoration activities might affect indigenous peoples and/or other local communities and stakeholders. By their nature, these risks are considered significant. The risk is mitigated by the strong existing Government's policy and legal framework to manage such concerns, and the project-specific safeguard instruments. Furthermore, the project's implementation partners have over a decade of experience in satisfactorily implementing World Bank safeguard instruments.

40. **Stakeholders.** Strong stakeholder participation is key to successful PAs and integrated landscape approaches implementation. While there is substantial experience within and around

[11] Coalition for Climate, Forests and Agriculture (*Coalizão Brasil Clima, Florestas, Agricultura*): www.coalizaobr.com.br and 'Alliance for the Restoration of the Amazon' (*Aliança pela Restauracao na Amazonia*): www.wribrasil.org.br

[12] Arrangements are acceptable if they are considered capable of recording correctly all budgets, transactions, and balances, supporting the preparation of regular and reliable financial statements, safeguarding the entity's assets, and are subject to auditing arrangements acceptable to the World Bank.

PAs, participatory mechanisms for mobilizing stakeholders relevant to land-use planning and restoration activities at the landscape level are less well-tested. To mitigate this risk, the proposed Project will actively involve a wide range of stakeholders from the local and indigenous communities, civil society, private sector, as well as state governments and actors across the central government. It will reinforce the ongoing dialogue and support the existing local forum for implementation of the Forest Code. Additionally, targeted activities such as awareness raising, training, strengthening extension services, and actively promoting dialogue among different actors along productive value chains are expected to not only enhance individual capacities but also contribute to building lasting local social capital.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analysis

41. The economic feasibility simulation yields positive results not only under the baseline but also under conservative assumptions and different scenarios (see annex 5 for details). The analysis proved to be robust as it includes varying discount rates and also tests for changes in anticipated results. The analysis contrasts generated welfare benefits from a 'with project' and "without-project" situation, accounting for opportunity costs of alternative agricultural use. Project costs and benefits are assessed on the area of newly created PAs (3,000,000 ha), area brought under improved forest management (57,000,000 ha), and area benefiting from investments in integrated landscape restoration. The latter assumes a 20 percent reduction in current annual deforestation rates over six years, with benefits generated from carbon sequestration, fire prevention, erosion control, non-timber forest products, and existence value. Improved forest management benefits are assumed to increase the economic PA value by 5 percent (of the total economic value for 1 ha forest). Project and forest conservation opportunity costs are included, defined as the net income per hectare per year sacrificed as a result of not putting the land to agriculture use (soy or cattle). The "without-project" case assumes trends follow the recent past and no police changes occur.

42. The net present value (NPV) is estimated to be US$5.6 billion, and the benefit-cost (BC) ratio is 2.1. To verify the result's robustness different discount are applied and a reduction of the economic benefits by 20 percent and 50 percent in subsequent analysis is used. The benefits are more than two times larger than the costs in all scenarios. The NPV remain positive even if only the six years of project implementation are analyzed and if all the cofinancing costs are included. The net welfare outcome is only negative if the benefits are reduced by 50 percent and a six-year period is examined. In reality, the project benefits are probably far greater, because this analysis disregards benefits from new policies, monitoring tools, capacity building, or guidelines which are all likely to result in benefits and to trigger further positive developments in the area of sustainable resource management in the future.

B. Technical

43. The proposed Project seeks to expand and further consolidate the area of the Brazilian Amazon under protection and to increase the forest area under sustainable management, within a landscape approach. Its design draws upon the experience gained under ARPA Phases I and II, as well other PA and integrated landscape management initiatives in the Amazon and elsewhere.

The establishment and management of PAs, long considered to be one of the best approaches to protect biodiversity and ecosystem function, is also recognized as being effective at reducing deforestation and safeguarding local communities' access to resources. While there is some debate as to whether PAs reduce deforestation or simply divert it to other areas, the strategic use of PAs, in conjunction with other policies, has clearly proven effective at reducing deforestation in the case of the Brazilian Amazon. Deforestation between 2005 and 2015 was reduced by 70 percent below the historical baseline of 1996–2005, with PAs accounting for approximately 30 percent of the overall decrease.[13] Project design also recognizes the critical importance of securing financial sustainability for PA efforts if gains on the ground are to be maintained, providing support to the Government in its quest to transition over 25 years from donor to public funding for ARPA. Similarly, the proposed Project recognizes the critical importance of increasing ecosystem connectivity if the globally, nationally, and locally important ecosystem services provided by the Amazon forest are to be maintained and made more resilient. To this end, it also focuses on building both government and private capacity to implement forest restoration activities within and between PAs and enabling sustainable economic benefits to be derived from forests. The proposed Project builds upon strong institutional arrangements which have been tested over the past 15 years, expanding the focus to develop tools, capacity, and incentives for the restoration of native vegetation.

C. Financial Management

44. The World Bank performed a preliminary FM assessment of both PEU-FUNBIO and PEU-CI-Brazil. The overall conclusion of the FM assessment is that: (a) the FM arrangements for the proposed Project are considered adequate; and (b) the funds flow, disbursements, monitoring, auditing, and supervision arrangements have been designed to respond to the project's implementation arrangements. Annex 3 provides further details on FM and disbursement aspects.

D. Procurement

45. A full capacity assessment of CI-Brazil to implement procurement following World Bank regulations has been carried out. Their Procurement Department has only one professional who is trained on the former Procurement Guidelines, with little practical experience. CI-Brazil plans to assemble a full-time dedicated unit for this proposed Project, including one procurement manager and two procurement coordinators. In addition, a procurement specialist will be contracted at the beginning of the project to build the CI-Brazil procurement team's capacity. The hiring of this procurement specialist with Terms of Reference (TOR) acceptable to the World Bank is a condition of effectiveness. It is anticipated that training and intensive support will be needed at the beginning of the project. A full capacity assessment is not necessary for FUNBIO as the institution has been applying the World Bank Procurement Guidelines for over 15 years. Furthermore, as the proposed Project seeks to capitalize the existing ARPA Transition Fund, there are no project level procurement implications for implementation of Component 1.

[13] Soares-Filho, Britaldo. 2016. *Role of Amazon Protected Areas, Especially the Conservation Units Supported by ARPA, in Reducing Deforestation*. Rio de Janeiro: FUNBIO.

E. Social (including Safeguards)

46. Overall the proposed Project impacts are expected to bring socioeconomic benefits to forest-dependent people (traditional communities and indigenous peoples,) through improved management of natural resources upon which their livelihoods depend, introduce innovative and best practice in agriculture and agroforestry, diversify livelihoods, promote food security, and increase resilience.

47. OP 4.10 Indigenous Peoples is triggered because project activities might affect indigenous peoples. About 60 percent of Brazil's indigenous population or approximately 420,000 indigenous persons live in the Brazilian Amazon region, which comprises 98 percent of regularized indigenous lands in Brazil, covering almost 21 percent of the regional territory (approximately 90 million ha). PA and indigenous land overlaps are common throughout Brazil, particularly in the Amazon, the proposed Project aims to assist the development of procedures and methodologies to support the Government's work in these areas, promoting the resolution of conflicts and shared and integrated management of overlapping areas, thus enhancing protection for both biodiversity and indigenous peoples. As the exact location for the implementation of the proposed Project's activities have not yet been defined, the MMA and FUNBIO jointly conducted a social assessment paying special attention to indigenous peoples in the Amazon and the potential impacts of PAs, landscape management, and biodiversity conservation on their traditional livelihoods. The MMA and FUNBIO also prepared, consulted on, and publicly disclosed an Indigenous Peoples Policy Framework (IPPF) setting out the principles and guidelines to be complied with when project activities affect indigenous peoples. The IPPF also spells out screening procedures to ensure that the proposed Project will not support activities in PAs where the overlapping with indigenous lands or land claims has led to land tenure conflicts.

48. OP 4.12 Involuntary Resettlement is also triggered. The proposed Project is not expected to support any activity requiring the involuntary taking of land. Consequently, physical and economic displacement should be completely avoided. However, OP 4.12 is triggered because under Components 1 and 2, the creation, consolidation, and management of PAs as well as activities related to landscape management may potentially cause adverse impacts related to restrictions on land use and access to natural resources by traditional communities with customary tenure or recognizable usage rights. To mitigate these potential adverse impacts, the MMA prepared and publicly disseminated a Process Framework before appraisal.

F. Environment (including Safeguards)

49. This Category B project is expected to generate a positive impact on the environment. The creation and consolidation of PAs has proven to be a viable strategy to reduce deforestation and biodiversity loss in the Brazilian Amazon. The positive impact is expected to be expanded with the support to sustainable landscape management practices within PAs and private lands to enhance ecosystem connectivity. To maximize biodiversity benefits, the proposed Project will apply existing science-based instruments to define priority areas for PA creation and vegetation restoration, such as the Map of Priority Areas for the Conservation and Sustainable Use of Brazilian Biodiversity, and data from the continuous Legal Amazon Deforestation Monitoring Project (*Programa de Monitoramento da Floresta Amazônica Brasileira por Satélite*, PRODES) and Amazon TerraClass studies, among others.

50. National environmental legislation is robust and includes specific rules and procedures for the creation of PAs aimed at reducing social impacts and maximizing biodiversity benefits. The Recipient is experienced with the application of World Bank safeguards procedures in similar World Bank-supported operations. The project Environmental and Social Management Framework (ESMF) reinforces and complements the national legal framework, defining preventive procedures and mitigation measures to address key aspects that will require attention during implementation, such as forest management for timber and non-timber products, pest management, application of consultation procedures for PA creation, and participation of indigenous peoples, among others.

51. The following environmental safeguards were triggered for the proposed Project: OP 4.01 Environmental Assessment, OP 4.04 Natural Habitats, OP 4.36 Forests, OP 4.09 Pest Management, and OP 4.11 Physical Cultural Resources. Possible negative impacts are expected to be few, localized, small, and reversible. The impact assessment under the ESMF prepared by the MMA and FUNBIO includes specific guidance and preventive and mitigation measures to address all possible negative impacts identified.

52. The social and environmental safeguard instruments (ESMF, IPPF, and Process Framework) have been publicly disclosed in the official websites (http://programaarpa.gov.br/documentos-fase-iii-do-arpa/; https://www.funbio.org.br/projeto-paisagens-sustentaveis-amazonicas/) of FUNBIO and the MMA and consulted online and at two face-to-face workshops. The first workshop was held on May 30, 2017 in Manaus (Amazonas State); the second on August 1, 2017, in Rio Branco (Acre State). The relevant stakeholders were invited and the locations of the two workshops were chosen to facilitate the participation of indigenous peoples, riverine and traditional communities from the Amazon region, and their representative organizations. The comments received were integrated into the social and environmental safeguards instruments, which also include a detailed annex on the consultation process. The ESMF, IPPF and Process Framework were adopted by the GOB with final in country disclosure on August 15, 2017, and through the World Bank website on August 23, 2017.

G. Other Safeguards Policies Triggered

53. The proposed Project triggered OP 7.50 International Waterways. The activities financed are designed to protect and recover large expanses of biodiversity rich forests, which contain countless perennial and seasonal bodies of water, many of which fit the description of international waterways provided under OP 7.50. No negative impact is expected to such bodies of water. Proposed activities should positively affect these waterways by conserving the forests that protect them, either within PAs or within private lands in sustainably managed landscapes, thus maintaining or improving water quality and river flows. Supported activities that may use or involve water are (a) eventual watering of seedlings produced with project support for reforestation activities, and (b) sustainable fisheries management of wild stocks in lakes and rivers. The ESMF includes guidance on the prevention of impacts to international waters and an exemption to the riparian notification requirement has been obtained (see annex 3).

H. World Bank Grievance Redress

54. Communities and individuals who believe that they are adversely affected by a World Bank supported project may submit complaints to existing project-level grievance redress mechanisms or the World Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the World Bank's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of World Bank non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

Annex 1: Results Framework and Monitoring

Country: Brazil

Project Name: Amazon Sustainable Landscapes Project (P158000)

Results Framework

Global Environmental Objectives

PDO Statement

The PDOs are to expand the area under legal protection and improve management of Protected Areas, and increase the area under restoration and sustainable management in the Brazilian Amazon.

These results are at	Project Level

Global Environmental Objective Indicators

Indicator Name	**Baseline**	**Cumulative Target Values**						
		YR1	**YR2**	**YR3**	**YR4**	**YR5**	**YR6**	**End Target**
New area supported by the project with status as protected areas (ha, millions)	0.00	0.00	0.00	0.00	1.00	2.00	3.00	3.00
Area of existing protected areas supported by the project with (i) low, (ii) moderate and (iii) high management effectiveness as per defined criteria (Ha, millions)	Total: 60.00 Group 1: 10 Group 2: 44 Group 3: 6	Total: 60.00 Group 1: 10 Group 2: 44 Group 3: 6	Total: 60.00 Group 1: 8 Group 2: 44 Group 3: 8	Total: 60.00 Group 1: 5 Group 2: 40 Group 3: 15	Total: 60.00 Group 1: 3 Group 2: 38 Group 3: 19	Total: 60.00 Group 1: 0 Group 2: 36 Group 3: 24	Total: 60.00 Group 1: 0 Group 2: 34 Group 3: 26	Total: 60.00 Group 1:0 Group 2: 34 Group 3: 26
Area under restoration or reforestation	0.00 (i): 0.00	0.00 (i): 0.00	0.00 (i): 0.00	4.00 (i): 3.40	8.00 (i): 6.80	18.00 (i): 15.30	28.00 (i): 23.80	28.00 (i): 23.80

supported by the project (disaggregated by (i) assisted natural regeneration, and (ii) active restoration) according to defined criteria (Ha, thousands)	(ii): 0.00	(ii): 0.00	(ii): 0.00	(ii): 0.60	(ii): 1.20	(ii): 2.70	(ii): 4.20	(ii): 4.20
Forest area brought under sustainable management plans (Ha, millions) - (Core)	0.00	0.00	0.00	0.00	0.00	0.4	1.4	1.4

Intermediate Results Indicators

		Cumulative Target Values						
Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	YR6	End Target
1.1 Existing protected areas supported by the Transition Fund under improved management (Number)	65.00	65.00	90.00	105.00	114.00	114.00	114.00	114.00
1.2 Capitalization of the Protected Areas trust fund (Transition Fund) (US$, millions)	134.00	144.00	154.00	165.00	180.00	195.00	215.00	215.00
2.1 Area of rural properties adopting sustainable land management practices supported by the project according to defined criteria (Ha, thousands)	0.00	100.00	200.00	300.00	500.00	700.00	900.00	900.00
2.2 Sustainable use	0.00	0.00	0.00	1.00	2.00	3.00	5.00	5.00

protected areas under sustainable land management practices supported by the project according to defined criteria (Ha, millions)								
2.3 Land area under sustainable land management practices (Ha, thousands) - (Corporate)	0.00	100	200	1,304	2,508	3,718	5,928	5,928
3.1 Rural properties adopting land use planning tools for sustainable land management (Number, thousands)	0.00	2.00	4.00	9.00	14.00	20.00	27.00	27.00
3.2 Incentive mechanisms for reducing forest loss and increasing restoration improved (Number)	0.00	1.00	3.00	5.00	7.00	9.00	10.00	10.00
4.1 Local people consulted on project activities (disaggregated by gender) (Number)	0.00 (of which Male: 0.00, Female: 0.00)	Total 600 Male: 420 Female: 180	Total 1,200 Male: 840 Female: 360	Total 1,500 Male: 1,050 Female: 450	Total 1,800 Male: 1,260 Female: 540	Total 2,400 Male: 1,680 Female: 720	Total 3,000 Male: 2,100 Female: 900	Total 3,000 Male: 2,100 Female: 900

Indicator Description

Global Environmental Objective Indicators	
Indicator Name	**Description (Indicator Definition)**

New area supported by the project with status as protected areas	• Target values are cumulative. • Indicator captures the PDO outcome of area under legal protection according to Presidential or State Government Decrees.
Area of existing protected areas supported by the project with (i) low, (ii) moderate and (iii) high management effectiveness as per defined criteria (million ha)	• Target values are cumulative. • Indicator captures improved management of PAs as measured by the Management Effectiveness Tracking Tool (METT) assessment. This scorecard is the GEF's standard tool for assessing the evolution in PA management effectiveness, evaluating it across 6 categories: content, planning, inputs, processes, outputs, and outcomes. • A score of 0–33 percent indicates low management effectiveness, 34–66 percent indicates moderate management effectiveness, and 67–99 percent indicates high management effectiveness.
Area under restoration or reforestation supported by the project (disaggregated by (i) assisted natural regeneration, and (ii) active restoration) according to defined criteria.	• Target values are cumulative. • Areas can be located inside and outside of selected PAs within the project area of intervention. These restoration actions will be implemented by the project activities in the field (planting, fire exclusion, and so on) and supported by additional activities, such as management plans with specific recovery actions and focused training that might result in recovery actions. • Defined criteria: 'Assisted natural regeneration' means late-succession degraded areas under indirect restoration interventions (fire exclusion, grazing exclusion, and so on) within the project area. 'Active restoration' means degraded areas under direct restoration or afforestation interventions (enrichment, total planting, agro-forestry system, and so on) within the project area.
Forest area brought under sustainable management plans	• Target values are cumulative. • These areas can be located inside and outside of PAs and also overlap with PAs supported by the project. • Criteria: Includes production and protection forests as well as other forests under sustainable management for which management plans have been prepared, endorsed, and are under implementation. Forest land classification is based upon national definitions. Management plan is defined in accordance with national legislation.

Intermediate Results Indicators

Indicator Name	Description (indicator definition and so on)	Frequency	Data Source/Methodology	Responsibility for Data Collection
1.1 Existing protected areas supported by the Transition Fund under improved management	• Target values are cumulative. • Includes all PAs receiving financial and/or technical support from the Transition Fund. • 'Improved management' is defined as the number of PAs, passing from 'consolidation'	Annual	FAUC	ICMBio and state environmental agencies

	to 'maintenance', as defined by the FAUC for PA monitoring. The FAUC is based on the METT Scorecard, adapted to the Brazilian context.			
1.2 Capitalization of the Protected Areas trust fund (Transition Fund)	• Target values are cumulative. • Measured as donor funds entering the Transition Fund over and above government budgetary allocations.	Annual	Review of report provided by Transition Fund asset manager	MMA, ICMBio, FUNBIO, and state environmental agencies
2.1 Area of rural properties adopting sustainable land management practices supported by the project according to defined criteria	• Target values are cumulative. • Average rural property area estimated to be 100 ha. • Criteria: Rural properties which are (a) enrolled in the PRA according to the Brazilian Native Vegetation Law and applicable state implementing regulations and (b) developing sustainable land management practices.	Annual	Project reports Rural Environmental Registry System (SICAR) reports	MMA and state environmental agencies
2.2 Sustainable use protected areas under sustainable land management practices supported by the project according to defined criteria	• Target values are cumulative. • Criteria: 'Sustainable use PAs' are Extractive Reserves (*Reserva Extrativista*), Sustainable Development Reserves (*Reserva de Desenvolvimento Sustentável*), Public Forests and Area of Environmental Protection (*Área de Proteção Ambiental*). 'Sustainable land management practices' are defined as practices that support sustainable productive activities related to timber and non-timber forest product (NTFP) extraction, processing, and trading, and sustainable forest management.	Annual	Project reports	MMA, ICMBio, and state environmental agencies
2.3 Land area under sustainable land management practices	• This indicator measures the land area that as a result of the World Bank project incorporated and/or improved sustainable land management practices. This indicator can track progress toward sustainability at farm scale and a landscape scales within agroecological zones,	Annual	Project reports	MMA, ICMBio, SFB, and state environmental agencies

	watersheds, or basins. The baseline value for this indicator is expected to be zero. • Criteria: Sustainable land management practices are defined as areas supported under the project adopting a combination of at least two new technologies/approaches to increase land quality and restore degraded land, for example, agronomic, vegetative, structural, and management measures that, when applied as a combination, increase the connectivity between PAs, forest land, rangeland, and agriculture land. • Indicator calculated by summing: (a) 'Area under restoration or afforestation supported by the project (disaggregated by (i) assisted natural regeneration, and (ii) active restoration) according to defined criteria' (global environmental objective indicator), (b) 'area of rural properties adopting sustainable land management practices supported by the project according to defined criteria' (IR 2.1), and (c) 'sustainable use PAs under sustainable integrated land management practices supported by the project according to defined criteria' (IR 2.2).			
3.1 Rural properties complying with land use planning policies for sustainable land management	• Targets are cumulative. • Number of properties with CAR validated.	Annual	Project reports and SICAR reports	MMA and state environmental agencies
3.2 Incentive mechanisms for reducing forest loss and increasing restoration improved	• Target values are cumulative. • 'Incentive mechanism' are defined as policies or initiatives (federal, state, and local governments and private sector) with focus on deforestation reduction and forest restoration (for example, national revegetation policies and plans, public and private rural credit schemes, infraction regimes, and so on).	Annual	Project reports and official government gazettes	MMA, SFB, and state government

4.1 Local people consulted on project activities (disaggregated by gender)	• Target values are cumulative. • This citizen participation and gender indicator reflects the participation of local stakeholders in the project, with a particular focus on (a) community related activities and (b) the creation and management of new and existing areas under ARPA.	Annual	Project and activity records	MMA, ICMBio, SFB, and state environmental agencies

Annex 2: Detailed Project Description

BRAZIL: Amazon Sustainable Landscapes Project

I. Context

1. A six-year GEF Amazon Sustainable Landscape Program was approved by the GEF Council in October 2015 with a commitment of US$113 million and an expected US$682 million leveraged in additional financing. The ASL Program aims to protect globally significant biodiversity and implement policies to foster sustainable land use and restoration of native vegetation cover and comprises four national projects executed by three countries (Brazil, Colombia, and Peru) and a regional coordinating grant (fifth child project)[14]. Together, the child projects aim to maintain 73,000,000 ha of forest land, promote sustainable land management in 52,700 ha, and support actions that will help reduce CO_2 emissions by 300 million tons by 2030. The World Bank (as lead agency), WWF, and United Nations Development Programme will each serve as GEF implementing agencies for the Program.

2. The theory of change of the ASL Program and each of its five subsidiary child projects, builds on the notion that if (a) an adequate area of the Amazon is conserved under various regimes (PAs and indigenous lands); (b) agriculture, degraded, and forest lands are managed sustainably and with zero illegal deforestation tolerance; (c) national policies and strategies support sustainable development aiming to minimize deforestation and loss of ecosystem services; and (d) capacity of and regional cooperation between key players improves, the protection of significant biodiversity and the integrity of ecosystem services of the Amazon region can be achieved.

3. The proposed project builds on over a decade of work in the Brazilian Amazon to strengthen biodiversity conservation, reduce deforestation, and improve community livelihoods. Applying 'Open Standards for the Practice of Conservation'[15] and Theory of Change methodologies, project design, management, and monitoring arrangements were developed and refined. In line with the overarching ASL Program, the proposed Project's theory of change (figure 1) aims to further consolidate PAs in the Amazon and increase the land area under restoration and sustainable management. To this end, it will build national capacity to: (a) consolidate ARPA, (b) develop integrated landscape management, and (c) implement policies

[14] The ASL Program supports the GEF Strategic Frameworks for Biodiversity (BD-1, Programs 1 and 2; BD-4, Program 9), Climate Change (CCM-2, Program 4), Land Degradation (LD-1, Program 2; LD-3, Program 4) and Sustainable Forest Management (SFM-1, 2, and 3).

[15] The Open Standards methodologies developed by Conservation Measures Partnership over the past 15 years bring together common concepts, approaches, and terminology in conservation project design, management, and monitoring to help practitioners improve the practice of conservation. They facilitate discussions among project preparation teams, helping explore what they want to conserve, what threats and opportunities are affecting their conservation targets, which threats are of greatest significance, how their actions are believed to influence the situation at their site, and how they will operationalize their strategic plan through a work plan and budget. Additionally, the development of the Open Standards methodologies is an ongoing, dynamic process; Version 1.0 was released in 2004, with subsequent updates in 2007 and 2013. These methodologies have also served as the framework for the development of the Miradi Adaptive Management Software Program (www.miradi.org), which walks practitioners through several steps of the Open Standards to-do projects.

and strategies for PAs and productive landscapes. More specifically, this will be achieved by: (a) expanding the area, improving management, and furthering the long-term financial sustainability of ARPA; (b) building capacity for and facilitating adoption of sustainable land-use practices in rural properties and sustainable use PAs; (c) strengthening capacity of federal and state governments to implement key legal instruments for forest recovery, enhance related financial incentive mechanisms, and monitor forest restoration; and (d) facilitating the exchange of knowledge and experience among and between national and regional stakeholders. These interventions together aim to strengthen protection, reduce deforestation, and improve ecosystem connectivity, thereby furthering the integrity of the local, regional, and global ecosystem services that the Amazon provides, including biodiversity conservation, carbon sequestration, and maintaining the hydrological cycle. Furthermore, the project's link with the ASL Program, in particular, the Amazon Coordination Technical Assistance (P159233) will foster connectivity and knowledge sharing across countries, magnifying the impact of Brazil-ASL investments with the anticipated results being greater than the sum of its parts.

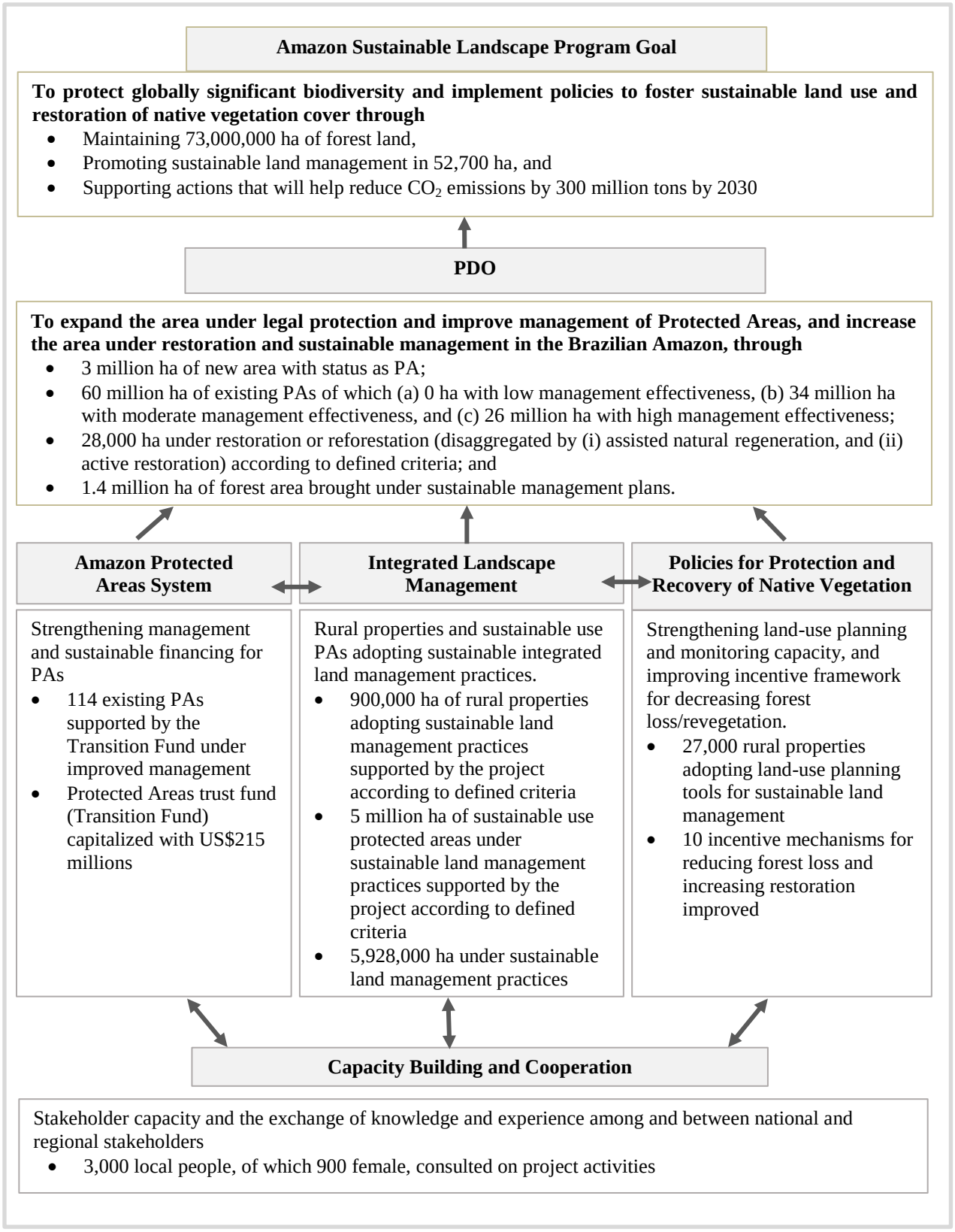

Figure 1. Brazil-ASL Project Theory of Change

II. Project Description

A. Project Development Objective

4. The PDOs are 'to expand the area under legal protection and improve management of Protected Areas, and increase the area under restoration and sustainable management in the Brazilian Amazon.'

5. The PDO level indicators and respective targets are as follows:

- New area supported by the project with status as protected areas. (Target: 3 million ha);
- Area of existing protected areas supported by the project with (i) low, (ii) moderate and (iii) high management effectiveness as per defined criteria defined criteria. (Target: 60 million ha);
- Area under restoration or afforestation supported by the project (disaggregated by (i) assisted natural regeneration, and (ii) active restoration) according to defined criteria. (Target: 28,000 ha); and
- Forest area brought under sustainable management plans. (Target: 1.4 million ha)

B. Project Components

Component 1. Amazon Protected Areas System (GEF: US$30.00 million; parallel cofinancing: US$185.00 million)

6. This component aims to expand and consolidate an over-60-million-ha PA system in the Brazilian Amazon and advance ongoing efforts to secure its long-term financial sustainability by capitalizing the ARPA Transition Fund. The ARPA Transition Fund seeks to gradually increase the resources provided by federal and state governments to ARPA, while decreasing donor-based investments, so that, after a period of 25 years, these governments will finance 100 percent of ARPA costs without any support from the Transition Fund itself or any other donor funds (annex 7 describes the Transition Fund in more detail). The project will capitalize the Transition Fund in three tranches in accordance with the following triggers: (a) declaration of project effectiveness together with confirmation of the donor contributions received to date by the Transition Fund, (b) signature of at least one formal **e**nvironmental compensation agreement, '*Termo de Compromisso de Compensacao Ambiental'*, benefitting the ARPA PAs, and (c) approval of the funding proposal for the ARPA Transition Fund by the National Bank for Economic and Social Development (*Banco Nacional de Desenvolvimento Econômico e Social*, BNDES).

7. Building upon the achievements of the first and second phases of ARPA.[16] in the context of this project, the Transition Fund will support the actions detailed below.

8. **Creation of new PAs.** This component aims to bring an additional 3 million ha of the Amazon region under legal protection. To this end, it will support activities to: (a) identify new areas to be designated for legal protection; (b) conduct the associated environmental, socioeconomic, and land tenure assessments as needed, including public consultations and workshops; and (c) prepare the necessary regulatory framework and delimitation of the boundaries of the PAs in question.

9. With previous project support from the GEF, Brazil has developed a robust process for defining priority areas for biodiversity conservation in all major biomes. This process builds on the KBA approach, expanding and deepening it through inclusion of among others, a wide range of complementary biological, socioeconomic, and political economy information. This approach will be applied to the identification of new PAs to be created under ARPA, as well as drawing on the Map of Priority Areas for the Conservation, Sustainable Use and Benefit-Sharing of the Brazilian Biodiversity,[17] and the Protected Area Creation Guidebook. In accordance with these, the Transition Fund will support the identification of potential PAs to be created, with special consideration for the location of indigenous peoples, intensity of threats of deforestation and land conversion, habitat connectivity, and potential to generate payment for ecosystem services mechanisms.

10. Following their identification, in line with the procedures for establishing PAs determined by the SNUC,[18] the Transition Fund will support the implementation of the studies and public consultations required for their creation, including among others: (a) analysis of environmental, socioeconomic, and land tenure issues in the selected priority areas; (b) preparation of an environmental and socioeconomic evaluation and public consultations, including consultations with indigenous peoples; and (c) formal designation of PAs as specified in the SNUC legislation followed by the drafting of and public consultation on a decree of creation for the PA. The initial analysis will emphasize the identification of unclaimed public lands so as to minimize the necessity of land acquisition with governmental funds and to avoid physical involuntary resettlement issues. This approach was successful in Phases I and II, and will be replicated.

11. For the project, new PAs will be defined as those created after July 30, 2017 for which: (a) environmental and socioeconomic studies have been finalized and public consultations carried out, (b) there is no overlap with indigenous or quilombolas lands, and (c) no physical resettlement of local population is required.

12. **Consolidation of PAs.** To further enhance the effective management of the PA system, this component will support the consolidation process of 60 million ha of ARPA supported PAs

[16] ARPA is a federal program, established and implemented in partnership with state agencies, private institutions, and civil society to promote the conservation of PAs in the Amazon in perpetuity.
[17] The 2007 version is currently being updated.
[18] The procedures for establishing PAs determined by the SNUC are detailed in Brazilian Federal Law No. 9.985/2000, and Decree No. 4.340/2002.

(new and 114 pre-existing) in accordance with the prescribed benchmarks presented in tables 2.1 and 2.2. These benchmarks apply to ARPA as a whole and are used to assess consolidation progress of and budget allocations to individual PAs. Activities are likely to include, among others: (a) providing technical assistance to strengthen country capacity to manage the consolidation process; (b) providing physical works, to include construction and rehabilitation of structures such as visitor centers, office space, and guard posts; (c) preparing, implementing, and monitoring PA management plans; (d) biodiversity monitoring; (e) implementing local and traditional community activities (environmental education, leadership training, and strengthening productive value chains); (f) promoting better coordination with and institutional strengthening of local and traditional communities and organizations; and (g) providing training to relevant staff in the management of PAs. Specific activities to be supported for each PA will be identified biennially following the planning and budget allocation process of the ECI as described in annex 7.

Table 2.1. PA Consolidation Benchmarks - Grade 1

Indicator	Verification Mechanism
Technical team of at least 2 employees working in the PA	Form completed in the Protected Areas Evaluation system[a] and National Registry of Protected Areas
Management council officially created	Form completed in the Protected Areas Evaluation system Administrative Ruling for the creation of a managing council under the managerial organization
Management plan developed and discussed by the managing council	Form completed in the Protected Areas Evaluation system Administrative Ruling for publication of management plans
Identifying the main points of access to the PA	Form completed in the Protected Areas Evaluation system
Protection plan developed	Form completed in the Protected Areas Evaluation system Technical inputs provided by the managerial organization
Basic equipment provided for the PA operation	Form completed in the Protected Areas Evaluation system and the National Registry of Protected Areas
Update the information in the National Registry of Protected Areas related to basic information, access to PA, human resources, and infrastructure	Form completed in the Protected Areas Evaluation system and National Registry of Protected Areas
Government budget allocation disbursed	Annual budget report approved by the ARPA Program Committee

Note: a. Form completed in the Protected Areas Evaluation tool - FAUC/ARPA

Table 2.2. PA Consolidation Benchmarks - Grade 2

Indicator	Verification Mechanism
Technical team with a minimum of 5 staff members, working in the PA	Form completed in the Protected Areas Evaluation system and National Registry of Protected Areas
Advisory Councils functioning and meeting regularly	Form completed in the Protected Areas Evaluation system Minutes of Meetings of the Advisory Councils, certifying the achievement of regular meetings in accordance with the bylaws
Identification of strategic issues for the PA, as identified in the management plan	Form completed in the Protected Areas Evaluation system
Demarcation points and priority corridors identified, as in the management plan	Form completed in the Protected Areas Evaluation system
Land tenure survey carried out	Form completed in the Protected Areas Evaluation system

Signing of the Terms of Agreement with indigenous and local peoples residing in and around PAs. Terms of Concessions for land-use rights agreements for populations in sustainable use PAs.	Form completed in the Protected Areas Evaluation system Terms of Agreement or Concessions for land-use rights
Research projects implemented in PAs in accordance with the management plan	Form completed in the Protected Areas Evaluation system
Monitoring of at least one biodiversity or social-environmental indicator in each PA	Form completed in the Protected Areas Evaluation system
Procurement of necessary equipment for each PA	Form completed in the Protected Areas Evaluation system and the National Registry of Protected Areas
Basic facilities for the operation of each PA established in accordance with the management plan	Form completed in the Protected Areas Evaluation system
National Registry of Protected Areas fully updated	National Registry of Protected Areas
Operating plan drafted based on the management plan and discussed within each local Advisory Council	Management plans for PA Minutes from board meetings from Advisory Councils
Yearly budgets allocated	Annual budget report from the managerial organization, approved by the ARPA Program Committee

13. PAs must meet all the benchmarks for consolidation of Grades 1 or 2 before becoming independent of the initial consolidation support and eligible to receive maintenance support through the Transition Fund.

14. **Maintenance of PAs.** Core maintenance and functioning of fully consolidated PAs will be supported through activities that include among others: (a) PA management and maintenance, (b) biodiversity monitoring and research, (c) review and implementation of PA management plans, (d) surveillance and protection, (e) infrastructure maintenance, (f) maintenance and replacement of PA equipment, (g) support for PA Council activities, and (h) training and capacity building.

15. **ARPA coordination and management.** This component will also support activities to: (a) strengthen coordination, management, and monitoring of ARPA; and (b) improve ARPA communication. More specifically, with respect to coordination, management, and monitoring, this component will seek to maintain and improve the efficiency and efficacy of ARPA's management system and participatory fora, by supporting activities to among others: (a) strengthen dialogue between all involved parties; (b) strengthen and coordinate the project's advisory and deliberative bodies (namely the Technical Forum, Managers Commission, Scientific Advisory Panel, Program Committee, and CFT); and (c) supervise ARPA activity implementation and financial execution based on monitoring reports, through direct verification of information in the Cérebro system and field visits, and reporting to the executive instances. Broader communication activities will also be supported with a view to raising awareness of the Program and disseminating information on its achievements and lessons among international, national and local stakeholders, and is expected to include activities such as participation in international and national meetings (for example, Biodiversity Conference of the Parties, World Parks Congress, Brazilian Congress on Protected Areas, and so on), design and production of communication materials (for example posters, brochures, videos, websites and so on).

16. ARPA's financial and logistics management will be managed by FUNBIO and aims at ensuring the efficient management of the Transition Fund's financial resources. To this end, the component will support: (a) the satisfactory operation of the Transition Fund's procurement activities, (b) satisfactory operation of the Transition Fund's FM, and (c) the development and improvement of the innovative management systems used in ARPA Phases I and II, such as: (i) *contas vinculadas* that allow for more autonomy of PA administrators to spend small amounts of their budgets; and (b) the Cérebro system used by FUNBIO and PA administrators to plan and monitor PA budgets.

17. **Long-term sustainability of ARPA PAs.** To ensure long-term sustainability for PAs, this component will also support the process of transitioning PA financing from an almost exclusively donor-based support to a long-term public financing mechanism. To this end, this component supports the provision of technical assistance to develop and implement strategies to raise the required additional donor revenue for the ARPA Transition Fund.

18. Under this component, GEF financing will capitalize the Transition Fund.

Component 2. Integrated Landscape Management (GEF: US$19.00 million; parallel cofinancing: US$117.36 million)

19. This component aims to promote integrated landscape management in the Amazon through complementary strategies that foster the recovery of native vegetation, develop sustainable productive systems, strengthen productive value chains, and implement innovative management arrangements between PAs. In line with the sectoral policies supported under Component 3, activities will encourage the adoption of practices which reduce deforestation, promote forest recovery and induce sustainable agro-silvo-pastoral practices with a view to both improving local communities' income and ecosystem connectivity. Component activities will focus on priority locations in the states of Amazonas, Pará, Rondônia, and Acre, selected based on the following criteria: (a) proximity to/overlap with main development axes (BR 163, BR 230, and BR 364); (b) areas with mosaics of sustainable use conservation units supported by ARPA; (c) areas of greater deforestation pressure; and (d) complementarity with other projects.

Subcomponent 2.1: Development of Sustainable Production Systems

20. Developing sustainable production systems requires both technical and planning improvements, whereby more sustainable agro-silvo-pastoral techniques are deployed in accordance with an integrative planning approach. Such good management practices need to be applied equally in the sphere of agriculture, involving small, medium, and large farmers willing to develop and adopt low-impact production models, as well as in the context of harvesting activities, with forest communities adopting good management practices.

21. Technical assistance (public or private) is fundamental to achieving this paradigm shift, which seeks to promote the production of food and raw materials in harmony with the conservation of ecosystems and their services. Historically such technical assistance in Brazil has largely focused on the dissemination of an agricultural production model that has paid limited attention to environmental matters, without an appropriate environmental or integrated planning approach. In addition, currently public federal technical assistance, as well as that for many

states, is inadequate. No national body to coordinate such actions exists and state authorities lack the human and financial resources to implement them.

22. Strengthening technical assistance in the region will require that technicians are provided with the skills to develop sustainable production systems, as well as to support and strengthen such assistance. One strategy for dealing with this challenge is to develop skills in conjunction with implementing demonstration units that serve as an example of good practice for farmers, harvesters, and technicians.

23. In this context, emphasis will be placed on encouraging adoption of sustainable agro-silvo-pastoral or extractive practices that assure conservation of forest patches in agricultural landscapes, focusing on options that maintain and/or increase the productivity and deliver multiple social and environmental benefits at the landscape level, particularly in the context of addressing food security and livelihood needs of beneficiary communities. Activities to be supported include, among others, (a) training for producers/harvesters and extension agents on good harvesting, extraction, and product processing practices; (b) forest inventories and preparation of management plans for the small-scale production of forest products; (c) training to farmers and technicians on sustainable agricultural practices such as agroforestry and integrated rural planning approaches at the farm level;[19] (d) leadership training and institutional and cooperative capacity building; and (e) implementing demonstration plots for sustainable agricultural and sustainable forest harvesting practices.

Subcomponent 2.2: Consolidation of Productive Value Chains

24. Successful integrated landscape management depends not only on improving agricultural and harvesting systems, but also on strengthening associated productive value chains. Tackling logistics, storage, and market aspects will be fundamental if products, be they agriculturally cultivated or harvested directly from nature, are to be converted into income for the producers. In some cases, the significant potential of local products cannot be realized due to poor market access or a failure to add value to these products. Addressing these challenges will require a mapping of product demand and processing infrastructures, definition of market range, and determination of local productive capacity and transport options (rivers, roads, railroads, and so on) based upon which a marketing strategy can be defined.

25. To strengthen underdeveloped local productive chains, business plans will need to be developed and implemented. For existing productive chains, actions will need to focus on scaling up or improving social and environmental performance and/or productivity. In the latter, business and quality improvement plans could include certification schemes as well as the establishment of sectoral accords and plans for strengthening the productive value chain as a whole.

[19] The integrated rural planning approaches at the farm level are related to compliance with the Forest Code. Support will be provided to farmers and technicians to map out and plan for appropriate spatial distribution of land uses within the farm boundaries, for example, compulsory set aside areas of native vegetation (*Áreas de Proteção Ambiental* and *Reservas Legais*), pasture land, agricultural land, and so on.

26. Strengthened productive value chains and adding value to the diverse socio-biodiversity products derived from Brazilian biodiversity will lead to the emergence of new income generating options for farmers, harvesters, and communities, and in so doing create important incentives for maintaining the standing forests. The project will also explore opportunities related to the allocation of benefits associated with Law No. 13.123 (Law of Biodiversity) together with the Secretariat for Biodiversity's Department of Genetic Heritage, within the MMA. To achieve these objectives, activities supported under the project will include among others: (a) development of business plans for productive chains that still require them, focusing on all stages from extraction, processing, and storage through to marketing activities, market surveys, and logistics; (b) installation of processing units; (c) improvement of laboratories for product testing, quality control, and certification; (d) fisheries agreements including management plans for fisheries and their implementation; and (e) identification and fostering demand for non-timber and socio-biodiversity products.

27. These actions will complement and explore synergies with activities planned under the GEF's 'Sustainable, Accessible and Innovative Use of Biodiversity Resources, and Associated Traditional Knowledge in Promising Phytotherapic Value Chains in Brazil' project. This project, to be implemented by the MMA's Department for Genetic Heritage (*Departamento do Patrimônio Genético*), aims to promote both the demand and supply of herbal remedies derived from genetic heritage and associated traditional knowledge, increasing the quality of life of indigenous peoples and traditional peoples and communities and encouraging activities that use genetic resources sustainably. It comprises three components focused on actions to: (a) strengthen local production chains such as the mapping of production chains and the purchase of capital goods for people and traditional communities; (b) accelerate bioprospecting and innovation by building capacity and promoting partnerships between academia, business, and traditional peoples and communities; and (c) promote the use of herbal remedies by the Unified Health System through revision of the regulatory framework and financing of studies.

28. The two projects have similar approaches but focus on different production chains. The actions to be implemented will occur in complementary areas and the lessons learned will be shared to promote ongoing improvements in both projects.

Subcomponent 2.3: Improving the Value Chain for the Recovery of Native Vegetation

29. Reestablishment of landscape connectivity will require inducing recovery of native vegetation in strategic locations. To this end, activities under this component will seek to support ecosystem restoration between and within PAs, thus improving the connectivity and resilience of ecosystems and the services they provide, including biodiversity conservation, carbon storage, and maintenance of the hydrological cycle. Successful large-scale and cost-effective restoration of native vegetation will depend upon the cost-effective implementation of a series of separate but interlinked activities encompassing, among others, seed collection, seedling production, establishment of nurseries, planting, and the development of plans to ensure sustainability, as well as of well-structured product chains and affiliated services.

30. Tackling these challenges will also require training for both extension agents and farmers, as both have limited experience with native vegetation restoration techniques, despite national legislative requirements to revegetate areas that have been cleared in contravention to

the law. In addition to specific training, demonstration plots for both low-cost, low-labor natural regeneration techniques as well as higher-cost, more labor-intensive techniques such as those involving the active planting of seeds and seedlings will be supported. Other systems, such as agroforestry and silvo-pastoral systems, also provide options for increasing producer income while simultaneously reestablishing ecosystem services.

31. The above activities will be designed to align with those under Component 3 aimed at strengthening implementation of recuperation policies and are expected to include, among others, (a) analytical work to identify potential best practices for key value chains, including reviewing cattle ranching policies and value chains to see if there are opportunities for mitigating the impact of these activities on forest degradation and loss; (b) training for extension agents and rural producers in areas such as seed collection and improvement, seedling generation, and restoration techniques; (c) support to nurseries including provision of equipment and inputs; (d) support to public laboratories in support of seed improvement for native species; (e) mapping of seed and seedling suppliers; (f) vegetation recovery activities on public and private lands (for example, regeneration, enrichment, planting, and agroforestry systems); and (g) field monitoring of restoration activities.

Subcomponent 2.4: Strengthening the Integrated Management of Protected Areas

32. A significant area of the Amazon is under some form of legal protection (PAs). Until three years ago, these areas were managed individually; however, a new integrated management model for PAs is emerging, grouping different PAs in a single management arrangement. This new model encourages management synergies between PAs, increasing physical and human resource efficiency, and facilitating the development of strategies for the formation of mosaics and ecological corridors.

33. In accordance with their specific objectives and geographical proximity, PAs can be grouped in two ways: (a) an Integrated Management Nucleus (*Núcleo de Gestão Integrada*, NGI) or (b) a Mutual Support Arrangement (*Arranjos de Apoio Mútuo,* APM). Within NGIs, federal PAs are planned and managed from a regional perspective, structuring the policies and actions for biodiversity conservation and sustainable use accordingly. NGIs constitute a formal restructuring of PA institutional arrangements, whereby contiguous or nearby conservation units with complementary or similar management objectives are grouped and managed from a macro-territorial perspective. In contrast, APMs group federal PAs from the perspective of improving their capacity to achieve their individual conservation objectives. The focus is on identifying and implementing joint actions that increase general administrative and managerial efficiency and effectiveness such as sharing offices and equipment and integrating surveillance activities. A more informal or temporary institutional arrangement, the APMs can be revised or adapted when these shared actions are no longer deemed efficient or necessary.

34. To support this process, a series of activities to complement those described under Component 1 are planned, including: (a) preparation and/or revision of PA management plans as well as their implementation; (b) improvements in surveillance infrastructure (guard posts and support stations); (c) meetings of and between PA management councils; (d) establishment and implementation of NGIs and APMs, including elaboration of action plans, acquisition of equipment, and training of joint councils; (e) training of managers to disseminate these new

management models; (f) preparation and dissemination of material on the tourism potential of PAs; (g) training and capacity building for tourism agents on community-based tourism and sustainable use PAs with tourism potential; (h) development of assessments and protocols for biodiversity monitoring in line with PA and integrated landscape management conservation strategies; and (j) biodiversity monitoring.

35. In addition to the above, activities under this subcomponent will also seek to advance compliance with Ramsar Convention guidelines, supporting the recognition and implementation of new areas of international importance for conservation and sustainable use of wetlands (Ramsar sites). Additionally, wetland connectivity will be promoted through the establishment of 'wetland corridors' seeking to establish linkages between those existing PAs which encompass globally significant wetlands. To this end, the project will support, among others: (a) studies for the establishment and implementation of Ramsar sites; and (b) innovative management mechanisms.

36. Under this component GEF financing will cover, among others, consultancy services, non-consultancy services, infrastructure and rehabilitation, goods and equipment, public consultations, workshops and training, and salaries and related benefits costs for CI-Brazil employees as per the procedures defined in the POM; and operating costs (including travel and per diems).

Component 3. Policies for Protection and Recovery of Native Vegetation (GEF: US$7.33 million; parallel cofinancing: US$46.33 million)

37. This component focuses on strengthening the capacity of national and state governments to develop and implement sectoral policies and financial mechanisms to reduce deforestation and promote forest recovery. It particularly focuses on the Law for Protection of Native Vegetation (Law No. 12.651/2012); the National Policy for the Recovery of Native Vegetation (Decree No. 8972/2017); the Law for the Management of Public Forests (Law No. 11.284/2006); and selected state policies. Activities focus on three key areas: (a) strengthening implementation of key legal instruments for ensuring forest recovery, (b) improving capacity for monitoring forest restoration, and (c) improving financial incentives for farmers to invest in restoration activities.

Subcomponent 3.1: Strengthening Implementation of Legal Instruments

38. The project will focus principally on strengthening implementation of the legal instruments detailed in the following paragraphs.

39. **Law for Protection of Native Vegetation (Law No. 12.651/2012).** Three key instruments for achieving the forest recovery objectives of the Law No. 12.651/2012 are the CAR, the related PRA, and the PRADA. The CAR is an electronic environmental rural register mandatory for all properties in Brazil. The database provides strategic information for controlling, monitoring, and combating deforestation of forests and other forms of vegetation native to Brazil; the management of native vegetation recovery; and for environmental and economic planning of rural properties. Based on the referred, rural properties that do not meet the legal requirements of the minimum compulsory set aside areas of native vegetation may choose to join the PRA to receive governmental support and undertake measures to restore the

required vegetation in situ or, in the case of RLs, compensate for deficits outside the property (that is, ex situ). The legal liabilities of the property can be addressed with instruments such as the PRADA, whereby the person responsible for the property undertakes maintenance and recovery of the compulsory set aside areas of native vegetation directly within their property. These environmental recovery plans should indicate the methods, techniques, and time lines for restoration to be conducted. The owners of properties also have other alternatives such as to compensate indirectly for the deficit of compulsory set aside areas of native vegetation ex situ through instruments such as servitude contracts, acquisition of areas occupied with native vegetation, or purchase of Environmental Reserve Quotas (*Cotas de Reserva Ambiental,* CRA), all in the same biogeographical region.

40. The registration deadline for all properties is December 2017, and according to SFB data, the process is well advanced in the states of the Amazon. Once registered, these records are analyzed and validated by state environmental agencies. Early reviews indicate that a significant number of these property registrations will need to be rectified before being validated. To optimize this process, gaps will need to be addressed, such as the need to train managers, assessing the need for further automation of analysis through the development of technological tools over and above those already developed by the SFB, and the design of legal operating arrangements that increase the capacity of the responsible bodies to analyze cadastral entries. To this end, the project will support activities such as: (a) contracting a team to carry out these analyses together with the responsible state bodies, (b) training of state bodies to carry out the analyses, and (c) customization of analysis modules (online platforms) to adapt them to the reality of each state and increase efficiency of the process.

41. In addition to analyzing and validating the CAR, states are also responsible for regulating and implementing the PRA within their jurisdiction. Some states have already published PRA regulations but others are still in the process of developing their implementation strategy and regulatory framework. The SFB is finalizing a federal model within SICAR, to serve as a basic model for state action. Nevertheless, some states are choosing to customize the PRA module designed by the SFB, adapting it to their regional context. Landowners who participate in the PRA are eligible to receive subsidies for the vegetation recovery process or to be compensated for their environmental assets. Participation in the PRA requires that the landowner presents either a PRADA or a proposal for compensation of their environmental liabilities in another area within the same biome through the CRA. Along with PRA implementation, states are also responsible for developing and implementing associated monitoring mechanisms, although this theme still needs to be developed in more detail.

42. One of the main bottlenecks with regard to preparation of PRADAs is the lack of technical and scientific knowledge, among both public managers and the farmers themselves, with respect to restoration methodologies, most suitable species to use, minimum number of required species, minimum active intervention time needed to subsequently allow for the area to continue the recovery process itself, indicators for monitoring the phases and success of the restoration activities, and so on. Furthermore, as noted under Component 2, even technical assistants and rural extension agents lack an integrated knowledge framework that simultaneously considers the environmental and agronomic characteristics of the property in question, the different use options for the legal reserves, and the recovery of degraded areas. In this context, the project will support different activities related to PRADAs, including, among

others, (a) technical training for state environmental personnel and contracted agents on the elaboration of PRADAs, (b) technical support to the state teams responsible for the elaboration of PRADAs in the field, (c) field validation of the decision trees to facilitate PRADA elaboration, (d) studies to develop analytical and monitoring mechanism for PRADA implementation, and (e) support for the development of platforms and other dissemination tools.

43. **National Policy for Recovery of Native Vegetation (Decree No. 8.972/2017).** In addition to efforts to operationalize SICAR-related instruments, the Federal Government has sought to strengthen the legal framework supporting its policy for the recovery of native vegetation. During the 13th Conference of the Parties of the CBD, held in December 2016, the GOB made a voluntary commitment with respect to two international initiatives to restore forest landscapes, namely the Bonn Challenge and the 20 × 20 Initiative, to restore, reforest, and induce natural regeneration in 12 million ha of forests by 2030 for multiple uses. These commitments further reinforce the measures identified by Brazil in September 2016 with respect to the implementation of its NDC. Additionally, during the CBD, the goals of implementing integrated agro-silvo-pastoral systems in 5 million ha by 2030 and recovering 5 million ha of degraded pastures by 2020 were defined.

44. In the face of the extent and diversity of ecosystems and landscapes to be recovered, the Federal Government launched PROVEG (Decree No. 8.972/2017). PROVEG aims to articulate, integrate, and promote policies, programs and actions to foster the recovery of forests and other forms of native vegetation and boost the environmental regularization of Brazilian rural properties for an area of at least 12 million ha by December 31, 2030.

45. The main implementation instrument for PROVEG will be PLANAVEG. A preliminary version of PLANAVEG was drafted in 2014 by the MMA with the support of various partners, and it constitutes an important starting point for encouraging discussion with various Brazilian stakeholders on the recovery of native vegetation. Based on this preliminary version, PLANAVEG will be established by a joint Ministerial Ordinance of the ministers for the environment; agriculture, livestock, and supply; and education; together with the Presidency of the Federative Republic of Brazil.

46. PROVEG also established the National Commission for the Recovery of Native Vegetation (*Comissão Nacional para Recuperação da Vegetação Nativa*, CONAVEG), composed of members of the Government and civil society, with the mandate to coordinate the implementation and M&E of PROVEG and PLANAVEG, and to interact with sectors, entities and state, district, and municipal agencies on mechanisms for PROVEG and PLANAVEG management and implementation.

47. In May 2017 civil society representatives launched the ‘Alliance for the Restoration of the Amazon’. This initiative, of which the MMA is a partner, brings together institutions from various sectors of society such as NGOs, research institutions, Government, and the private sector and aims to expand the scale of restoration of the Brazilian Amazon, as well as promote integration between different actions and cooperation between the multiple actors engaged in the subject.

48. In a context in which diverse initiatives in support of vegetation recovery policies are being consolidated, the project's support will play a critical role in reinforcing PROVEG and PLANAVEG. Project activities include, among others, (a) implementation of PLANAVEG strategies in the Amazon, (b) M&E of PLANAVEG implementation, and (c) operationalization of CONAVEG. In addition, activities to support the implementation of the 'Alliance for the Restoration of the Amazon' will also be supported, including, among others, priority studies to strengthen restoration activities in the Amazon.

49. **Law for the Management of Public Forests (Law No. 11.284/2006).** Another key strategic instrument for stimulating the forest economy and maintenance of the standing forest is the granting of public forest concessions. This instrument was created in 2006 by Law No. 11.284/2006. The forest concession policy allows companies and communities to manage public forests to extract timber and NTFPs and offer tourism services. It constitutes an essential element for stimulating sustainable economic activities as well as to combat deforestation and land grabbing. Despite the varied social, economic, and environmental benefits derived from forest concessions, so far, only a few public forests are under concessions and sustainable forest management. Brazil has about 16 million ha of National Forests (*Floresta Nacional*, Flonas), divided into 67 PAs, 34 of which are in the Amazon and correspond to about 99 percent of the total area of the Flonas in the country. At present, only 17 forest concession contracts are in place. These are distributed across 6 Flonas and correspond to little more than 1 million ha. Of the 34 existing Flonas in the Amazon, 20 have approved management plans, 7 have management plans under preparation, while the remaining 7 have yet to start the preparation work. Forest concessions can only be granted for Flonas with a management plan and that are registered in the National Register of Public Forests and identified in the National Forest Concession Plan (*Plano Anual de Outorga Florestal*). Moreover, all public calls for forest concessions must be drawn up based on market information, requiring additional studies to be completed over and above those required for the preparation of the management plan.

50. All these steps hinder the granting of new public forest concessions in Brazil. Within this context, it is strategic to invest in the development of management plans for additional Flonas, as well as to support the studies needed to enable the concession of those Flonas that already have management plans. Another important factor that limits the increase in and expansion of forest concessions in Brazil is the economic viability of the wood products derived from these concessions as they compete directly with wood products from the illegal market. Despite national legislation requiring documentation to prove the origin of the wood, the country still lacks the modern systems of traceability for wood necessary to automate the monitoring and certification processes.

51. In addition, although large areas are being conserved in public forests in the Amazon, some of these areas are degraded or are in the process of degradation. In these cases, the issuance of reforestation concessions for degraded public forestland could be an interesting way to promote forest recovery while simultaneously generating income as, under such an arrangement, the cost of land is not borne by the producer since the production area is public and not private. Though promising, as of now, no models or in-depth studies have been prepared to explore the economic feasibility of this arrangement.

52. In this context, the project will support: (a) the elaboration of management plans for PAs with concession potential; (b) specific viability studies for concessions (timber pricing, production inventory, harvesting logistics, social economic impacts, and so on); (c) training for parabotanists to improve forest inventories; (d) the establishment of mechanisms for monitoring and traceability of wood, through among others, the development of chips and barcodes, with a view to controlling the trade in illegal timber; and (e) the development and implementation of models for reforestation concessions in degraded public forests.

53. **State policies.** In addition to federal policies, it is also essential to strengthen state policies for biodiversity conservation, sustainable use, ecosystem recovery, and territorial management, because states and municipalities have considerable autonomy, including regarding environmental affairs (Complementary Law No. 140/2011). State policies can respond to local contextual particularities in ways that federal policies cannot due to their nationwide nature. Thus, the combined implementation of both federal and state policies in a given area can be strategically important for ensuring the conservation and sustainable use of biodiversity. To this end, the project will support several specific state policies which are under development, for example: (a) the Socio-Biodiversity Program of Acre, (b) the Integrated Monitoring and Environmental Management Center of Acre, (c) the Green Municipalities Program of Pará, and (d) the Forest Concession Policies of the States of Rondônia and Amazonas, as well as supporting instruments and fora for management and territorial planning (municipal environmental committees, water basin committees, environmental secretariat fora). More specifically, activities include, among others, (a) feasibility studies of potential new policies, (b) studies to strengthen implementation of existing policies, (c) policy M&E, and (d) public consultation and validation.

Subcomponent 3.2: Improving Monitoring of Forest Restoration

54. The ability to monitor forest restoration over time is essential to the design and implementation of landscape-level planning processes as well as for assessing the effectiveness of strategies and instruments for the recovery of native vegetation. The TerraClass Amazonia initiative has been producing use and coverage maps of the Legal Amazon, permitting the evaluation of regional dynamics. Mapping conducted under TerraClass Amazonia identifies 12 classes of land use, one of which is 'secondary vegetation.' This class provides important information for the monitoring of forest restoration, indicating the regions where forest regeneration and formation of secondary forests are occurring. The methodology used in TerraClass Amazonia can be refined in support of a continuous and systematic monitoring system for tracking forest restoration.

55. The development of a restoration monitoring system, integrated with SICAR, will be essential for monitoring vegetative restoration in rural properties (by sampling), and will also enable tracking of the implementation efficiency of the Law for the Protection of Native Vegetation. However, development and implementation of this monitoring system depends on overcoming existing knowledge gaps, such as distinguishing the different stages of succession of vegetation, differentiating between forest monocultures and recovery of native vegetation, differentiating between areas dominated by invasive alien plants and areas in early stages of restoration, and definition of baselines. To fill these gaps, activities under this component will seek to build technical and institutional capacity to identify degraded forest landscapes and

monitor forest restoration through support for the design and implementation of a national spatial planning and monitoring platform to support decision making for native vegetation recovery in the Amazon. This platform will be integrated in the existing PMABB instituted under Portaria No. 365/2015. In addition, support for new mapping activities in the context of TerraClass Amazônia will be essential to ensure continuity in the evaluation of the land use and land cover dynamics of the Amazon.

56. Activities supported under this subcomponent include, among others, (a) training of the PMABB actors; (b) strengthening the institutional capacity of the agencies responsible for vegetation monitoring; (c) workshops and technical studies to fill existing knowledge gaps; (d) improving monitoring and methodologies for native vegetation recuperation; (e) acquisition of equipment; and (f) support for the creation and implementation of a national system for monitoring native vegetation recovery, integrated in SICAR.

Subcomponent 3.3: Improving Financial Incentives for Long-Term Restoration Activities

57. The project will also seek to adapt the access rules to existing financial incentive mechanisms such as the Sector Plan for Mitigation and Adaptation to Climate Change for the Consolidation of a Low Carbon Economy in Agriculture (*Plano Setorial de Mitigação e de Adaptação às Mudanças Climáticas para a Consolidação de uma Economia de Baixa Emissão de Carbono na Agricultura,* ABC Plan)[20] of the Ministry of Agriculture, Livestock and Food Supply (*Ministério da Agricultura, Pecuária e Abastecimento,* MAPA), National Program for Strengthening Family Agriculture (*Programa Nacional de Fortalecimento da Agricultura Familiar,* PRONAF)[21] of the Special Secretariat for Family Agriculture and Agricultural Development (*Secretaria Especial de Agricultura Familiar e Desenvolvimento Agrário,* MDSA); BNDES' line of credit for forest-related investments (BNDES Florestal)[22]; and others to make them more attractive to farmers, thus increasing their uptake and investment in restoration activities. To achieve this, the project will seek to bring together key players and, in parallel, support: (a) meetings and workshops to discuss the topic; and (b) targeted studies and research to enable decision making on financial instruments in support of producers. The workshops and studies should provide the diagnosis required for the identification of the key issues to be addressed, as well as the priority regions, sectors, or production chains.

58. Activities under this component will also seek to identify and establish other types of financial mechanisms to boost markets for products and services (for example, wood, NTFPs, and watershed protection) generated by lands with recovered native vegetation. In so doing, new and improved revenue-generating opportunities will be created for landowners, providing an

[20] The ABC Plan is one of the sectoral plans elaborated in accordance with Article 3 of Decree No. 7.390/2010. It focuses on the organization and planning of the actions to be taken to adopt the sustainable production technologies, selected with the objective of responding to the commitments of reduction of GHG emissions in the agricultural sector assumed by the country.

[21] *Pronaf* finances individual or collective projects that generate income for family farmers and land reform settlers. The program has the lowest interest rates for rural financing, in addition to the lowest default among the country's credit systems

[22] The National Bank for Economic and Social Development's (*Banco Nacional de Desenvolvimento Econômico e Social* –BNDES') line of project financing from 1 million Brazilian reais for reforestation, conservation, and forest recovery as well as the sustainable use of native areas.

additional incentive for landowners to engage in the restoration activities required under Law 12.651/2012. One example of an innovative mechanism under discussion and to be supported by the project, is a means by which administrative fines collected for environmental infractions can be used to finance actions for the recovery of native vegetation. The project will support the studies and consultancies necessary to define an appropriate governance and management structure for this innovative mechanism, which is being promoted by the Brazilian Institute of the Environment and Renewable Natural Resources (*Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis*, IBAMA), the agency responsible for federal-level environmental monitoring. It is anticipated that this model, once defined, could serve as a model for developing similar arrangements at the state level.

59. Other areas of intervention include, among others, the introduction of financial mechanisms such as new and improved loans, forest bonds and green bonds, restoration funds, and tax exemptions to encourage native vegetation recovery. With respect to these, the MMA's interventions will focus on fostering political and institutional linkages, catalyzing discussions and encouraging partners to pursue these avenues, as these financial mechanisms are managed by other institutions (including BNDES, MAPA, Ministry of Finance, IBAMA, MDSA, and National Environment Fund [*Fundo Nacional do Meio Ambiente*]).

60. Under this component GEF financing will cover, among others, consultancy services, non-consultancy services, infrastructure and rehabilitation, goods and equipment, public consultations, workshops and training, and salaries and related benefits costs for CI-Brazil employees as per the procedures defined in the POM, and operating costs (including travel and per diems).

Component 4. Capacity Building, Cooperation, and Project Coordination (GEF: US$4.00 million; parallel cofinancing: US$25.09 million)

61. This component will support activities to improve Brazilian stakeholder implementation capacity and collaboration within and across sectors and to promote effective and efficient project implementation, and at the same time will help advance national compliance with international commitments.

Subcomponent 4.1: Capacity Building and Cooperation

62. The component will be designed to link directly to the regional Amazon Coordination Technical Assistance (P159233), which aims to facilitate the exchange of knowledge and experience between the four national child projects in Brazil, Colombia, and Peru, so as to strengthen the impact of national, regional, and international processes and policies committed to avoiding deforestation in the Amazon and promoting sustainable landscape management. Regional knowledge exchange and learning supported under the regional Amazon Coordination Technical Assistance will be directly linked to the implementation of activities and challenges encountered on the ground by the four national projects and will target stakeholders at all levels in the three countries. This practical and demand-driven approach will ensure that problems are identified and focused solutions deployed on time. Activities financed under this subcomponent of the Brazil-ASL Project will support the participation of Brazilian stakeholders in the regional program including, among others, participation in coordination meetings, knowledge exchange

events, specialized workshops, on-the-job training, field visits, and study tours. This subcomponent will also, as relevant, support actions to improve management of environmental issues in collaboration with official counterparts in Peru and Colombia.

63. At the national level, project implementation capacity and impact will be enhanced through cross-sectoral and cross stakeholder capacity development. Capacity-building activities will seek to identify and reinforce synergies between local, state, and federal stakeholders, particularly in the biodiversity, climate change, forestry, and agriculture sectors. These efforts will focus primarily on stakeholders in the areas where project activities will be implemented. Initial areas of focus may include, among others, environmental assessment, restoration, and sustainable management. Training materials and structured lectures will be developed such that they can be readily adapted to local needs so as to better engage local stakeholders and mainstream project results. Gender, social identity issues, and traditional knowledge are considered critical to the integration of local communities and indigenous peoples and will be considered during preparation of this and all other project components. In addition to developing and implementing the abovementioned training activities, capacity building may also include short international internships in sectors/technical areas where there are gaps and/or Brazilian experience lags behind that of other countries.

64. To further encourage and strengthen cross-sector collaboration, project capacity-building activities will target the financial groups, trade organizations, cooperatives, and all three levels of government actors along those forest product value chains which foster reforestation and/or link to timber and non-timber sustainable production in the region. Furthermore, seminars will be carried out under this subcomponent, to support the scaling up of experiences and promote integration in national policies.

65. Activities under this subcomponent will also seek to document and systematize the lessons learned at regional and national levels through project implementation, particularly those related to institutional strengthening and regional integration. These lessons will serve to both: (a) improve project implementation through adaptive management; and (b) inform future efforts to expand and deepen these regional approaches to integrated management of the Amazon biome.

Sub-component 4.2 Project Coordination

66. This component aims to ensure implementation efficiency and efficacy for the project as a whole through the establishment of a satisfactory management system and the maintenance of the project's participatory structures. To this end, it will support the coordination, communication, management, and monitoring of implementation across all components including, among others, (a) the costs associated with the day-to-day management and supervision of overall project implementation, to include: (i) the operation of the PCU by the MMA, responsible for ensuring project implementation and monitoring; and (ii) the project execution unit in CI-Brazil (PEU-CI-Brazil), responsible for the satisfactory management of project funds and procurement processes as well as specific technical and M&E activities under Components 2, 3, and 4; (b) the establishment and functioning of the various project inter-institutional structures including the: (i) POC, the project decision-making body comprising each of the key executing agencies; (ii) multi-stakeholder Brazil-ASL AC, comprising the

Government, private sector, NGO, and civil society, responsible for technical, strategic, and policy guidance and advice; and (iii) ad hoc Technical Working Groups focused on specific issues as necessary; and (c) preparation and implementation of an overarching project communication strategy.

67. Under this component GEF financing will cover, among others, consultancy services, non-consultancy services, infrastructure and rehabilitation, goods and equipment, public consultations, workshops and training, and salaries and related benefits costs for CI-Brazil employees as per the procedures defined in the POM, and operating costs (including travel and per diems).

Annex 3: Implementation Arrangements

BRAZIL: Amazon Sustainable Landscapes Project

Project Institutional and Implementation Arrangements

I. Overview and Management Arrangements

1. **Overview/executing partners.** Overall responsibility for the project lies with the SBio at the MMA, however, its day-to-day implementation will be undertaken in partnership with various agencies, as follows:

(a) Coordination and supervision

(i) **SBio at MMA.** The lead government implementing agency, housing the PCU responsible for coordination, supervision, and monitoring of project implementation.

(b) Technical implementation

(i) **ICMBio.** A government agency responsible for management of federal PAs and threatened species in Brazil.

(ii) **SFB.** A government agency responsible for forest management and implementation of the Forest Code.

(iii) **State environmental agencies**, where appropriate, according to the state PAs and forestry-related activities supported by the project, responsible for the implementation of project activities in state areas under their jurisdiction.

(c) Grant recipients

(i) **FUNBIO** is a nonprofit private entity, qualified by the Ministry of Justice of Brazil as of public interest since 2004. FUNBIO operates under the rules of private law, especially the Brazilian Civil Code.

(ii) **CI-Brazil** is a Brazilian nonprofit organization created in 1990 and established as a civil association under the laws of the Federative Republic of Brazil. CI-Brazil is a legally independent affiliate of Conservation International Foundation based in Arlington, VA, USA. Its mission is to promote human well-being and strengthen society to responsibly and sustainably use and conserve nature. CI-Brazil was chosen by the Government, based on its track record in land management, restoration projects and for being a leader of the Amazon Restoration Alliance. CI-Brazil is considered as an implementing entity for the purposes of this project.

2. The working relationships and roles and responsibilities of each of the project's key executing agencies and institutional structures are summarized in sections II and III below and

will be spelled out in detail in the POM, as well as in a series of Cooperation Agreements to be signed between the executing partners.

3. **Cofinancing partners.** The project will be financed by a US$60.33 million GEF grant and US$373.78 million in parallel cofinancing provided by: (a) the Government of Brazil (GOB) (federal and state); (b) the ARPA Transition Fund (with contributions from *Kreditanstalt fur Wiederaufbau*, KfW; WWF-Brasil, Fundo Mundial para a Natureza; World Wildlife Fund for Nature, WWF-US; Gordon and Betty Moore Foundation; Linden Trust for Conservation; Margaret A. Cargill Foundation; Anglo American Minerio de Ferro Brasil, S.A; Natura; O Boticário; and the original Protected Areas Fund ([*Fundo de Áreas Protegidas*, FAP], excluding GEF contributions); and (c) CI-Brazil. A summary description of the source and form of cofinancing is presented in table 3.1.

Table 3.1. Summary of Project Cofinancing

Name of Cofinancer	Sources of Cofinancing	Cofinancing Amount (US$)
MMA- SECEX	Recipient Government	97,743,401
ICMBio	Recipient Government	26,092,518
SFB	Recipient Government	8,968,692
State of Acre Environmental Agency	Recipient Government	22,978,723
State of Amazonas Environmental Agency	Recipient Government	56,487,215
State of Pará Environmental Agency	Recipient Government	31,812,353
State of Rondônia Environmental Agency	Recipient Government	16,869,652
FUNBIO (Transition Fund)	CSO	104,613,044
CI-Brazil	CSO	8,219,049
Total		**373,784,646**

Note: SECEX = Executive Secretariat of the Ministry of Environment (*Secretaria Executiva/MMA)*

4. **Financial arrangements.** The GOB has selected two agencies, FUNBIO and CI-Brazil, to be the recipients of the GEF grant resources for Component 1 and for Components 2, 3, and 4, respectively. They will be in charge of the FM and procurement activities of their respective grant, ensuring that all project entities carry out their responsibilities for the implementation of the project. CI-Brazil will additionally directly implement specific technical and M&E activities under Components 2, 3, and 4. To this end, the World Bank will sign individual grant agreements with FUNBIO and CI-Brazil (GEF 'Grant Agreements'). The two GEF Grant Agreements set forth the specific terms and agreements for grant management and project implementation, and include the following responsibilities, among others, (a) procuring goods and contracting services needed for project execution with grant resources, (b) carrying out disbursements and the financial execution and accounting of the project, and (c) providing technical support to carry out the project activities. The Coordination Agreements detail the relationship, roles, responsibilities, and coordination arrangements for and between each of the recipients and the MMA.

5. Cooperation Agreements[23] will be signed, as appropriate, (a) between FUNBIO and ICMBio and/or the state environmental agencies with respect to the implementation of activities in and around federal and state PAs (Component 1); (b) between CI-Brazil and ICMBio and SFB and/or the state environmental agencies with respect to the implementation of forest management activities (Components 2 and 3), respectively, as well as for training activities (Component 4). These legal agreements are expected to be developed along similar lines to those governing ARPA Phases I and II projects (P058503 and P114810) and the Marine Protected Areas (GEF MAR) project (P128968), and will define each institution's responsibilities and obligations under the project.

6. **Legal framework**: The following legal agreements, national legislation, and other documents are of relevance for project implementation:

(a) Grant Agreements

(i) Between the World Bank and FUNBIO ('FUNBIO Grant Agreement')

(ii) Between the World Bank and CI-Brazil ('CI-Brazil Grant Agreement')

(b) Coordination Agreements

(i) Between the MMA and FUNBIO

(ii) Between the MMA and CI-Brazil

(c) Cooperation Agreements

(i) Between ICMBio and FUNBIO, attended by the MMA

(ii) Between ICMBio and CI-Brazil, attended by the MMA

(iii) Between the SFB and CI-Brazil, attended by the MMA

(iv) Between state environmental agencies and FUNBIO, where applicable, attended by the MMA

(v) Between state environmental agencies and CI-Brazil, where applicable, attended by the MMA

(d) Applicable national legislation, including: Law No. 9.985/2000,[24] Decree No. 4.340/2002,[25] Decree No**.** 4.339/2002,[26] Law No**.** 11.284/2006,[27] Decree No.

[23] Recent changes in Brazilian legislation related to CSOs (Law No.13.204/2015) establishes that the legal instruments governing relations between the government and CSOs are to be called 'Cooperation Agreements.' Note: there is no transfer of GEF funds under this type of agreement.
[24] Establishes the SNUC and makes other provisions.
[25] Regulates articles of Law No. 9.985/2000, concerning the SNUC, and makes other provisions.
[26] Establishes principles and guidelines for the implementation of the Biodiversity National Policy.

5.746/2006,[28] Law No. 12.651/2012,[29] Decree No. 7.830/2012,[30] Decree No. 8.235/2014,[31] Law No. 13.019/2014,[32] Decree No. 8.505/2015,[33] and Decree No. 8.972/2017[34]

(i) Legal Charter and Operations Manual of FUNBIO

(ii) Legal Charter and Operations Manual of CI-Brazil

7. **Effectiveness conditions.** To this end, the following are the required conditions for effectiveness of the GEF Grant Agreements:

(a) The execution and delivery of the FUNBIO Grant Agreement on behalf of FUNBIO has been duly authorized or ratified by all necessary governmental and FUNBIO corporate actors;

(b) The execution and delivery of the CI-Brazil Grant Agreement on behalf of CI-Brazil has been duly authorized or ratified by all necessary governmental and CI-Brazil corporate actors;

(c) CI-Brazil has retained a procurement specialist under terms of reference acceptable to the World Bank;

(d) The Coordination Agreements and the Cooperation Agreements have been executed on behalf of the parties;

(e) The POMs, in form and substance satisfactory to the World Bank, have been prepared and adopted by the recipients and MMA.

(f) Legal opinions from each of the recipients.

8. All of the above conditions must be met for the project to be deemed effective.

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[27] Addresses management of public forests for sustainable production: establishes the SFB within the MMA; creates the National Forest Development Fund (*Fundo Nacional de Desenvolvimento Florestal)*; changes Laws 10.683/2003, 5.868/1972, 9.605/1998, 4.771/1965, 6.938/1981, and 6.015/1973; and makes other provisions.
[28] Regulates Article 21 of Law No. 9.985/2000, on the SNUC.
[29] Addresses the protection of native vegetation, changes Laws No. 6.938/1981, No. 9.393/1996, and No. 11.428/2006; revokes Laws No. 4.771/1965 and No. 7.754/1989 and the Provisional Measure No. 2.116-67/2001; and makes other provisions.
[30] Addresses SICAR and CAR, establishes general norms to the PRAs, matter of Law No. 12.651/2012 and makes other provisions.
[31] Establishes complementary general norms to the PRAs of the states and federal districts, matter of Decree No. 7.830/2012, establishes the Program More Environment Brazil (*Programa Mais Ambiente Brasil*), and makes other provisions.
[32] Establishes the legal regime for partnerships between public administration and CSOs to achieve public and reciprocal interests, by carrying out activities or projects in accordance with collaborative work plans and development or cooperation agreements; sets guidelines for fostering, collaborating, and cooperating with CSOs; and changes Laws No. 8.429/1992, and No. 9.790/1999.
[33] Addresses ARPA, established by the MMA.
[34] Establishes PLANAVEG.

II. Organizational Structure and Roles and Responsibilities

9. **Overview.** The SBio at the MMA has overarching policy-level responsibility for carrying out the overall institutional coordination required to implement project activities, while the SBio's Department of Protected Areas (*Departamento de Áreas Protegidas)* and Department of Ecosystems Conservation (*Departamento de Conservação de Ecossistemas*) are charged with leading project implementation. A multi-institutional POC, an executive and decision-making body chaired by the MMA, will oversee project implementation. The POC will be directly supported by (a) a PCU based in the MMA/SBio, comprising the ARPA and the sustainable landscapes teams and responsible for the day-to-day coordination and supervision of implementation activities for the project as a whole; (b) focal points in each of the implementing agencies; (c) a PEU based in FUNBIO (PEU-FUNBIO), responsible for day-to-day FM and procurement activities for Component 1; and (d) a PEU based in CI-Brazil (PEU-CI-Brazil), responsible for day-to-day FM and procurement activities for Components 2, 3, and 4. Additionally, with respect to Component 1, the POC will work with the ARPA Program Committee and the CFT, which are responsible for overseeing the implementation and financing of ARPA, respectively.

10. The POM will detail the roles and responsibilities of each of these institutional structures as well as the agencies involved in project implementation. A summary is presented below.

11. **Brazil-ASL AC.** An advisory body comprising representatives of key governmental and nongovernmental stakeholders will be established with a view to providing policy-level and strategic recommendations, particularly in relation to integrated landscape management approaches, promoting linkages to relevant sectoral policies and programs, and resolving intersectoral debates. The Brazil-ASL AC may also provide technical recommendations such as proposing criteria, guidelines, elements, and activities for inclusion in the project's operating plan and will follow the monitoring of project targets and indicators. The Brazil-ASL AC will meet at least once a year, and more frequently on an ad hoc basis as needed. It will be chaired by the SBio/MMA, and will comprise the following 18 members:

- One representative of SECEX/MMA
- One representative of the Secretariat for Climate Change and Forests (*Secretaria de Mudança do Clima e Florestas*, SMCF)/MMA
- One representative of the Secretariat of Extractivism and Sustainable Rural Development (*Secretaria de Extrativismo e Desenvolvimento Rural Sustentável*, SEDR/MMA)
- Two representatives of the SBio/MMA
- Three representatives of ICMBio (Department of Creation and Management of PAs [*Diretoria de Criação e Manejo de Unidades de Conserva*, DIMAN], Directorate of Socio-environmental Actions and Territorial Consolidation [*Diretoria de Ações Socioambientais e Consolidação Territorial*, DISAT], and Department of

Biodiversity Monitoring, Evaluation and Research [*Diretoria de Pesquisa, Avaliação e Monitoramento da Biodiversidade*, DIBIO])

- Two representatives of the SFB (Land Registry and Development Directorate [*Diretoria de Cadastro e Fomento*], and Forestry Concession and Monitoring Directorate [*Diretoria de Concessões e Monitoramento*])

- Four representatives of state environmental agencies

- Two representatives of NGOs (preferably represented through collective associations and with project relevant expertise)

- One representative of FUNBIO

- One representative of CI-Brazil

12. **POC.** The POC is an administrative and deliberative unit and functions to ensure compliance with proposed project objectives, considering the Brazil-ASL AC's recommendations. To this end, the POC will: (a) approve action strategies and define procedures and guidelines; (b) establish criteria for the signing of agreements and contracts envisioned under the project; (c) analyze and approve the project's operating plans and Procurement Plans; (d) review component implementation progress and budgets on a semester basis, and resolve any identified problems and bottlenecks; and (e) analyze and issue opinions on technical and financial reports, as well as on strategic recommendations made by the other project groups. The POC will meet at least once every six months and more frequently as needed. It will be chaired by a representative from the SBio/MMA and will comprise the following members:

- Two representatives of the SBio/MMA (including one from the ARPA Coordination Unit)

- One representative of SECEX/MMA

- One representative of SMCF/MMA

- One representative of SEDR/MMA

- One representative of ICMBio

- One representative of the SFB

- One representative of the states[35]

- One representative of FUNBIO[36]

[35] An individual representative of the participating states will be appointed to the POC on an annual rotating basis.

- One representative of CI-Brazil[37]

13. **Technical Working Groups.** In addition to seeking guidance from the Brazil-ASL AC, the POC may periodically establish specific Technical Working Groups to analyze and provide technical guidance on particular issues that may arise with respect to implementation. Technical Working Groups will report directly to the POC and will typically comprise a subset of the members of the Brazil-ASL AC complemented by additional technical experts drawn from, among others, government, universities, research institutions, NGOs, and/or stakeholders relevant to the question at hand.

14. **PCU.** The PCU is the lead implementing body under the SBio within the MMA. It is composed of the ARPA team and the Sustainable Landscapes Project team. The PCU is responsible for the day-to-day coordination and management of project implementation. This includes: (a) supporting, coordinating, and supervising the implementation of activities under each component by the individual implementing agencies; (b) monitoring the project's physical and financial activities both within and outside PAs according to agreed targets and budgets and, as needed, discussing and proposing adjustments to operations, project reference documents, and methodologies to achieve objectives; (c) updating GEF Tracking Tools, in articulation with federal and state implementing agencies; (d) guiding project implementers on the administrative and financial procedures accepted by the World Bank, as well as providing technical recommendations and ensuring project safeguard compliance; (e) formulating and systematizing documents for analysis and approval by the POC; (f) receiving operating plans; (g) collating and consolidating the physical and financial execution reports from all implementers, in articulation with executing agencies (FUNBIO and CI-Brazil); (h) preparing semiannual progress and M&E reports; and (i) preparing the consolidated operating plans for the project and the general progress report to be reviewed and approved by the POC based on implementation agencies' proposals. The unit, comprising MMA-financed staff, will be headed by a National Project Coordinator and supported by at least two technical specialists, a safeguard officer, and administrative staff. The project PCU will work in close coordination with the focal points in each implementing agency, with a view to coordinating implementation between them. The project's PCU shall interact with ARPA's Coordination Unit so as to ensure integration between the project and the broader ARPA.

15. **Focal points.** Focal points in each implementing agency will ensure the execution of the project's operating plans and Procurement Plans, following POC decisions, integrated with PCU day-to-day guidance and in cooperation with the other implementation agencies.

16. **PEUs.** Two PEUs will be established, one within FUNBIO (PEU-FUNBIO) and the other within CI-Brazil (PEU-CI-Brazil). These will ensure sound fiduciary management of project resources for Components 1 and Components 2, 3 and 4, respectively. Their responsibilities will include, among others, (a) FM, procurement, and implementation, (b) financial progress reports, (c) M&E of the project, as described in detail in the POM; and (d) technical support to carry out the project activities, including, as appropriate, the direct implementation of specific project activities. FUNBIO and CI-Brazil will ensure that the PEUs are staffed with qualified staff in

[36] FUNBIO is a non-voting member of the POC.
[37] CI-Brazil is a non-voting member of the POC.

adequate numbers to ensure sound programmatic and fiduciary management of project resources until completion of the project in agreement with the terms set forth in the POM. The National Project Coordinator in the PCU will work closely with the two PEUs to ensure smooth coordination on questions related to finances and procurement.

17. **ARPA Program Committee.** This is the governing body of ARPA, and its composition is set forth in Decree No. 8,505 of August 20, 2015 and Ministerial Order No. 37 from February 14, 2017. The ARPA Program Committee is composed of six representatives from the federal and state governments and six representatives from civil society. Its mandate includes, among others, overseeing Program implementation, approving operating plans, and recommending adjustments to the POM. It meets ordinarily twice a year. Detailed responsibilities of the ARPA Program Committee are presented in annex 7.

18. **CFT.** This is the decision-making body of the Transition Fund, responsible for ensuring compliance with the POM and related instruments including, among others, ensuring compliance with Disbursement Conditions, approving the fund's maximum allowable annual disbursement, defining and supervising implementation of the Fund Investment Policy, appointment and oversight of the Fund Manager, and so on. (See annex 7 for more details.) The CFT is composed of nine voting members, of whom seven members are nominated by donors and two members are nominated by the GOB (MMA and Ministry of Planning, Budget and Management); the latter must also be members of the ARPA Program Committee. Ordinary committee meetings are held annually and usually three extraordinary meetings are also held within this period.

III. Key Project Implementation Agencies

19. The roles and responsibilities attributed to each of the key implementation agencies will be described in detail in the POM. Table 3.2 provides an overview of the key implementation agencies and partners for each of the four components.

Table 3.2. Implementation and Administration Responsibilities

Component	Implementing Agency	Administrator	Potential Partners
1. Amazon Protected Areas System	ICMBio and the MMA and state environmental agencies	FUNBIO	NGOs, research institutions, grass roots organizations, state agencies, and the private sector
2. Integrated Landscape Management	The MMA, ICMBio, SFB, and state environmental agencies	CI-Brazil	Sectoral ministries, other state agencies, NGOs, research institutions, grass roots organizations, and the private sector
3. Policies for Protection and Recovery of Native Vegetation	The MMA, ICMBio, SFB, and state environmental agencies	CI-Brazil	Sectoral ministries, other state agencies, NGOs, research institutions, grass roots organizations, and the private sector
4. Capacity Building, Cooperation, and Project Coordination	The MMA, ICMBio, SFB, and state agencies	CI-Brazil	National and international federal and state government partners, research institutions, NGOs, and the private sector

20. **MMA.** This ministry is responsible for overall project management and communication activities at the strategic level, evaluating and updating, as needed, project objectives and targets in the project results matrix; monitoring performance against project goals; and supervising FUNBIO and CI-Brazil. Partnerships with research institutions will be critical for carrying out the biodiversity and environmental monitoring. In addition, the project will work, through close supervision and timely actions, to continue to improve the implementation capacity that already exists in all three institutions. The monitoring of project progress will be carried out by the MMA in close coordination with ICMBio, SFB, state environmental agencies, FUNBIO, and CI-Brazil.

21. **ICMBio.** This institute is responsible for ensuring the implementation of all aspects of federal PAs under Components 1, 2, 3, and 4 to include, among others, preparing proposals for the creation of new PAs, managing the consolidation process for existing and newly created PAs, preparing the PA operating plans, elaborating PA management plans, ensuring implementation of management actions (including surveillance and control), and providing the counterpart resources, as well as the implementation of biodiversity and environmental monitoring. DIBIO, together with DIMAN and DISAT within ICMBio will oversee the project actions by the institute and will coordinate with the PCU, in the MMA, and the PEUs in FUNBIO and/or CI-Brazil.

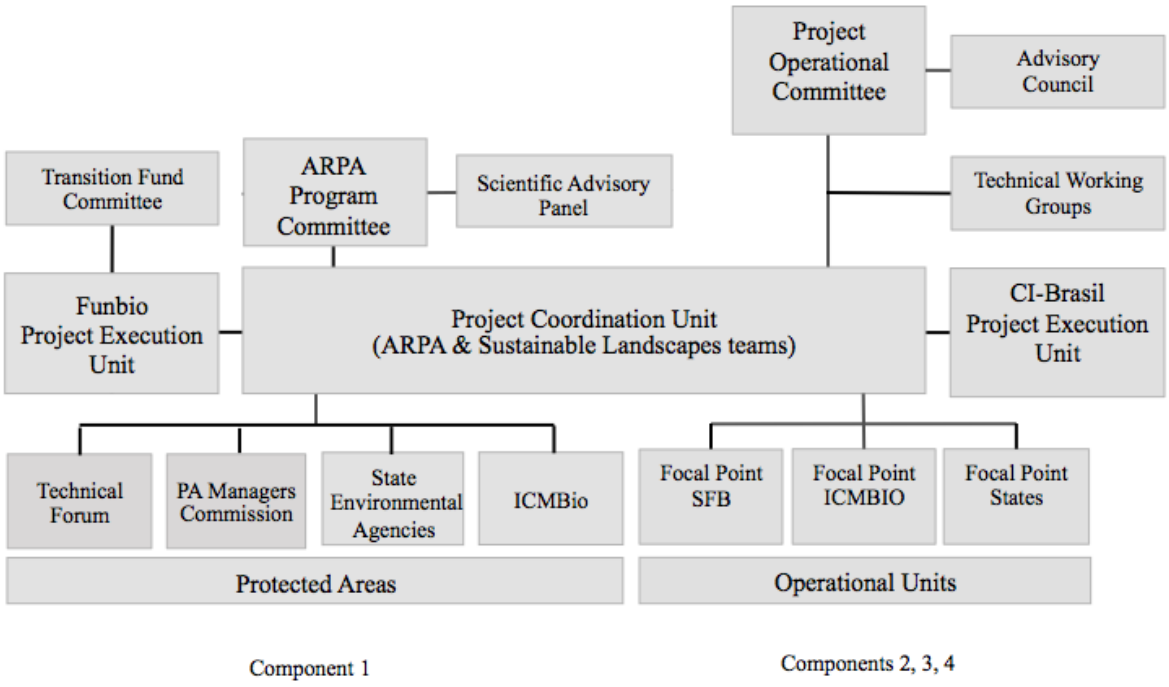
22. **SFB.** The SFB is responsible for ensuring implementation of all forest-related activities under Components 2 and 3, including the coordination and implementation of actions related to the concession of public forests for sustainable forest management; the coordination, in partnership with environmental agencies, of actions related to the CAR and the execution of the PRA. The actions are coordinated by the Forest Concession and Monitoring Department and the Forest Promotion and Inclusion Department.

23. **FUNBIO**. This fund is one of the two grant recipients and executing agencies and has extensive experience in implementing World Bank-financed projects. FUNBIO will be responsible for the FM and procurement functions for Components 1, as well as for approving and tracking the distribution of funds.

24. **CI-Brazil.** Being one of the two grant recipients and executing agencies, CI-Brazil lacks previous experience in implementing World Bank/GEF-financed projects. CI-Brazil will be responsible for the FM and procurement functions, including approving and tracking the distribution of funds and delivering specific technical services and M&E activities for Components 2, 3, and 4.

25. **State environmental agencies.** These are the implementing agencies responsible for, among others, (a) preparing proposals for the creation of state PAs within its territorial jurisdiction; (b) managing the process of consolidating new and existing state PAs; (c) coordinating and implementing vegetation recovery and consolidation of socio-biodiversity chains activities; (d) implementing the CAR, as well as the validation of the registry and execution of the PRA (e) preparing the operating plans for participating states; (f) ensuring implementation of actions proposed on the operating plans; (g) ensuring availability of project monitoring instruments (for example, tracking tools); and (h) ensuring the prompt availability of counterpart resources for the carrying out of the project.

Figure 3.1. Project's Organizational Structure



Financial Management, Disbursement, and Procurement

26. The project's administrative and financial procedures will be detailed in the POM, comprising the project specific procedures governing Components 2, 3 and 4, as well as the procedures specific to the Transition Fund which will govern Component 1.

27. **Operating plans.** The MMA, ICMBio, SFB, state environmental agencies, FUNBIO, and CI-Brazil, where appropriate, and under the scope of their respective responsibilities, will prepare individual operating plans and send them to the PCU. The operating plans direct the application of financial resources allocated to the project. The PCU reviews and consolidates the different operating plans into a single project-wide operating plan and submits it to the POC for approval. The project's operating plan is then sent to the World Bank for 'no-objection.' The PCU forwards the final operating plan to FUNBIO, CI-Brazil, and other agencies and administrative authorities in charge of operating plan execution. These agencies, in turn, implement the operating plan through their internal procedures, strictly observing the terms approved by the World Bank and POC and the contractual rules assumed with the World Bank through the grant agreements and the POM.

28. With respect to Component 1, programming and financing of activities will follow the established processes and procedures of the Transition Fund (see annex 6 for details).

Monitoring and Evaluation of Project Results

29. A project M&E unit will be established within the PCU at the MMA to implement M&E activities. The M&E indicators have been agreed and are presented in annex 1. M&E of

project implementation will be conducted through: (a) activities of the PCU at the MMA, PEU-FUNBIO, and PEU-CI-Brazil; (b) semiannual progress reviews by the POC; (c) semiannual progress reviews during World Bank implementation support missions; and (d) midterm review of project implementation to be conducted jointly by the GOB, POC, PCU, FUNBIO, CI-Brazil, and the World Bank. Every six months, the PCU will transmit to the World Bank annual progress reports on project implementation and outcomes (project reports); these project reports shall be furnished to the World Bank not later than two months after the end of the period covered by the report. An Implementation Completion and Results Report will be prepared within six months after closing of the GEF grant.

Financial Management

30. **Overview.** The World Bank performed an FM assessment of both FUNBIO and CI-Brazil, in accordance with OP/BP 10.00 and the Financial Management Manual for World Bank-Financed Investment Operations (effective March 1, 2010 and Revised February 10, 2017). The scope of the assessments included: (a) an evaluation of the existing FM systems in place to be used for project monitoring, accounting, and reporting; (b) a review of staffing requirements; (c) a review of the flow of funds arrangements and disbursement methodology; (d) a review of the internal control mechanisms in place; (e) a discussion with regard to the reporting requirements, including the format and content of IFRs; and (f) a review of internal and external audit arrangements.

31. **Conclusion.** Considering project design and seeking effective and efficient project management and monitoring over the use of funds, each PEU will have its own FM arrangements. Despite the parallel arrangements, this design ensures that all FM aspects of the project will be well monitored.

32. The FM arrangements as described below are acceptable.[38]

33. **FM risk rating.** The overall FM risk rating associated to the project is Substantial for PEU-CI-Brazil and Low for PEU-FUNBIO. The FM assessments identified the following risk to the achievement of the PDO: PEU-CI-Brazil's lack of experience with World Bank procedures.

34. **Integrated fiduciary risk rating.** The integrated fiduciary risk rating is Substantial.

FM Arrangements for CI–Brazil

35. **Executing Agency.** In addition to delivering specific technical services, CI-Brazil will be responsible for carrying out the project's administrative and FM tasks, accounting, and disbursements for Components 2, 3, and 4.

[38] Arrangements are acceptable if they are considered capable of recording correctly all budgets, transactions, and balances, supporting the preparation of regular and reliable financial statements, safeguarding the entity's assets, and are subject to auditing arrangements acceptable to the World Bank. The Financial Management Assessment for CI-Brazil was approved for the Rio de Janeiro unit. No overhead fees or payments of salaries or other expenditure related to headquarters Conservation International staff are eligible to be financed under the grant proceeds.

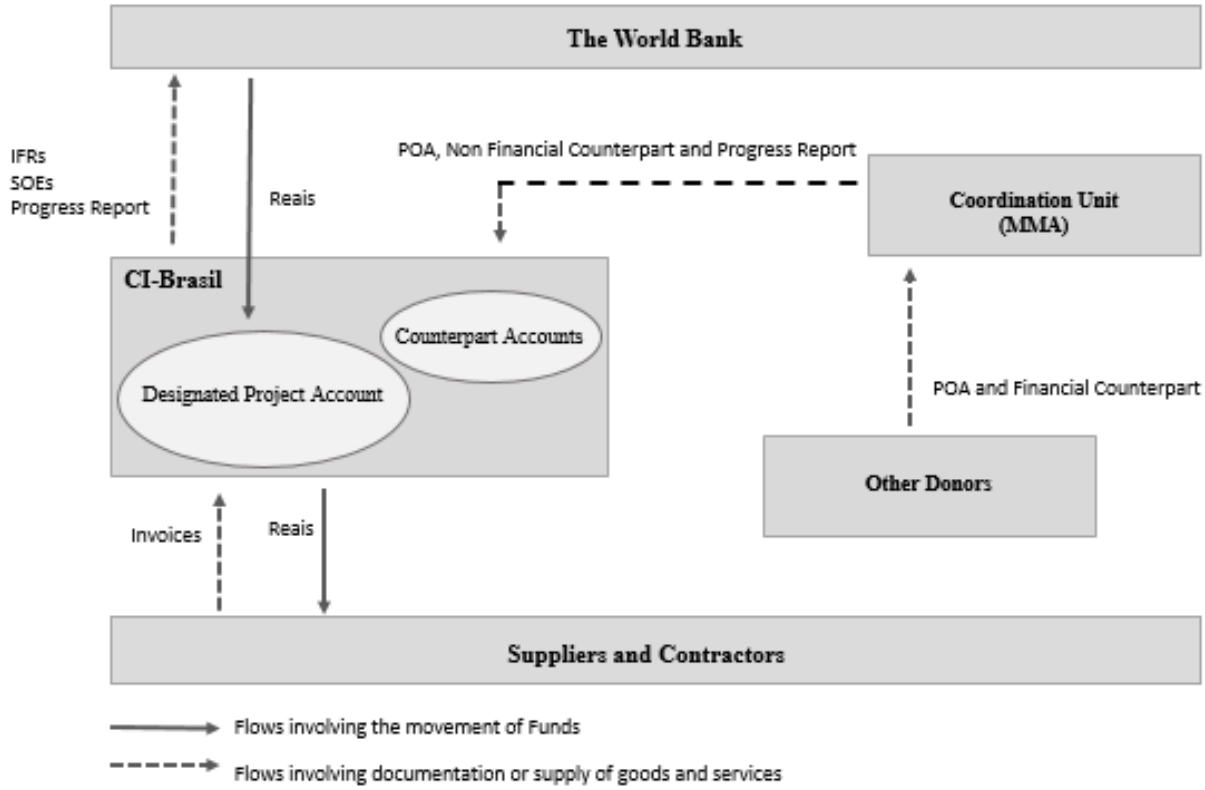
36. **Staffing.** CI-Brazil personnel in the fiduciary and technical areas have the required education levels, experience and knowledge of processes to perform these functions. However, specific training on the World Bank's procedures and policies will be required

37. **Budgeting and Accounting.** CI-Brazil adheres to the Brazilian Accounting Rules (*Normas Brasileiras Contabilidade*), Law No. 6.404/76 and 11.638/07, which together with other rules, policies, and procedures issued by the National Treasury Secretariat (*Tesouro Nacional*), National Federal Accounting Council (*Conselho Federal de Contabilidade*), and Committee of Accounting Guidelines (*Comitê de Pronunciamentos Contábeis*) is aligned with international accounting standards and International Financial Reporting Standards. CI-Brazil will maintain the accounting records of the transactions under the grant encompassing the related components activities. Besides identifying the project under its current chart of account structure, CI-Brazil will record all transactions in the Business World system (components and subcomponents under the 'work order' and categories under 'activities' structure). They will reconcile these records with budget and procurement report figures on a monthly basis. The Business World system will be used by CI-Brazil as the Financial Management Information Systems. Transactions under the grant will be accounted for on a cash basis, for disbursements, reporting and auditing purposes.

38. **Internal controls.** All project budgeting and accounting transactions will run through the Business World system. All payments will follow acquisition, verification of invoices (*provisão*), and payment (*pagamento*) routine. All transaction processing (recording annual budgets, budget commitments, and payables; authorizing payments; and internal control reviews) will be carried out by CI-Brazil that will execute payments and control the segregated project bank account. These functions will be carried out by the Accounting and Finance Departments of CI-Brazil. Other internal control mechanisms will include: review and reconciliation of payments, proper access to systems, segregation of functions, and observation of internal administrative codes and procedures. Internal controls procedures will be detailed in the POM and, if necessary, new routines will be established during project implementation.

39. **Funds flow and disbursement arrangements.** All payments will be made by the financial department using the Business World system, upon instructions from the PEU-CI-Brazil, once expenditures have been incurred and properly documented. Payments will be made directly by CI-Brazil, through the issuance of a payment authorization (*autorização de pagamento*) to service providers and contractors. To make payments, funds will be committed by source, making possible the tracking of grant disbursements/receipts to project expenditures, due to this earmarking mechanism within the system. No advances or decentralization of funds will be made during project implementation.

Figure 3.2. Flow of Funds – CI-Brazil



40. **Disbursement arrangements.** The following disbursement methods will be available: Advance, Reimbursement, and Direct Payment. Disbursements will be primary based on the use of Advances. The World Bank will advance funds into a segregated Designated Account, maintained exclusively for management of grant proceeds, opened in Brazilian reais at Itau Unibanco S.A, in the name of CI-Brazil. The ceiling of the Designated Account will be fixed as BRL 9,500,000. The PEU-CI-Brazil will report on the use of Advances and Reimbursement requests through simplified SOEs (generated through Business World). Direct Payments will be documented by records (copy of the invoices). There will be no decentralization or transfers of funds to any other agency.

41. The counterpart funds will be managed separately from the Designated Account. Counterpart funds will be properly accounted, monitored, and reported by CI-Brazil.

42. Retroactive financing will be allowed for this project up to an aggregate amount not to exceed US$3,000,000 to be made for payments up to 12 months before the signing date of the grant agreement for eligible expenditures but no earlier than April 4, 2017.

43. The grant will also have a four-month grace period after the closing date, during which the World Bank will accept withdrawal applications relating to project transactions incurred before the closing date. The grant will have a minimum application size of US$500,000. All disbursement details will be reflected in the Disbursement Letter. Table 3.3 specifies the categories of eligible expenditures that may be financed out of the proceeds of the grant under Component 2, 3, and 4 administered by CI-Brazil.

Table 3.3. CI-Brazil Disbursement Categories

Category	Amount of the Grant Allocated (US$)	Percentage of Expenditures to be Financed (inclusive of Taxes)]
(1) Works, goods, consultants' services, non-consulting services and training under Project Components 2, 3, and 4	21,000,000	100
(2) Operating costs under Project Components 2, 3, and 4	5,000,000	100
(3) Remuneration of CI-Brazil staff:		
3-a - Technical staff remuneration under Project Components 2, 3, and 4	1,800,000	100
3-b – Administrative staff remuneration under Project Component 2, 3, and 4	2,530,000	100
Total Amount	30,330,000	

44. **Financial reporting.** CI-Brazil will ensure the timely production of semiannual financial monitoring reports (IFRs), prepared in Brazilian reais and U.S. dollars, for monitoring reasons and that these reports will be generated from the Business World system and be submitted to the World Bank, within 45 days after the end of each semester. A specific ledger will be created in the system to record all grant transactions and will be aligned with the structure of the grant cost table to record transactions by category and component/activity. Any counterpart contribution (in-kind or cash contributions) supporting the grant's activities will be reflected in the IFRs. Accordingly, the format and content of the IFRs will cover the following items:

- IFR 1A - Sources and Uses of Funds by disbursement category, with evidence of the World Bank's share in the financing of expenditures, cumulative (project-to-date, year-to-date, and for the period) versus actual expenditures, including a variance analysis

- IFR 1B - Uses of Funds by Project Activity or Component, cumulative (project-to-date, year-to-date, and for the period) versus actual expenditures, including a variance analysis

- IFR 1C - Designated Account bank reconciliation

45. **External auditing.** CI-Brazil's prior external auditors (RR auditors) who issued an unqualified audit opinion on CI-Brazil's annual financial statements (calendar year 2015). For project purposes, specific annual financial statements will be audited by independent auditors, satisfactory to the World Bank, in accordance with acceptable auditing standards. The external audit will be conducted according to TOR acceptable to the World Bank. The auditors will be required to issue an opinion on the project's financial statements (IFRs), according to the World Bank's guidelines. Auditors will also have to prepare a Management Letter, where any internal control weaknesses will be identified, which will contribute to the strengthening of the control environment. The auditor's report will be submitted to the World Bank no later than six months after the closing of the grantee's fiscal year, and the annual audit may be financed out of grant proceeds.

46. **Implementation Supprot Plan.** FM implementation support will take place twice a year and include: (a) reviewing of semiannual IFRs; (b) reviewing of the auditors' reports and follow-

up of any issues raised by auditors in the Management Letter, as appropriate; (c) participating in project implementation support; and (d) updating the FM rating in the Implementation Status and Results Report.

FM Arrangements for FUNBIO

47. **Financial Management Assessment conclusion.** The overall conclusion is that FUNBIO's FM arrangements, as set out for this project, are acceptable and the FM risk is rated Low**.**

48. **Implementing agency.** FUNBIO will be responsible for carrying out the project's administrative and FM tasks, accounting, and disbursements for Component 1. Monitoring is carried out jointly by the PCU, FUNBIO, and the PA management agencies (*Órgãos Gestores das Áreas Protegidas,* OGs). They are responsible for the preparation of periodic reports, on the topics most directly related to their specific responsibilities.

49. **Staffing.** The PEU-FUNBIO is well staffed, appropriately qualified, and has experience in working with World Bank-administeredfinanced projects, KfW, and other donors.

50. **Budgeting and accounting.** FUNBIO adheres to the Brazilian Accounting Rules (NBC), Laws No. 6404/76 and 11.638/07, which together with other rules, policies, and procedures issued by the Secretariat of the National Treasury (*Secretaria do Tesouro Nacional*), Federal Accounting Council (*Conselho Federal de Contabilidade*), and Committee for Accounting Guidelines (*Comitê de Pronunciamentos Contábeis)* are aligned with international accounting standards. The accounting and monitoring systems in place (resource management and Cérebro II) have the capacity to record the assets, liabilities, and the financial transactions of the project. Transactions under the grant will be accounted for on a cash basis, for disbursements, reporting, and auditing purposes.

51. **Internal controls.** FUNBIO has elaborate levels of approvals for specific budget transfers/allocations to allow proper execution of activities. Control is exercised through segregation of functions, the oversight of FUNBIO's financial counsel, reconciliations of accounts (prepared by the focal points), and different levels of access to information systems and approval. FUNBIO also has an internal auditor who is responsible for defining preventative internal control procedures. The accounting records are maintained electronically and are reconciled with budget and procurement reports on a monthly basis. Expenditure reports are further analyzed and cash flow analyses are conducted both on an ex post basis (analyzing weekly spending for the prior month) and on a forecast basis for the upcoming month. Administrative procedures have been established to ensure that financial transactions are made with consideration to safeguarding project assets and ensuring proper entry in the accounting/monitoring systems.

52. **Fund flow and disbursement arrangements.** FUNBIO will be primarily responsible for implementation of Component 1, which aims to expand and consolidate an over-60-million-ha PA system in the Brazilian Amazon and advance ongoing efforts to secure its long-term financial sustainability by capitalizing the ARPA Transition Fund (see annex 7 for details). In the context of this project the Transition Fund will: (a) bring an additional 3 million ha of the Amazon

region under legal protection; (b) strengthen the consolidation of 60 million ha of ARPA-supported PAs (new and pre-existing); (c) strengthen the coordination, management, monitoring, and communication of ARPA as a whole, and (d) develop and implement strategies to raise additional revenue for the ARPA Transition Fund.

53. Under this component, GEF financing will capitalize the Transition Fund, which would in turn finance, among others, consultancy services; non-consultancy services (for example, publications; rental of vehicles, boats, and aircraft; and maintenance and repair services); infrastructure and rehabilitation works; goods and equipment; public consultations; research scholarships; workshops and training; and operating costs (including travel and per diems).

54. Disbursements to the Transition Fund, will be made in three instalments (through the Direct Payment disbursement method) of US$10 million each. In line with the description in table 3.4, each disbursement will be supported by documentation, evidencing that prior installment criteria has been met. Disbursements will be made directly from the World Bank, to the Transition Fund bank account at Itau Bank International (Miami Branch), in three tranches in accordance with the triggers shown in table 3.4.

Table 3.4. Transition Fund Disbursement Conditions

Disbursement Tranche	Disbursement Condition	Supporting Documentation
First disbursement	Upon grant effectiveness and confirmation of the donor contributions received to date by the Transition Fund.	Effectiveness notice from the World Bank and copy of the signed contracts and deposit confirmations as reflected in the bank statements and notification signed by the World Bank authorizing disbursement.
Second disbursement	Signature of at least one formal environmental compensation agreement - ARPA TTCA (*Termo de Compromisso de Compensação Ambiental*)	Official letter from ICMBio presenting directing environmental compensation resources to the ARPA PAs and notification signed by the World Bank authorizing disbursement
Third disbursement	BNDES approval of the proposal for funding the ARPA Transition Fund	Official letter from Amazon Fund (BNDES) informing the proposal's framework was approved (*enquadramento*) and notification signed by the World Bank authorizing disbursement

55. Table 3.5 specifies the category of Eligible Expenditure that may be financed out of the proceeds of the grant under Component 1 administered by FUNBIO.

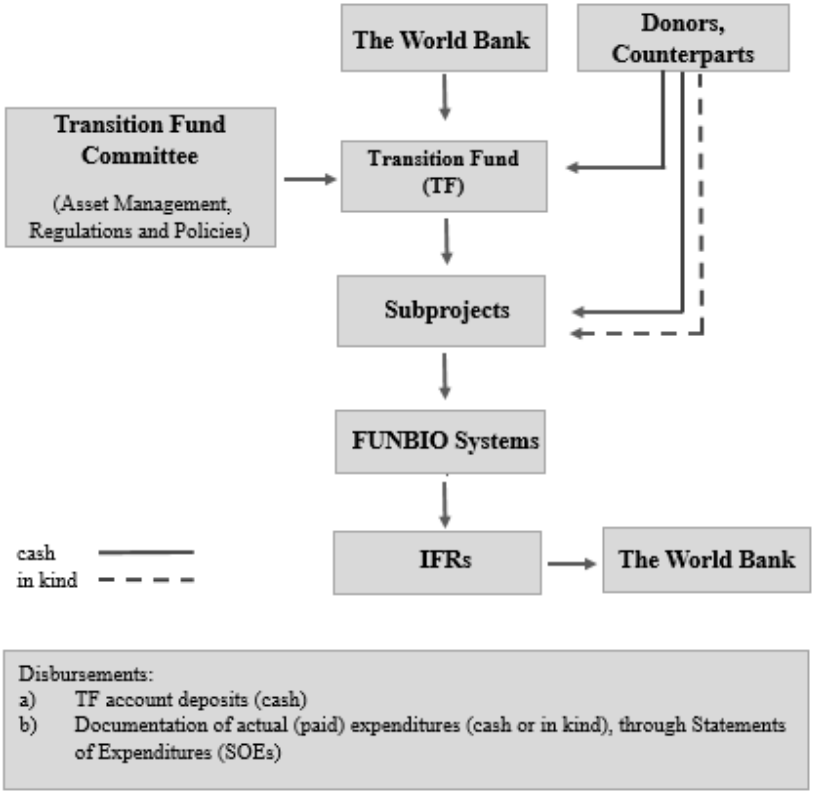
Table 3.5. FUNBIO Disbursement Categories

Category	Amount of the Grant Allocated (US$)	Percentage of Expenditures to be Financed (inclusive of Taxes)
(1) Capitalization of the Transition Fund - First Tranche	10,000,000	100
(2) Capitalization of the Transition Fund - Second Tranche	10,000,000	100

Category	Amount of the Grant Allocated (US$)	Percentage of Expenditures to be Financed (inclusive of Taxes)
(3) Capitalization of the Transition Fund - Third Tranche	10,000,000	100
Total Amount	30,000,000	

56. Funds from the Transition Fund bank account, will then be used for the implementation of ARPA. The flow of funds is illustrated in figure 3.3.

Figure 3.3. Flow of Funds for FUNBIO



57. **Financial reporting.** FUNBIO will ensure the timely production of semiannual financial monitoring reports (IFRs) in Brazilian reais for monitoring reasons, and that these will be produced from the FUNBIO's system, and be submitted to the World Bank, within 45 days after the end of each semester. Accordingly, the format and content of the IFRs, agreed with the recipient, will cover the following items:

- IFR 1A - Sources and Uses of Funds by disbursement category, with evidence of the World Bank's share in the financing of expenditures, cumulative (project-to-date, year-to-date, and for the period) versus actual expenditures, including a variance analysis (attaching Memorandum of the President reports);

- IFR 1B - Transition Fund Account bank reconciliation (consolidated report from the Transition Fund asset manager).

58. **External auditing.** For project purposes, annual financial statements will be audited by independent auditors, satisfactory to the World Bank, in accordance with acceptable auditing standards.

59. For previous World Bank-administered grants implemented by FUNBIO, the World Bank agreed to accept FUNBIO's internal regulations on auditing arrangements, which is to use the same audit firm hired to audit FUNBIO's accounts (for a three-year period) to also prepare a specific audit report on each of the World Bank-administered grants under implementation during the said period, subject to the World Bank's yearly review of the respective TORs. The audit will be due no later than six months after the end of the fiscal year.

60. **Implementation Support Plan.** The Transition Fund will benefit from regular implementation support by the World Bank for the lifetime of the project. FM implementation support missions will take place twice a year and include (a) reviewing of semiannual IFRs; (b) reviewing of the auditors' reports and follow-up of any issues raised by auditors in the Management Letter, as appropriate; (c) participation in project supervision; and (d) updating the FM rating in the Implementation Status and Results Report.

How the Transition Fund Operates

61. The Transition Fund is a private financing mechanism created through contracts between entities, individuals, legal entities, and Brazilian and foreign donors.

62. The Transition Fund aims to provide resources and incentives for the federal and Amazonian state governments to: (a) enable the creation of 6 million ha of new PAs; (b) complete the consolidation of 60 million ha of PAs and maintain those PAs, according to the Reference Frameworks established for ARPA; and (c) gradually increase the resources provided by governments to ARPA, so that, after a period of 25 years, government funds and alternative funding sources will finance 100 percent of the Program costs, without any additional support from the Transition Fund or any other donor funds.

63. To this end, the Transition Fund intends to finance the acquisition of goods and services to be donated to the PA management agencies for exclusive use in the creation, consolidation, and maintenance of the supported PAs, provided that certain conditions are fulfilled by the federal and state governments. The idea is that by 2039, Transition Fund resources will have been exhausted and, consequently, the Transition Fund will be closed and PA operating and maintenance costs will be fully covered by the government budget and alternative funding sources.

64. **CFT**. The CFT is the decision-making body of the Transition Fund, with the purpose of supervising/overseeing compliance with the instruments that define its functioning. The CFT is composed of nine voting members, of whom seven members are nominated by donors and two members are nominated by the GOB (MMA and Ministry of Planning, Budget and Management); the latter must also be members of the ARPA Program Committee. Ordinary committee meetings are held annually and usually three extraordinary meetings are also held within this period. Specific responsibilities of the CFT include, among others, the following:

(a) Analyze the technical and financial results of ARPA

(b) Evaluate compliance with the Disbursement Conditions, every two years, according to the reports presented

(c) Decide, every two years, on the maximum annual withdrawal volume of the Transition Fund to pay the eligible expenses in the PAs of ARPA

(d) Determine the investment policy of the Transition Fund

(e) Monitor and analyze the financial performance of the Transition Fund

(f) Monitor, evaluate, and supervise fund management activities carried out by the fund's financial manager (*Gestor Financeiro,* GF)

(g) Evaluate the external and independent audit report prepared in relation to the GF

(h) Approve a strategy for attracting new resources to the Transition Fund, if the CFT determines, in its sole discretion, that it is desirable to raise new resources, as well as approve new donors and/or donations

(i) Appoint the GF and replace it in its sole discretion

(j) Approve, with exclusivity, any modifications in Module 2 of the Operational Manual of ARPA, and suggest to the ARPA Program Committee changes in Module 1 of the manual. The manual will serve as the basis to manage the fund in accordance with the financial and operational policies, specified therein

(k) Require the GF to contract, at the expense of the Transition Fund, independent consultants for any areas or topics deemed necessary by the CFT

(l) Based on the assessment of compliance with the Disbursement Conditions, identify which PAs or PA management agencies have not met the Disbursement Conditions biennially, and determine how to handle it

(m) Suspend the use of Transition Fund resources for ARPA if the CFT deems that the Disbursement Conditions have not been substantially fulfilled for a period of four consecutive years.

65. **Flow of funds for the Transition Fund.** All resources donated to the Transition Fund are pooled in a single fund and are not individually tracked by the donor. These resources are used up to the limit of disbursements approved by the CFT for the given period (biannual), in accordance with the rules contained in the Transition Fund's Operational Manual. Transfers approved by the CFT are made from the account of the fund in Brazil to the Operational Account of the Program. FUNBIO as the Transition Fund's GF will be responsible for processing all payments for works, goods, and services. Payments will be made directly from this operating account. All payments from this account shall be made through electronic deposits to the bank account of the beneficiary/supplier. The original supporting documentation will be available at FUNBIO headquarters.

66. **Reporting arrangements:** The Transition Fund adopts a series of standardized financial and technical reports, designed to meet the requirements of all Transition Fund donors, ensuring greater transparency and efficiency. FUNBIO is responsible for monitoring the detailed execution of financial resources, financial balances, and account rendering. OGs are responsible for monitoring the execution of resources within the PAs, following their physical-financial performance and progress with regard to the Program's planned targets according to the FAUC and PEP planning tools. The OGs, together with the PCU, also monitor the execution of the governmental, financial, and in-kind cofinancing. The PCU is also responsible for in situ monitoring, for monitoring PA creation and management effectiveness, progress in the Program's creation and consolidation targets, and the implementation of the components of the Program. In addition, FUNBIO conducts an independent external audit every year, which analyzes its accounts, as well as the accounts of ARPA and the Transition Fund, both of which will be submitted to the World Bank two months after the completion of the respective audits.

Procurement

67. Procurement for the proposed project, including the Transition Fund[39], will be carried out in accordance with the World Bank Procurement Regulations for Borrowers under Investment Project Financing dated July 2016 and the provisions stipulated in the Legal Agreement. Component 1 will be executed by FUNBIO following the processes and procedures established in the Transition Fund Manual (see annex 7 for details).

68. The various items under different expenditure categories are described in general terms below. For each contract to be financed by the grant, the different procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements, and time frame will be agreed between the Recipient and the World Bank in the Procurement Plan.

69. The World Bank's Standard Procurement Documents will govern the procurement of World Bank-financed Open International Competitive Procurement. For procurement involving National Open Competitive Procurement, the Recipient will use Standard Procurement Documents acceptable to the World Bank that will be included in the Operational Manual.

70. **Procurement of works.** Works procured under the project will include, among others, small construction and expansion or renovation projects. Depending on the estimated amounts, they will be carried out through Open National Requests for Quotations (RFQs) or Requests for Bids.

71. **Procurement of goods.** Goods procured under the project will include, among others: vehicles, boats, satellite images, information technology and electronic equipment and systems, and household supplies. The provision of goods may be carried out in accordance with the method known as '*Pregão Eletrônico*,' as set forth in Brazilian Law No. 10.520/2002, provided: (a) documents are acceptable to the World Bank, (b) documents include anticorruption clauses,

[39] The Transition Fund procurement policies are fully aligned with the World Bank Procurement Regulations for Borrowers under Investment Project Financing dated July 2016.

and (c) the process is carried out under an e-procurement system previously approved by the World Bank.

72. **Procurement of non-consulting services**. Non-consulting services under the project will include, among others: the cost of installation of equipment, repairs and/or maintenance services, delimitation surveys, capacity-building support to the implementation and beneficiary agencies, monitoring, reporting, and evaluation-related services, events, training, workshops, seminars, logistics, travel services, and so on. Non-consulting services may be carried out in accordance with the method known as '*Pregão Eletrônico*,' as set forth in Brazilian Law No. 10.520/2002, provided: (a) documents are acceptable to the World Bank, (b) documents include anticorruption clauses, and (c) the process is carried out under an e-procurement system previously approved by the World Bank.

73. **Selection of consultants.** Consulting services under the project will include preparation of PA management plans, land tenure studies, works supervision, engineering designs, communication and marketing plans, asset management, conservation finance studies, development of conservation financing mechanisms, legal advice, and preliminary studies to create PAs, and so on. The following methods will be used for selecting consulting firms depending on the nature, estimated amounts, and complexity of assignments, attractiveness to foreign firms, and the need for international expertise: Quality- and Cost-Based Selection, Least-Cost Selection, Selection under a Fixed Budget, Selection Based on Consultant's Qualification, Single-Source Selection both for consulting firms and individual consultants, and Selection of Individual Consultants. The threshold for international advertisement will be in the Procurement Plan.

74. **Operating costs** mean necessary and reasonable incremental costs related to technical and administrative management, preparation, monitoring and supervision required under the project, including among others, office equipment, supplies, travel costs (including accommodations, transportation costs, and per diem), printing services, communication costs, utilities, maintenance and rental of office equipment and facilities, insurance, vehicle operation and maintenance costs, and logistics services. Procurable expenses under operating costs to be financed by the project will be procured following the World Bank Procurement Regulations for IPF Borrowers dated July 2016 and shall be listed in the Procurement Plan.

75. **CI-Brazil technical staff remuneration** means the remuneration and benefits costs paid for the recipient's technical staff for services provided exclusively for implementation of Components 2, 3, and 4 of the project, as stated in the POM and approved by the World Bank.

76. **CI-Brazil administrative staff remuneration** means the remuneration and benefits costs paid for the recipient's administrative staff for services provided exclusively for the implementation of Components 2, 3, and 4 of the project as stated in the POM and approved by the World Bank.

77. **Training costs** means expenditures (other than those for consulting services) incurred in connection with the carrying out of training, seminars, and workshops, including the reasonable travel costs (for example, 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 Components of 2, 3, and 4 of the project.

78. **Other**. The detailed arrangements for the procurement procedures and standard bidding documents to be used for each procurement method, as well as model contracts, are presented in the project's Operational Manual.

79. ***Contas vinculadas*.** The *contas vinculadas* are mechanisms for distribution of funds that allow for more autonomy of PA administrators to spend small amounts of their budgets on daily operation and maintenance of PA offices. These items are considered operating costs and will be procured using FUNBIO's administrative procedures, which were reviewed and found acceptable to the World Bank. A detailed list of expenditures eligible to be paid out of *contas vinculadas* is included in the POM.

80. **Procurement assessment**. There are two implementing agencies.

(a) **Assessment of FUNBIO's capacity to implement procurement.** FUNBIO currently implements two other GEF projects with the World Bank, the Marine Protected Areas Project (P128968) and the Amazon Region Protected Areas Project, Phase II (P114810), and a full capacity assessment is not necessary, because the institution has been applying the World Bank Procurement Guidelines for over 15 years. Furthermore, due to the nature of the project, no complex procurement is expected. FUNBIO uses a management system named Cérebro, which has a full procurement module. This system deals with procurement responsibilities and formalizes the decision-making process. Its bidding and contracting manual and filing system was reviewed and found acceptable by the World Bank. Its Procurement Unit is adequately staffed by trained personnel.

(b) **Assessment of CI-Brazil.** A full capacity assessment of CI-Brazil to implement procurement in accordance following World Bank Regulations has been carried out. Their Procurement Department is staffed with only one professional who is trained on the former Procurement Guidelines, with little practical experience. CI-Brazil plans to assemble a full-time dedicated unit for this project, including two procurement coordinators. The hiring of this procurement specialist with TORs acceptable to the World Bank is a condition of effectiveness for the project. It is anticipated that training and intensive hands-on support will be needed in the beginning of the project.

81. **Project Procurement Strategy for Development (PPSD).** A PPSD was prepared for the project as a whole, covering FUNBIO and CI-Brazil. It shows that both institutions are adequately equipped to handle the procurement ahead of them, with most of it falling into the selection of individual consultants and goods and non-consulting services to be contacted through RFQs.

82. Overall, the procurement risk associated with the project has been assessed as 'Moderate,' because most of the selection processes are not expected to have higher complexity.

Table 3.6. Procurement Action Plan

Act	Description	Action	Time Frame
1	Lack of procurement personnel and experience by CI-Brazil	Hiring of procurement coordinators Strengthening CI-Brazil's capacity through ongoing World Bank support and specific procurement training	By effectiveness
2	Lack of FUNBIO's practice with the new procurement regulations	Strengthening FUNBIO's capacity through specific procurement training	By effectiveness
3	Quality of TORs and technical specifications	Reach out for experts' advice on the definitions of the TORs and specifications. Technical concurrences to technical documents to be issued by the task team leader	Throughout implementation Before launching of each procurement process
4	Weak and imprecise cost estimates	Base estimates on market data and not only on official tables issued by the Government	Throughout implementation
5	Companies involved in fraud and corruption issues	Maintain a strict control over the companies and individuals that are debarred by multilateral development banks	Throughout implementation

83. All bidding documents and contracts, regardless of the amount and procurement method, are required to have the anticorruption clause as an eligibility condition.

Procurement Plan

84. The Recipient has prepared a Procurement Plan for the proposed Project in the Systematic Tracking of Exchanges in Procurement (STEP) system for the first 18 months of project implementation, which provides the basis for the procurement processes. This plan was agreed upon between the MMA, FUNBIO, and CI-Brazil, and was approved by the World Bank. The Procurement Plan will be updated in agreement with the World Bank on a biannual basis or as required to reflect the actual project implementation needs and improvements in institutional capacity.

Environmental and Social (including safeguards)

85. **Safeguard policy issues.** This is essentially a conservation project and no potential large scale, significant, and/or irreversible negative impact is expected from the project. Long-term positive impacts are expected from the project, mainly related to increased ecosystem and biodiversity connectivity, protection, and resilience, as well as increased sustainability of agricultural lands surrounding PAs. National environmental legislation is very robust and includes specific rules and procedure for the creation of PAs, which aim at reducing social impacts and maximizing biodiversity benefits. The Recipient is experienced with the implementation of World Bank safeguards in similar World Bank-financed operations, with a satisfactory track record. The project's ESMF reinforces and complements the national legal framework, defining preventive procedures and mitigation measures to address key aspects that will require attention during implementation, such as forest management for timber and non-timber products, pest management, application of consultation procedures for PA creation, and participation of indigenous peoples, among others. The project was assigned Category B and the following safeguards were triggered: OP/BP 4.01 Environmental Assessment, OP/BP 4.04

Natural Habitats, OP/BP 4.36 Forests, OP/BP 4.09 Pest Management, OP/BP 4.10 Indigenous Peoples, OP/BP 4.11 Physical Cultural Resources, and OP/BP 4.12 Involuntary Resettlement.

86. Additionally, OP 7.50 International Waterways was triggered because all components of the project will finance activities designed to protect and recover large expansions of biodiversity rich forests, which contain countless perennial and seasonal bodies of water, many of which fit the description of international waterways provided under OP 7.50, and some supported activities may use or involve water. More specifically, water use under the project may include the following: (a) the production of seedlings for reforestation activities (family plots producing 20,000–30,000 seedlings per year, and three state operations for 180,000 to 1,000,000 seedlings per year) may require watering during dry periods (although typically agriculture is rain-fed in the Amazon) and (b) traditional sustainable fisheries management of wild stocks may be supported in lakes and rivers inside sustainable use PAs, improving the sustainability of existing traditional practices. The ESMF includes guidance on the prevention of impacts to international waters and an exemption to the riparian notification requirement has been obtained. It is important to note that the Amazon Basin accounts for one of the largest volumes of freshwater reserves on the planet and no negative impact is expected to its bodies of water. On the contrary, project activities should positively affect these international waters by conserving the forests that protect them, either within PAs or within private lands in sustainably managed landscapes, thus maintaining or improving water quality and river flows. Furthermore, virtually all main rivers and tributaries in the Amazon Basin flow from neighboring countries, particularly from the Andes, into Brazil. Therefore, all project activities will be located inside the Brazilian territory downstream from the borders.

87. Although the types of activities to be supported under the project are already known, the exact location for their implementation and exact activity to be implemented in each area have not yet been defined. The MMA and FUNBIO carried out an Environmental and Social Impact Analysis, which informed the preparation of an ESMF, IPPF, and Process Framework. All safeguard documents were publicly consulted and their final versions are available in both the MMA and FUNBIO's webpages (http://programaarpa.gov.br/documentos-fase-iii-do-arpa/ and https://www.funbio.org.br/projeto-paisagens-sustentaveis-amazonicas/) and the World Bank's public website. Consultations were conducted on line and at two face-to-face workshops held in the city of Manaus (Amazonas State) on May 30, 2017, and in the city of Rio Branco (capital city of the State of Acre) on August 1, 2017. The relevant stakeholders were invited and the locations of the two workshops were chosen to facilitate the participation of representatives of indigenous peoples, riverine and traditional communities from the Amazon region, and their representative organizations. Both workshops were organized and facilitated by the MMA. As the participation of indigenous peoples was limited in the first consultation (Manaus), a second workshop was held to increase their participation. This second workshop (Rio Branco) convened 32 participants, comprising 18 representatives of 10 indigenous peoples and several indigenous peoples organizations—including the two nationwide organizations[40]. The comments received

[40] Organizations consulted include Coordination of Brazilian Amazon Indigenous Organizations (*Coordenação das Organizações Indígenas da Amazônia Brasileira*) and Articulation of Indigenous Peoples of Brazil (*Articulação dos Povos Indígenas do Brasil*), and representatives of the Pro-Indian Commission of Acre State (*Comissão Pró-Índio do Acre*), National Organization of Indigenous Peoples of the Colombian Amazon (*Organización Nacional de los Pueblos Indígenas de la Amazonia Colombiana*), Association of Kaxinawa Producers of the Paroa Village

were integrated into the social and environmental safeguards instruments, which also include a detailed annex on the consultation process.

88. The project is expected to generate a positive impact on the environment with the expansion and strengthening of PAs. The creation and consolidation of PAs has proven to be a viable strategy to reduce biodiversity loss and deforestation in the Brazilian Amazon, through the containment of anthropogenic pressures and the promotion of the sustainable use of natural resources. Also, the simple fact of designating land use is already hugely effective in counteracting the illegal land market, by conferring permanent private and public land ownership rights. The positive impact is expected to be expanded with the support to sustainable landscape management practices within PAs and private lands to enhance ecosystem connectivity. Examples of such practices to be supported can include conservation agriculture, agroforestry systems, fertility-boosting technologies, terraces, rainwater harvesting, pastoralism and rangeland management, improved grazing land management, integrated crop-livestock systems, natural resource management, plantations and reforestation/afforestation, catchment management, and PA management. Possible risks associated to these practices related to pest management are addressed within the project's ESMF according to OP 4.09 guidance. To maximize biodiversity benefits, the project will apply existing science-based instruments to define priority areas for PA creation and vegetation restoration, such as the Map of Priority Areas for the Conservation and Sustainable Use of Brazilian Biodiversity, and data from the continuous PRODES and Amazon TerraClass studies, among others. Possible negative impacts are expected to be few, localized, small, and reversible. The impact assessment under the ESMF prepared by the MMA and FUNBIO addresses, among other themes, (a) potential negative and positive impacts of project activities on natural habitats; (b) potential impacts of forest management activities (timber and non-timber); (c) potential impacts of activities that might require pest management (for example, seedling production for vegetation restoration and agroforestry activities); (d) potential impacts on physical cultural resources; and (e) potential impacts on indigenous peoples and traditional communities (see OPs 4.04, 4.36, 4.09, 4.10, 4.11, 4.12 below). During project implementation, Environmental Management Plans will be prepared by ICMBio and CI-Brazil and disclosed for specific activities supported under Components 1, 2, and 3, or as annexes to PA management plans prepared or revised under Component 1.

89. In relation to social aspects, the project will also have positive impacts because PAs are important to secure land tenure for traditional communities and eliminate or greatly reduce the risk of these communities being expelled or losing access to natural resources for their livelihoods. The process to review and update the Amazon portion of the Map of Priority Areas for the Conservation and Sustainable Use of Brazilian Biodiversity, supported by ARPA I in 2006, incorporated community participation aspects that contributed to mitigate potential conflicts in the process of creation of new PAs. To further address the issue of eventual conflicts, two measures will be taken by the ASL Project: (a) any PA creation process will involve broad public consultation, because it is now widely accepted that public consultation allows for

(*Associação dos Produtores Kaxinawa da Aldeia Paroa*), Association of the Movement of the Indigenous Agroforestry Agents of Acre State (*Associação do Movimento dos Agentes Agroflorestais Indígenas do Acre*), Organization of the Kaxinawa Farmers of the "Colonia 27" Indigenous Land of Tarauacá Municipality (*Organização dos Agricultores Kaxinawa na Terra Indígena Colônia 27 de Tarauacá*), and Organization of the Tarauacá River Indigenous Peoples *(Organização dos Povos Indígenas do Rio Tarauacá*).

adjustments in the PA creation processes, responding to needs and demands of local stakeholders; and (b) the project will avoid any activity requiring the involuntary acquisition of land. Consequently, physical and economic displacement would be completely avoided (see below, OP 4.12 Involuntary Resettlement).

90. During ARPA I and ARPA II projects, 10.8 million ha of sustainable use reserves were created combining social demands and priority areas for biodiversity conservation. Subprojects for alternative sustainable income generation in communities located in buffer zones of threatened PAs were also implemented. As successfully carried out in ARPA I and II projects and according to national legislation, the creation of PAs would also require the preparation of environmental, socioeconomic, and land tenure diagnoses of the selected priority areas. Socioenvironmental aspects and safeguards will be monitored at the PA level by the responsible agencies and at the project level by the MMA. To the extent possible, the social assessment carried out as part of the ESMF includes disaggregated information on indigenous women, children, the aged, and the disabled, and any differentiated impacts that may disproportionately affect them. This information fed into the IPPF and will help inform the management plans for the PAs. The social assessment considered potential impacts of the project on the livelihood of traditional communities heavily reliant on the uses of forests, biodiversity, and natural resources. Finally, the social assessment includes an assessment of labor conditions prevailing in the productive chain of forest products, particularly concerning risks related with forced labor/child labor.

91. **Forests OP/BP 4.36.** The project may include support to community-level sustainable timber and non-timber management activities in Flonas and other sustainable use areas where such use is allowed, according to existing specific regulations applicable to each area. The ESMF provides guidance to ensure that activities supported will be consistent with the requirements of OP 4.36 regarding certification and procedures for small-holder or community scale forestry and defines the sustainability and monitoring procedures to be followed by any forest-based economic activity.

92. **Natural Habitats OP/BP 4.04.** The potential positive impact of the project for biodiversity is significant given the major focus of the project in the support of sustainable forest landscape management systems and forest restoration and in the creation and consolidation of PAs within the Amazon Basin. Support to sustainable productive landscapes and integrated landscape restoration should expand benefits to natural habitats to the private areas surrounding and between PAs, increasing connectivity and the availability of a suitable habitat to biodiversity. The ESMF assesses potential negative impacts on natural habitats that might arise from project activities such as small infrastructure interventions in PAs, control of pests in seedling nurseries or agroforestry systems, and economic use of forest resources, and proposes preventive, monitoring, and mitigation measures.

93. Supported PAs should include parks, biological reserves, ecological stations, national forests, extractive reserves, and sustainable development reserves. In the two latter types of area, traditional communities and indigenous groups can plan land use aiming at income generation through the continuation of their traditional practices, while averting deforestation. Traditional communities and indigenous peoples' land management and production practices are generally compatible and benign in terms of impacts on biodiversity. The changing context surrounding

community lands brings increasing pressure to carry out nontraditional forms of land use and management. Project activities and capacity building will seek to foster conservation and sustainable management of natural resources while providing tools such as participatory diagnostics and planning activities, strengthening of local organizations, and participatory M&E that will generate an improved platform for community decision making on sustainable use of the available natural resources.

94. **Pest Management OP/BP 4.09.** The project will support the adoption of a variety of sustainable landscape management practices within sustainable use PAs or in surrounding private lands. These can include conservation agriculture, agroforestry systems, fertility-boosting technologies, terraces, rainwater harvesting, pastoralism and rangeland management, improved grazing land management, integrated crop-livestock systems, natural resource management, plantations and reforestation/afforestation, catchment management, and PA management. Although these activities should favor ecological methods for managing pests, some might require the use of pesticides or other agricultural chemicals. To reduce the risk of negative impacts from the eventual use of such pest control products, the project's ESMF includes indication of favored methods to be supported under the project as well as preventive and mitigation measures for pest management compatible with OP 4.09 to guide these activities.

95. **Physical Cultural Resources OP/BP 4.11**. It is not expected that project implementation would have any negative impact on physical cultural resources. However, chance finds during implementation activities are possible, even though no such occurrence came up in the previous similar ARPA I and ARPA II operations. To handle such findings, Brazil has a well-developed legislative and normative framework, which is under the oversight of the National Institute for Protection of Historical and Archeological Sites (*Instituto do Patrimônio Histórico e Artístico Nacional*), and the Indigenous National Foundation (*Fundação Nacional do Índio*, FUNAI) also has established procedures for safeguarding historical or prehistorical heritage pertaining to indigenous peoples, through the National Indian Museum which is an agency of FUNAI. The screening and action procedures for chance finds, including sacred sites, were incorporated into the project's ESMF and into the environmental screening section of the project's Operational Manual.

96. **Indigenous Peoples OP/BP 4.10.** During project preparation, it was determined that indigenous peoples with the four characteristics called for in OP 4.10 are present in the project area. As the exact location for the implementation of the activities to be supported under the project have not yet been defined, to comply with the principles and requirements of OP 4.10 Indigenous Peoples, the MMA and FUNBIO carried out a social assessment paying special attention to indigenous peoples in the Amazon and the potential impacts of PAs, landscape management, and biodiversity conservation on their traditional livelihoods. The MMA and FUNBIO also prepared, consulted, and publicly disclosed (before appraisal) an IPPF setting: (a) the principles and guidelines to be complied with when project activities interfere with indigenous peoples as well as (b) the project's screening procedures that will ensure that the project would not support activities in PAs where the overlapping with indigenous lands or land claims has led to land tenure conflicts. The IPPF also includes a brief section on the issues related with conflicts due to overlapping between indigenous lands and PAs.

97. **Involuntary Resettlement OP/BP 4.12.** The project will not require the involuntary acquisition of land. However, the creation and consolidation of PAs could potentially lead to restrictions in access to PAs leading to impacts on peoples' livelihoods. A Process Framework was prepared, consulted, and disclosed before appraisal by MMA and FUNBIO, ensuring that affected people and communities had an opportunity to participate in the definition and design of alternative livelihood activities or other compensation/mitigation measures.

98. Key stakeholders were consulted during project preparation on the potential risks and impacts of the project and the proposed mitigation measures. Face-to-face and online consultation of safeguard documents were held and described in the project's IPPF and ESMF. In addition to direct mailing, a public consulting call was published by FUNBIO and the MMA in their websites, inviting public society to download and comment on the socioenvironmental safeguards documents. The comments/suggestions received at the two face-to-face events (Manaus and Rio Branco), as well as through an online form that allows interested people to identify themselves or remain anonymous to ensure no-restraints to participation were incorporated in project design and safeguard documents as appropriate.

99. **Grievance Redress Mechanism.** In addition to the World Bank's GRS described in Section VI (H) of the main document. ARPA has had a Grievance Redress Mechanism in place since 2013 with the purpose of making project information available to the public; reducing risks; providing suggestions, sharing practices, and receiving feedback from the public and all actors involved in project implementation; functioning as a disincentive to fraud and corruption; recording and providing responses to complaints and suggestions; and ensuring compliance with safeguards. This existing mechanism was updated and incorporated into the current project and its Process Framework (published at websites of the participating institutions: http://programaarpa.gov.br/documentos-fase-iii-do-arpa/;
http://www.conservation.org/global/brasil/Pages/gef-paisagens-amazonicas.aspx;
and https://www.funbio.org.br/projeto-paisagens-sustentaveis-amazonicas/) provides a detailed description of the system, its guiding principles, quality control mechanism, and complete contact information.

100. At the level of the proposed project, the MMA, FUNBIO, and CI-Brazil are the main channels for receiving, recording, and processing complaints and suggestions and for informing the World Bank. However, the project's Grievance Redress Mechanism has several layers as described below, all of which aim to respond to complaints within seven working days either independently or together with other layers as necessary: (a) the PA manager is the first layer of the system, because he/she is in constant and direct contact with communities within and around PAs and well positioned to provide immediate feedback to mitigate or improve any situation; (b) PA management councils, which include representatives from local communities and indigenous peoples among their members, represent a privileged layer to address issues related to the daily operation of PAs, as well as to present and represent the interests of their respective social groups; (c) each of the institutions supervising project implementation (see implementation arrangements) has designated a focal point to function as an intermediary between on-the-ground activities and the coordination bodies of the project; (d) individuals and communities can also contact FUNBIO and/or CI-Brazil directly; and (e) if responses at the previous levels are not satisfactory to those presenting a grievance, the MMA ombudsman may be contacted directly as a higher level of appeal. Detailed contact information (street and electronic address, phone and

fax numbers) for each of these layers is presented in the project's Process Framework and published on the websites of all participating institutions. FUNBIO's main contact information is: +5521 2123 5303 and gs@funbio.org.br. CI-Brazil's main contact information is: +5521 2173 6360 and infogef@conservation.org or GEFAccountability@conservation.org.

Monitoring and Evaluation

101. Project M&E will be carried out in four broad areas: (a) financial monitoring, (b) monitoring of implementation of project activities; (c) monitoring of PA management (including updating GEF Tracking Tools based on the information provided by the PA coordinators); and (d) environmental monitoring. A project M&E unit will be established within the PCU in the MMA. This M&E unit will lead the project's M&E, with support on the fiduciary aspects from FUNBIO, CI-Brazil, and each of the components' executing partners. Progress will be tracked against the indicators outlined in the project's Results Framework (annex 1) and the actions agreed in the project's Operation Plans agreed annually with the POC and partners.[41] Quarterly financial and annual progress and M&E reports will be submitted to the World Bank. In addition, (a) semiannual progress reviews will be conducted by the POC; (b) semiannual progress reviews will be conducted during World Bank implementation support missions; (c) a midterm review of the project's implementation will be conducted jointly by the GOB, POC, PCU, FUNBIO, CI-Brazil, and World Bank; and (d) an independent end-of-project evaluation will be also completed, and a project completion report prepared.

[41] Work programming for activities under Component 1 will be completed on two-year cycle in line with the operating policies and procedures of the Transition Fund.

Annex 4: Implementation Support Plan

BRAZIL: Amazon Sustainable Landscapes Project

Strategy and Approach for Implementation Support

1. The project Implementation Support Plan (ISP) describes how the World Bank, public entities, and other development partners will address the risk mitigation measures and provide the technical advice necessary to facilitate achieving the PDO (linked to results/outcomes identified in the Results Framework). The ISP below also identifies the minimum requirements to meet the World Bank's fiduciary obligations.

2. The MMA in Brazil has reasonable capacity and has performed well in previous GEF-financed projects. The SFB does not have experience with GEF-financed projects but sits within the MMA and will benefit from and be guided by its experience. State governments have varying levels of capacity and will need to be engaged and supported. ICMBio and FUNBIO also have experience implementing World Bank/GEF-financed projects, however, being relatively new institutions, they can still benefit from technical assistance. CI-Brazil lacks previous experience in implementing World Bank/GEF-financed projects and will benefit from technical assistance. The World Bank will provide guidance to these institutions as needed.

Implementation Strategy - Potential Risks

3. As described in the project risk analysis, there are moderate risks to some stakeholders, especially because the social safeguards of Indigenous Peoples (OP/BP 4.10) and Involuntary Resettlement (OP/BP 4.12) have been triggered. Although the public perception of the project is likely to be positive, people's livelihoods could be disrupted by the creation of new PAs, so perceptions of the project could change. Face-to-face consultations on safeguard documents were held locally in the Amazon region on May 30, 2017 in Manaus and on August 1, 2017 in Rio Branco. Representatives of indigenous peoples and local community organizations participated in both consultations (as described in the project's IPPF and ESMF). Furthermore, to mitigate any potential risk of social conflict during project implementation, the MMA, ICMBio, and FUNBIO issued a call for public consultation on their website, inviting members of civil society to download and comment on the socioenvironmental safeguard documents. Complementarily, invitations to participate in the consultation process were sent through direct mailing to key stakeholders including indigenous peoples' associations, rural producers' organizations, environmental NGOs, and governmental agencies, among others. The public was invited to make comments or suggestions through an online form where interested people can identify themselves or remain anonymous to reduce self-censuring by participants.

4. There are some risks related to the implementation agencies. There are many organizations at different levels involved in implementation, and the coordination of these will be a challenge. Additionally, some of the institutions involved are relatively new and are still establishing their relationships with relevant partners.

Administrative and Fiduciary Flexibility

5. Disbursement categories are aligned with proposed project activities allowing flexibility in the use of funds to reach specific targets. The operating plans and Procurement Plans will allow the GOB, FUNBIO, CI-Brazil, and World Bank to plan the use of funds based on actual opportunities and needs.

6. The initial disbursement size and reimbursement amounts have been determined based on the project scope and expected disbursement profile. For procurement, appropriate streamlining and thresholds for prior and post review have been established. An audit of annual project financial statements will be conducted by an independent auditing firm, in accordance with TORs acceptable to the World Bank.

7. Tables 4.1 and 4.2 provide the main activities to be carried out and respective skills/resources required for the project implementation.

Table 4.1. Implementation Support Plan

Time	Focus	Skills Needed	Resource Estimate	Partner Role
First 12 months	Establishing fiduciary systems in FUNBIO and CI- Brazil	Procurement and FM expertise	Included in project operating plan (US$1,000,000)	FUNBIO/CI-Brazil provide staff, space, and equipment
	Establishing and operationalizing PCU in MMA	Project management and M&E	Included in project operating plan (US$600,000)	MMA to provide staff and space and CI-Brazil to provide equipment, travel, and per diem (as needed) identify, host
	Communications strategy development and implementation	Communications/knowledge management specialists	Included in project operating plan (US$100,000)	MMA/ PCU to identify and host
	Environmental-social management framework in place	Social/indigenous peoples specialist; environmental impact evaluation experts	Included in project operating plan (US$100,000)	MMA/ICMBio staff to monitor IPPF and overall ESMF
	Establishment of committees/units and Brazil-ASL AC (and ad hoc working groups as needed)	Organization of regular high-level meetings	Included in project operating plan (US$10,000)	MMA leadership

Table 4.2. Skills Mix Required

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Safeguards (social, indigenous peoples, and environment; other safeguards per project documents)	World Bank implementation support will require 6 SWs per fiscal year (mainly senior technical staff)	At least two trips per fiscal year	Given safeguards complexity, extra implementation support is needed.

Institutional capacity strengthening (FM, procurement, and disbursement)	10 SWs per fiscal year (mix of junior and senior technical staff)	At least two trips per fiscal year	Additional technical assistance may be needed in form of training of CI-Brazil and FUNBIO staff.
Technical Expertise Enhancement (PA, M&E, landscape management, forest restoration, knowledge management, communications, technical support, and so on)	20 SWs per fiscal year (mix of junior and senior technical staff)	At least two trips per fiscal year	As a high profile, landmark project for the Government, extra technical assistance will be required

Annex 5: Financial, Economic, and Incremental Cost Analysis

BRAZIL: Amazon Sustainable Landscapes Project

A. Global and National Relevance of the Amazon and Overviews of its Threats

1. The economic analysis presents an incremental analysis of the economic (welfare) benefits generated by the proposed investment, resulting from the provision of global and local environmental benefits, which are both private and public goods. The tendency to underestimate the value of ecosystems is related, for the most part, to their 'public good' quality. The ecosystems and the services that they provide are accessible to all and, thus, protected by none. They generate shared benefits and therefore encourage free riding. Being publicly provided, they are underpriced or unpriced and thus tend to be overused and abused. This public good character of the ecosystem applies at the local scale as well as globally.

2. The Amazon rain forest is of global importance in terms of carbon sequestration and biodiversity and plays a critical role in regulation of the regional and global climate. The Amazon forests help regulate temperature and humidity and are linked to regional climate patterns through hydrological cycles that depend on the forests. About 15 percent of all river freshwater on earth passes through the Amazon River, which illustrates the importance of the Amazon for life on our planet. Besides that, there is a clear hydro-climatological connection between the Amazon and other basins like the adjacent La Plata River. After evaporation, moisture from the Amazon is transported to the La Plata river basin where it contributes about 19 percent to precipitation.

3. Similarly, given the large amount of carbon stored in the Amazon forests, there is also considerable potential to influence the global climate if not properly protected or managed. The Amazon contains 90–140 billion metric tons of carbon, the release of even a portion of which could accelerate global warming significantly. Land conversion and deforestation in the Amazon release up to 0.5 billion metric tons of carbon per year, not including emissions from forest fires, thus rendering the Amazon an important factor in regulating global climate.[42]

4. Lastly, the vast biodiversity of the Amazon also has a global option or existence values. Future generations might benefit from new medical discoveries that require natural resources from the Amazon. The global society is likely to see some value of life for its own sake and to the importance of keeping options open for the future, too.

5. The Amazon rain forest is also of national importance; supporting subsistence livelihoods, providing income sources, and avoiding soil erosion. Roughly half of Brazil's indigenous population lives in the Brazilian Amazon. Many of them live traditionally, heavily dependent on the forest for food, shelter, tools, and medicines. NTFP are an important source of subsistence livelihoods and income for people inhabiting the Amazon. Tree loss would not only eliminate these income sources, but would also be a major cause of erosion because the roots that

[42] Nepstad, D, C.M. Stickler, B. Soares-Filho, and F. Merry. 2008. "Interactions Among Amazon Land Use, Forests, and Climate: Prospects For A Near-term Forest Tipping Point." *Philosophical Transactions of the Royal Society: Biological Sciences*. doi:10.1098/rstb.2007.0036.

anchor the soil would be eliminated. The sediments and eroded soils are eventually washed into the rivers causing significant problems downstream, for example, for hydroelectric projects, irrigation, and biodiversity in the river delta. Furthermore, an intact natural tropical forest provides much better natural protection against wild fires than a forest under different use because the amount of dry logging waste is lower and the use of fire for land clearance is absent.

6. Finally, the Amazon also has a recreational value. Brazil attracts more than 6 million international tourists annually, of which an increasing number are going to the Amazon. The Amazonas state, for example, had the highest growth (51.6 percent) in the number of international visitors, between 2013 and 2014.[43] Easily accessible areas are particularly valuable for tourism but—as outlined in the following paragraphs—at the same time more likely to suffer from land degradation.

7. The Amazon rain forest is at risk of deforestation and land degradation due to factors ranging from agricultural expansion to illegal mining. Agricultural expansion is by far, the leading land-use change associated with deforestation in Amazonia. The opening of pastures for cattle ranching takes place on areas covered with mature forests, or areas that were previously cleared by small farmers by means of slash and burn agriculture. The building of new roads or improvement of existing roads in the Amazon has facilitated uncontrolled migration to otherwise inaccessible areas resulting in increased land grabbing, deforestation, and expansion of unsustainable extractive activities like illegal logging and mining. The high demand for timber products, weak forest governance, and weak rule of law are additional drivers for illegal logging, which destroys nature and wildlife, damages communities, and distorts trade. In the Brazilian state of Pará, for example, 65 percent of the logged wood was illegally logged. In recent years, the levels of illegal mining have been experiencing highs due to spiking gold prices. The most common form of gold mining in the Amazon is conducted in a way that is damaging to flora and fauna in the Amazon and for human health. In addition to landscape removal and water contamination with dangerous substances like mercury, the enormous energy needs of the industrial mining and ore processing industries create a demand, which drives deforestation for charcoal fuel and damming of rivers for hydropower. More than 150 new dams are planned in the Amazon basin and the effects on the forests could be dramatic and irreversible.

8. Preventing agricultural expansion—even if driven by deforestation—has an opportunity cost because landholders who are not using their land for agricultural activities are foregoing profits. To fully evaluate what would happen without the project, it is necessary to account for these costs. As outlined earlier, agricultural expansion into the Amazon, mainly through cattle grazing and soy cultivation, is seen as the main driver of deforestation in the Amazon. The agricultural expansion is however, limited by climatic and soil conditions as well as accessibility. As for most drivers of deforestation, proximity to transport infrastructure and markets is extremely important for producers.[44].Accordingly, the estimated agricultural opportunity costs for the Brazilian Amazon vary substantially depending on production method (small scale versus industrial) and regions (close to roads versus deep into the Amazon).

[43] *Ministério do Turismo*. 2015. *AM registra maior salto na demanda turística internacional, Departamento de Polícia Federal e Ministério do Turismo*.
[44] Olsen, N., and J. Bishop. 2009. *The Financial Costs of REDD: Evidence from Brazil and Indonesia.* International Union for Conservation of Nature.

9. To significantly reduce deforestation and promote efficient land use in the Amazon region, the project needs to address key issues across the complex set of drivers of deforestation and barriers to sustainable land use. This proposed project aims at generating scalable results in reducing deforestation and the loss and fragmentation of natural habitats, as well as preventing the extinction of endangered species and improving their conservation status.

10. Establishing new PAs and improving management effectiveness of new and existing conservation and resource management areas (that is, forest concessions), can help contain the expansion of deforestation. The Brazil-ASL project, along with sister projects in Peru and Colombia, will invest in a number of instruments to contain deforestation in areas where the conservation of closed-canopy forests is paramount for the stability of the ecosystem and associated environmental services, including climate change regulation. Without proper policies and investments in the PAs and integrated landscape management, there is high risk of the Amazon ecosystem as a whole reaching a tipping point of runaway natural forest dieback due to drought and fire that would be immensely difficult to stop. In the business-as-usual (BAU) scenario of this analysis these threats persist.

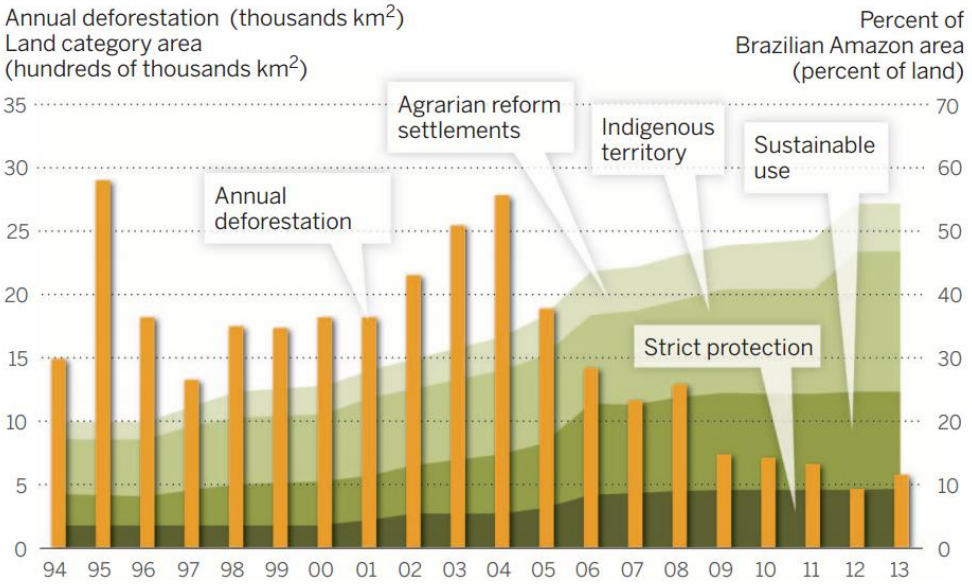
B. Without-Project Scenario (BAU scenario)

11. For this analysis, a BAU baseline case is used that assumes that future development trends follow those of the past and no changes in policies will take place. This approach follows recommendations by the Intergovernmental Panel on Climate Change [45] and the FAO[46] and uses past trends to model the BAU or the without-project scenario. The approach is more sophisticated than a no-change scenario but less complex than a future-trends scenario. The past-trends scenario supposes that the changes in land use and practices will evolve in the same way as they have in the past. In developing countries land-use patterns change quickly, so it is more relevant to use recent past trends than long-term past trends. Accordingly, this analysis uses recent trends as these seem to be more representative of the current evolution.

12. In the BAU scenario it is assumed that the five-year average deforestation rate is maintained. Deforestation rates have been falling from a record high of almost 28,000 km^2 in 2004 to 4,500 km^2 in 2012. However, in the last two years a significant uptick in deforestation rates was observed, reaching almost 8,000 km^2 in 2016, which makes an accurate forecast challenging. Considering the past deforestation rates, this is a conservative scenario because deforestation rates have, in some of the last 15 years, been up to four times higher. However, to account for the commitment by the GOB to combat deforestation such a conservative BAU scenario seems justifiable. The amount of areas under strict protection or sustainable use has remained virtually constant throughout the last years (see Figure 5.2) and it is therefore assumed that in a BAU scenario, the area under protection would remain constant as well.

[45] http://www.ipcc.ch/ipccreports/tar/wg3/index.php?idp=286.
[46] FAO (Food and Agriculture Organization of the United Nations). 2011. *Main Recommendations for the Elaboration of the Baseline Scenario; Building the "Without Project" Scenario Within The EXACT Tool.*

Figure 5.2. Evolution of Deforestation Rate and PAs in Brazil



Source: Nepstad, D. et al. 2014. "Slowing Amazon Deforestation Through Public Policy and Interventions in Beef and Soy Supply Chains." *Science* 344 (6188):1118–1123.[47]

C. 'With Project' Scenario - Anticipated Outcomes and Their Associated Benefits

13. With its different components and multiple areas of investments, the project will generate a diverse portfolio of economic benefits ranging from direct use values to indirect, nonuse values. Only some of these benefits are reflected in market prices, due to widespread market imperfections and policy failures. Both private land users and public policy makers typically focus on tangible, marketed uses, and often neglect nonmarket environmental benefits. This undervaluation of environmental benefits results in excessive conversion of forest land to other uses or excessive damage to nonmarket forest services in the process of extracting marketed timber and other goods. A direct use value is, for example, the use of forest products such as timber, fruits, and medicinal products, while at the other end of the spectrum, a commonly referred to indirect nonuse value is related to the mere existence of virgin tropical rain forests. The transition from direct use to existence values is characterized by a decreasing tangibility of these values. The total value of a tropical rain forest comprises the sum of a large number of different values from each value category. Table 5.1 provides a limited overview of selected examples of the four categories of benefits that could be associated with the project. Given the difficulties of assigning monetary benefits to the entire range of economic benefits generated by the project (for example, governance support), only selected economic benefits were included in the quantitative economic assessment of project feasibility.

Table 5.1. Types of Forest Value

Use Values			Nonuse Values
1. Direct Use	**2. Indirect Use**	**3. Option**	**4. Existence**

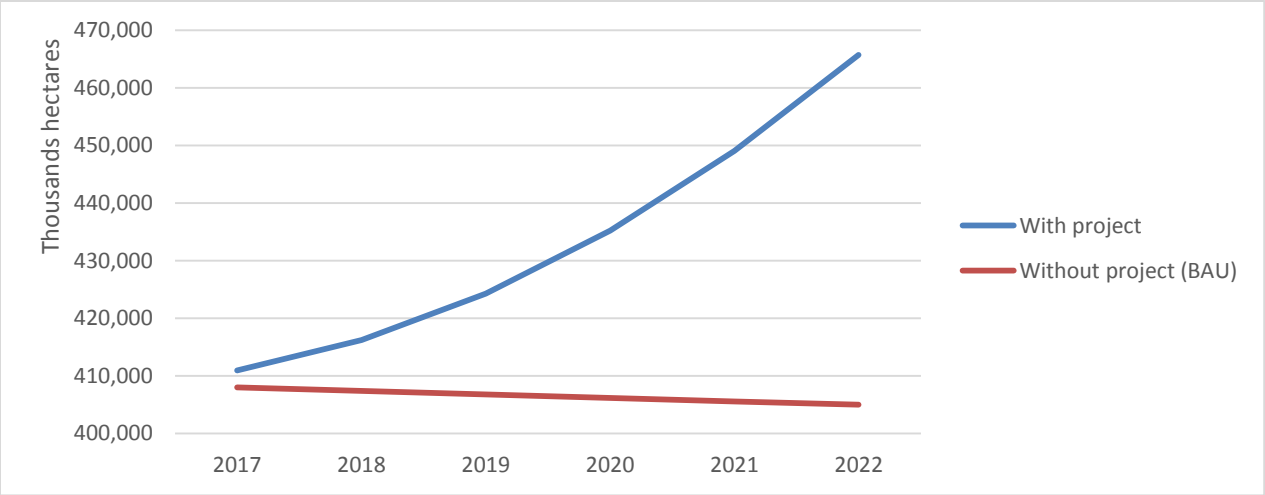
[47] Deforestation rates for subsequent years have shown an increase from the all-time low of 4,571 km^2 in 2012, with latest available figures from 2016 of 7,989 km^2.
(http://rainforests.mongabay.com/amazon/deforestation_calculations.html).

Wood products (timber, fuel)	Watershed protection	Future direct and indirect uses	Biodiversity (wildlife)
Non-wood products (food,	Nutrient cycling		Culture, heritage
Educational, recreational, and cultural uses	Air pollution reduction		Intrinsic worth
Human habitat	Micro-climatic regulation		Bequest value
Amenities (landscape)	Carbon storage		

Source: Bishop, J. T. 1999. *Valuing Forests: A Review of Methods and Applications in Developing Countries.*

14. The area for which costs and benefits are examined consists of the new PAs, the existing PAs brought under improved forest management, and the area that benefits from integrated landscape restoration. For the first two types of areas, the project target values of 3,000,000 ha forest land newly designated as PAs and 57,000,000 ha under improved forest management in existing PAs are used. The area benefitting from integrated landscape restoration has been calculated based on the assumed avoided deforestation. It is assumed that the integrated landscape restoration component leads to a 20 percent reduction of the annual deforestation rate during the project lifetime (six years) and the current five-year average deforestation rate for the Legal Amazon of 600,000 ha is used to estimate the baseline annual deforestation rate. This rate would remain constant in a without-project scenario. Based on this assumption, 120,293 ha per year of deforestation will be avoided during the implementation phase of the project. This is considered a conservative approach because the project will most likely incentivize the protection of forest land beyond the implementation phase of the project, generating benefits and costs further in the future as well (for a longer time horizon the benefits are larger than the costs). Figure 5.3 compares the without-project case (BAU scenario) to the 'with project' case. The graph vividly shows that the project generates large benefits, simply by looking at the area that will benefit from the project. This includes areas of avoided deforestation, areas that are converted into a PA, and areas in PAs that are sustainably managed. Other economic benefits, like increased human capital, improved governance structures, and bequest values, were not included. Further, the economic benefits included in the analysis were strictly limited to those immediately generated and associated with the project. Other benefit effects, such as, future improvements of forest management due to the capacity building in the administration are not included.

Figure 5.3. Comparison of the Sum of the Area Established as New PAs, the Area of Existing PAs Brought under Improved Forest Management, and the Area That Benefits from Integrated Landscape Restoration, With- and Without-Project (BAU) Scenario until 2022



Note: The area is the sum of the forest area, PAs, and PAs under sustainable management. It is assumed that the current five-year deforestation rate prevails in the without-project scenario, while in the 'with project' scenario the deforestation rates are reduced by 20 percent. In the without-project scenario the PA and the share of sustainably managed areas remains constant, while in the 'with' scenario they are expanded by the target value.

D. Main Assumptions, Cost Factors, and Methodology

15. As required for economic analysis of projects, a with- and without-project situation is used for estimating incremental benefits generated by the project.[48] Taking account of the current situation and the fact that the environmental as well as livelihood situation in the project areas is likely to continue to decline, even a slowing but continuation of an already negative trend represents a project benefit. For example, a slowing but continuation of deforestation and forest degradation trend is a benefit that can be quantified by the amount of incremental carbon that is not emitted into the atmosphere compared to the 'without project' situation. The NPV and BC ratio are used as criteria to assess the economic feasibility of the project.

16. Various studies in the scientific literature have assessed the economic costs and benefits of the Amazon rain forest—this assessment uses data from Verweij et al. (2007).[49] For this economic assessment, economic benefits from only one source are used to apply a consistent calculation method. Verweij et al. (2007) appears as the best available option for two reasons. First, it is one of, if not, the most recent study on economic benefits in the Amazon. Second, the values in this study are consistent with findings from other studies and can be regarded as very conservative as they are at the lower-bound studies of the spectrum of economic benefits for the Amazon (table 5.2 shows upper and lower-bound estimates for the economic benefits used).

[48] For a more detailed discussion of the 'with project' and 'without project' principle in project analysis and evaluation, please refer to (a) Gittinger, J.P. 1984. *Economic Analysis of Agricultural Projects*. Washington, DC: World Bank, 41–43 and (b) Belli, P, Jock. R. Anderson, Howard. N. Barnum, John. A. Dixon, and Jee-Peng Tan. 2001. *Economic Analysis of Investment Operations*. The World Bank Institute, World Bank, 17–24.

[49] Verweij, P., M. Schouten, P. van Beukering, J. Triana, K. van der Leeuw, and S. Hess. 2009. *Keeping the Amazon Forests Standing: A Matter of Values*. Report for WWF Netherlands.

Only values from Verweij et al. (2007) are used to avoid double accounting by using 'overlapping' categories from different sources. It should be therefore noted that it is likely that the actual benefits are greater because Verweij et al. (2007) do not account for medicinal benefits, bioprospecting, watershed value, food value, or timber. Moreover, this analysis uses the lower-bound estimates from Verweij et al. (2007), which is again a very conservative approach. For those areas that are brought 'only' under improved management—in contrast to those areas that constitute a new PA—it is assumed that the improved management leads to environmental benefits of 5 percent of the total benefits of Amazon forests.

Opportunity Costs of Land

17. To account for the opportunity costs of land resulting from foregoing agricultural profits, this study uses values for soy and cattle ranching, which vary substantially between and within studies, given the diversity of production method (small scale versus industrial) and regions (close to roads versus deep in the Amazon). For example, Grieg-Gran (2006)[50] estimate the NPVs of cattle ranching between US$3 per ha for small-scale production and US$413 per ha for large-scale production. The NPV for soybeans is US$3,275 per ha. It should be noted that these values are NPV and not annual values. For this analysis, values from Borner and Wunder (2008)[51] are used, that is, US$39 per ha per year for cattle ranching and US$171 per ha per year. These values translate into an NPV of US$367 per ha for cattle and US$1,600 per ha, for soybeans.[52] This confirms that the chosen values are in line with other studies and, if anything, close to the upper bound of the spectrum of estimates. It is assumed that 100 percent of the alternative agricultural production is going into highly profitable soybean. The rationale being, that even though soybean production takes place mainly in pasture areas—not the Amazon—it displaces cattle ranching to forest areas and is thus, a powerful indirect driver of deforestation (Olsen and Bishop 2009).[53] This approach is regarded as conservative because soybean production is not a direct driver of deforestation and the alternative land use for the landholder is not necessarily soybeans but cattle grazing. Due to this approach the overall costs are rather overestimated because the production of soybean is much more profitable than cattle (US$171 per ha per year versus US$39 per ha per year).

[50] Grieg-Gran, M. 2006. *The Cost of Avoiding Deforestation*. Report prepared for the Stern Review of the Economics of Climate Change. London: International Institute for Environment and Development.
[51] Borner and Wunder. 2008. "Paying for Avoided Deforestation in the Brazilian Amazon: From Cost Assessment to Scheme Design." *International Forestry Review* 10 (3).
[52] Using the 10 percent discount rate and a 30-year period like Grieg-Gran (2006).
[53] Olsen, N., and J. Bishop. 2009. *The Financial Costs of REDD: Evidence from Brazil and Indonesia.* International Union for Conservation of Nature.

Table 5.2. Overview of Study Estimates on Economic Values of Tropical Forests

	Upper Bound	Verweij et al. 2007	Lower Bound	Source Upper Bound	Source Lower Bound
	Direct Use				
Timber [a]	307	—	—	*Torras et al. (2000)*[b]	—
Food	400	—	20	*Peters et al. (1989)*[c]	*Pinedo-Vasques et al. (1992)*[d]
Non-timber raw materials	707	50	22	*Muniz-Miret et al. (1996)*[e]	*Peters et al. (1989)*
Recreation	50	3	5	*Tobias and Mendelsohn (1991)* [f]	*Ruitenbeck (1992)*[g]
	Indirect Use				
Climate regulation	336	70	59	*Krutilla (1991)*[h]	*Pearce (2001)*[i]
Fire prevention	6	6	4	*Verweij et al. (2007)*[33]	*Idem.*
Watershed value	19	—	19	*Fearnside (1997)*[j]	*Idem.*
Erosion control	238	68	—	*Torras et al. (2000)*	—
	Option Values				
Medicinal benefits	20	—	9	*Fearnside (1997)*[46]	*Grimes et al. (1994)* [k]
Bioprospecting	24	—	—	*Rausser and Small (2000)*[l]	—
Existence benefits	893	10	3	*Chopra (1993)*[m]	*Kramer and Mercer (1997)*[n]
Grand total	**2593**	**207**	**141**		

Note: a). Timber benefits are excluded because it is unclear whether sustainable forest management is really possible, by applying multiple long rotation cycles of 20–40 years (Fredericksen, T.S., and F. E. Putz. 2003. "Silvicultural Intensification for Tropical Forest Conservation." *Biodiversity and Conservation* 12(7): 1445–1453.). Typically, at the second harvest only 20–30 percent of the volume harvested at first harvest is available (Verweij et al. 2007).

b). Torras, M. 2000. "The Total Economic Value of Amazonian Deforestation 1978–1993." *Ecological Economics* 33: 283–297.

c). Peters, C.M., A.H. Gentry, and R.O. Mendelsohn .1989. "Valuation of An Amazonian Rainforest." *Nature* 339: 655–656.

d). Pinedo-Vasquez, M., D. Zarin, and P. Jipp. 1992. "Economic Returns from Forest Conversion in the Peruvian Amazon." *Ecological Economics* 6: 163–173.

e). Muniz-Miret N., R. Vamos, M. Hiraoka. F. Montagnini and R.O. Mendelsohn.1996. "The Economic Value of Managing the Acai Palm in the Floodplains of the Amazon Estuary, Pará, Brazil." *Forest Ecology and Management* 87 (1–3): 163–173.

f). Tobias, D., and R. Mendelsohn. 1991. "Valuing Ecotourism in a Tropical Rain Forest Reserve." *Ambio* 20 (2), 91–93.

g). Ruitenbeek, H.J. 1992. "The Rainforest Supply Price: A Tool for Evaluating Rainforest Conservation Expenditures." *Ecological Economics* 6: 57–78.

h). Krutilla, J.V. 1991. *Environmental Resource Services of Malaysian Moist Tropical Forest: For Resources for the Future.* Baltimore: Johns Hopkins University Press.

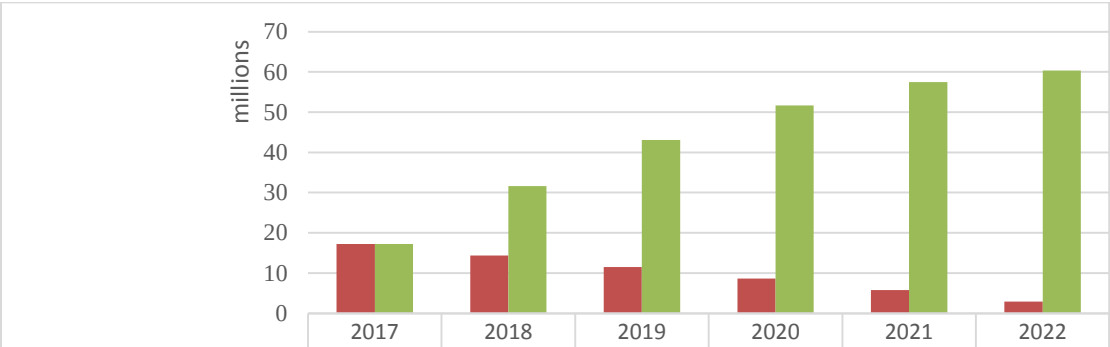
i). Pearce, D.W. 2001. "The Economic Value of Forest Ecosystems." *Ecosystem Health* 7(4): 284–296.

j). Fearnside, P. 1997. "Environmental Services as a Strategy for Sustainable Development in Rural Amazonia." *Ecological. Economics* 20 (1), 53–70.
k). Grimes, A., S. Loomis, P. Jahnige, M. Burnham, K. Onthank, R. Alarco´n, W.P. Cuenca, C.C. Martinez, D. Neill, M. Balick, B. Bennett, and R. Mendelsohn. 1994. "Valuing the Rain Forest: The Economic Value of Non-timber Forest Products in Ecuador." *Ambio* 23 (7): 405–410.
l). Rausser, G. and A. Small. 2000. "Valuing Research Leads: Bioprospecting and the Conservation of Genetic Resources." Working Paper Series, Berkeley Olin Program in Law and Economics.
m). Chopra, K. 1993. "The Value of Non-timber Forest Products: An Estimation for Tropical Deciduous Forests in India." *Economic Botany* 47 (3): 251–257.
n). Kramer, R.A. and D.E. Mercer. 1997. "Valuing A Global Environmental Good: US Residents' Willingness to Pay to Protect Tropical Rain Forests." *Land Economics* 73 (2): 196–210U.

Distribution of Costs and Benefits Over Time

18. A 15-year period is assumed to assess the economic feasibility of the project, alongside a 6-year sensitivity assessment. It is assumed that there are no further incremental changes of project-generated benefits beyond the 15-year project evaluation period. This is a rather conservative assessment as it is likely that some of the momentum created by the project, for example, with regard to the capacity of the administration to manage PA and forest ecosystems in general, will continue to increase after project implementation with increasing increments compared to a without-project situation. While project costs are only assumed to emerge for the six years of project implementation, benefits and opportunity costs are assumed to be generated beyond the implementation phase of the project. The distribution of benefits (increase in PAs and increase of PAs under improved forest management) is based on the triangular number[54] for six project years, that is, the project area is divided by 21 to obtain the factor that is each year added to the growth of the previous year.[55] The rationale for this assumption regarding the growth pattern is that designation and implementation of PAs initially require more time than at a later point of the project. Similarly, the distribution of project costs follows a reverse pattern, having higher investment costs in the early years and a fading out of project investments in later project years as can be seen in figure 5.2. Project costs are approximated using the investment costs of the proposed project totaling US$60.33 million.

Figure 5.2. Distribution of Project Costs



	2017	2018	2019	2020	2021	2022
Annual project costs	17,237,143	14,364,286	11,491,429	8,618,571	5,745,714	2,872,857
Cumulative project costs	17,237,143	31,601,429	43,092,857	51,711,429	57,457,143	60,330,000

[54]The triangular number is n (n + 1) / 2, and for six project years 6 × 7 / 2.
[55] The formula for year n is therefore: n × n (n + 1) / 2.

19. A sensitivity analysis is applied for the main simulation parameters, notably discount rate and project horizon to investigate analytical robustness. For the discount rate, alternative rates of 5 percent, 10 percent, and 20 percent are applied. In addition to varying discount rates, simulation results are tested against changing benefit values. Although all assumed benefit values are already lower-bound estimations and are only applied to the areas that benefit directly from the project (excluding spillover effects and positive externalities resulting from improved policy frameworks, research, and monitoring), benefit reductions of –20 percent and –50 percent are tested. It has to be noted that in addition to using already conservative values, these have not been adjusted from their publication year to current prices, which would result in an increase in values. This set of sensitivity assessments enables a comprehensive analysis of the economic robustness of the project in relation to the changing or differentiated value parameters. All sensitivity analyses are run for all discount rate scenarios. The results of the quantitative results will be complemented with qualitative benefits to conclude overall project feasibility.

E. Results

20. Overall, the results show positive simulation outcomes for the project, thus confirming economic feasibility. Simulation results are summarized in tables 5.3a, 5.3b, 5.3c and 5.3d. Each table shows the NPV and the BC ratio for different discount rates and benefit variations. Only for situations in which the combined input parameters are set at very 'extreme' low values in terms of project impacts, does the analysis yield BC ratios close to 1. The benefits are more than two times larger than the costs in the majority of scenarios and create an NPV of US$5.6 billion in what is regarded as the most appropriate scenario.

21. Additional checks yield positive results, even when the project lifetime is reduced to six years and the project costs include co-financing contributions, which attests to the robustness of the results. Under the first robustness check that uses a six-year project lifetime only, the BC ratio ranges between 2.01 for a 5 percent discount rate and 0.99 for a 20 percent discount rate and a reduction of the benefit values by 50 percent. This means that only in the most pessimistic scenario would the project not generate a net welfare gain and the welfare loss in that scenario would be very small. Under the second robustness check that uses a six-year project lifetime and includes the co-financing contributions of US$374 million, the project yields only a net welfare loss if the benefits are reduced by 50 percent. In the other less pessimistic scenarios the net welfare is still positive throughout all discount rate scenarios. Overall, these results show that the project is very likely to generate large welfare gains.

22. The project component 'Integrated Amazon Protected Area System' is economically viable as a separate component, even when GEF and co-financing costs are included. These results apply across all simulated discount rates and even apply under the assumption that only 50 percent of the anticipated project benefits can be achieved (see table 5.3d). Even if simulated only over a six-year project period this component yields positive results (not shown here). Again, these results apply to all three discount rates. In fact, the benefits generated under Component 1 alone cover the costs from all other activities, including the opportunity costs from avoided deforestation under Component 3.

Table 5.3. NPVs (US$) and BC Ratio Under Different Scenarios

a. Default Scenario, Project Lifetime of 15 Years and All Costs Included (GEF + Co-financing)

	Baseline		Baseline (–20%)		Baseline (–50%)	
	NPV	BC Ratio	NPV	BC Ratio	NPV	BC Ratio
Discount Rate 5%	5,671,280,525	2.10	3,505,414,984	1.68	256,616,672	1.05
Discount Rate 10%	3,717,442,988	2.09	2,289,897,992	1.67	148,580,498	1.04
Discount Rate 20%	1,827,632,762	2.06	1,116,367,048	1.65	49,468,477	1.03

b. Robustness Check 1, Project Implementation 6 Years and GEF Contributions Only

	Baseline		Baseline (–20%)		Baseline (–50%)	
	NPV	BC Ratio	NPV	BC Ratio	NPV	BC Ratio
Discount Rate 5%	1,499,920,405	2.01	901,748,266	1.60	4,490,057	1.00
Discount Rate 10%	1,206,517,815	1.99	722,636,447	1.60	–3,185,604	1.00
Discount Rate 20%	811,193,825	1.97	481,929,321	1.58	–11,967,434	0.99

c. Robustness Check 2, Only Project Implementation 6 Years and Co-financing Costs Included

	Baseline		Baseline (–20%)		Baseline (–50%)	
	NPV	BC Ratio	NPV	BC Ratio	NPV	BC Ratio
Discount Rate 5%	1,170,708,328	1.64	572,536,189	1.31	–324,722,020	0.82
Discount Rate 10%	913,613,241	1.61	429,731,874	1.29	–296,090,177	0.80
Discount Rate 20%	573,049,605	1.53	243,785,101	1.23	–250,111,655	0.77

d. Robustness Check 3, Component 1 Only Over 15 Years and Including All Costs

	Baseline		Baseline (–20%)		Baseline (–50%)	
	NPV	BC Ratio	NPV	BC Ratio	NPV	BC Ratio
Discount Rate 5%	4,309,607,723	2.24	2,750,568,014	1.79	412,008,449	1.12
Discount Rate 10%	2,947,939,326	2.20	1,868,415,101	1.76	249,128,764	1.10
Discount Rate 20%	1,516,678,267	2.13	944,383,054	1.70	85,940,234	1.06

F. Conclusion

23. This economic analysis conducted for the Brazil - ASL Program shows an overwhelmingly positive economic impact. The results of the quantitative simulations are also robust across a range of sensitivity analyses assuming significant changes in discount rates and key benefit parameters. Throughout the analysis, benefit assumptions were always conservative using the lower-bound values of associated nonmarket benefits attributed to the project.

24. The quantitative analysis was also strictly limited to values that can be clearly attributed to the project. Besides, the benefits for areas that have been explicitly conserved, protected, or put under sustainable management by the project, additional benefits can arise from better public service delivery resulting from capacity building of the forest administration and specialized training to beneficiaries. Further, it was assumed that the benefits would not further change beyond the project implementation period nor were any sort of positive spillover effects taken into account, even though it is likely that positive effects will continue to generate positive incremental changes compared to the 'without project' situation. While this approach is likely to systematically undervalue the project impacts, it provides a high degree of robustness. If

additional and downstream project benefits had been considered the simulations would have yielded even stronger results.

25. Probably one of the most important, though so far unstated, economic impacts of the project relates to the capacity building of government institutions at the central and decentralized levels. The enhanced capacities of government institutions will improve public service delivery with numerous benefits and positive economic impacts. Especially with the continuing challenges of natural resources management—not least due to climate change—the aspect of enhanced functioning of public institutions cannot be underestimated. Enhanced functioning of government institutions will also facilitate the implementation of future projects and investments that will build on and continue the achievements of this project. Similar considerations apply to knowledge generation and management achieved by the project.

26. In summary, based on this economic evaluation, it is concluded that the project will result in significant positive development impacts. The consideration of only a few of those benefits in the quantitative analysis sufficed to yield positive economic results. The achieved economic benefits comply largely with what was anticipated during the design stage of the project. This supports the design and implementation of the project, in particular the selection of activities in which the project plans to invest. The analysis demonstrates that investments in sustainable natural resource management can significantly contribute to the economic development ambitions of a developing country with a large forest area like Brazil.

Annex 6: Key Government Policies and Programs

BRAZIL: Amazon Sustainable Landscapes Project

1. The following is a list of the most significant actions taken in Brazil that constitute the baseline for the current project:

(a) **PAs.** The legal PA has been expanded to cover 27 percent of the Brazilian Amazon under ARPA, a partnership with GEF, World Bank, WWF, and KfW which started in 1998. Since then, other partners have contributed to ARPA, including Inter-American Development Bank, *Fundo Amazonia* (through BNDES), Moore Foundation, and others. ARPA, most recently, established a Transition Fund with an estimated target value of around US$215 million.

(b) **Indigenous lands.** A network of indigenous lands was established by the Government which protects an additional 25 percent of the Brazilian Amazon.

(c) **Biodiversity conservation targets.** In the 2020 National Goals for Biodiversity (targets 14 and 15), the Government established in Resolution number 6 of September 2013 that the restoration of ecosystem services and biodiversity is consistent with and will be an important share of Brazil's contribution to global climate change mitigation and adaptation efforts. The NBSAP, submitted to the CBD on August 31, 2016, further reinforces this. It details 20 targets,[56] several of which are particularly relevant to the proposed project, including targets 3, 4, 5, 7, 11, 14, and 15, which promote, among others, the deployment of incentives for sustainable use of biodiversity, implementation of sustainable management plans for both productive and extractive activities, and restoration of ecosystems and related services. Specific 2020 targets include, to: (i) reduce the rate of loss of natural habitats by at least 50 percent (compared to the 2009 rate) and significantly reduce degradation and habitat fragmentation, (ii) bring at least 30 percent of the Amazon under legal protection, and (iii) restore at least 15 percent of degraded ecosystems.

(d) **Reduction in agricultural GHG emissions.** The National Policy for Climate Change (NPCC), launched by the Government in December 2009 (Law 12.187/2009), commits Brazil to a 36.1 percent to 38.9 percent reduction in GHG emissions by 2020, relative to an agreed baseline scenario. In December 2010, the Government approved Decree 7390, which regulated the NPCC and stated that the projections for 2020 would be achieved through sectoral plans and initiatives. One of these plans is the Low-Carbon Economy in Agriculture Plan (*Portaria Interministerial* 984/2013), known as the ABC Plan, which aims at encouraging the use of low-carbon and sustainable practices for management of natural resources, including restoration of degraded pastures.

[56] https://www.cbd.int/countries/targets/?country=br.

(e) **Protection of native vegetation.** In 2012, the GOB approved a new Law for Protection of Native Vegetation (Law 12.651/2012), which regulates land use and management on private properties. The legal requirement of Brazil´s 'new' Forest Code of 2012 demands that each rural property keep a portion of land as a set-aside as both an RL' and a permanent PA to better reconcile food, timber, and bioenergy production while, at the same time, protecting globally important biodiversity and carbon stocks. Non-exempt landowners who cleared more than this area of native vegetation are required to either restore their 'deficit' within 20 years or compensate by purchasing CRAs. A recent analysis estimated that Brazil has approximately 21 million ha of native vegetation deficit, the restoration of which is also an opportunity for mitigating GHG emissions. Law 12.651/2012 also establishes innovative instruments such as the PRA and the SICAR, a georeferenced web system that will enable documentation of over 5 million rural properties, improving transparency and providing a pathway to environmental compliance. This law states that after five years from the date of its publication, financial institutions shall not grant agricultural credit, in any of its forms, for owners of rural properties who are not enrolled in SICAR and hence are not proving compliance with the law. Implementation of this national legislation will directly benefit from this project, because it encourages the compliance of rural properties with the law.

(f) **Green resettlements program.** The Government has also modified its agrarian reform resettlement scheme to a Green Resettlements Program, which starts to value environmental assets, pays attention to both environmental restoration and food security, and promotes land titling and rural environmental registry as well as environmental monitoring and control.

(g) **Restoration of native vegetation.** Affected landowners will need assistance to meet the native vegetation recovery requirements. The GOB intends to fulfil the needs of these landowners by expanding and strengthening public policies, incentives, private markets, farmer practices, and other measures to enable the recovery of native vegetation of 12.5 million ha (after factoring in CRA trading and other 'offsets' provided by the Forest Law) over the next 20 years. It is projected that the recovery will occur on an exponential growth curve, starting with 400,000 ha during the first five years and accelerating dramatically thereafter, as the enabling conditions for large-scale restoration come into place.

(h) **NDC.** From a climate change point of view, and for land-use change and forests in particular, the recent NDC for Brazil expresses the adoption of the following measures by the country: (i) strengthening and enforcing the implementation of the Forest Code, at the federal, state, and municipal levels; (ii) strengthening policies and measures with a view to achieve, in the Brazilian Amazonia, zero illegal deforestation by 2030 and compensating for GHG emissions from legal suppression of vegetation by 2030; (iii) restoring and reforesting 12 million ha of forests by 2030, for multiple purposes; and (iv) enhancing sustainable native forest management systems, through georeferencing and tracking systems applicable to native forest management, with a view to curbing illegal and unsustainable practices.

2. In addition to the abovementioned Government measures, civil society and academic sectors have been active partners, improving knowledge and piloting many mechanisms and tools to improve biodiversity conservation, extractive resources management by local communities, forest management, and private land use. Donors have also supported, over the years, a number of different initiatives to strengthen local governments, states, and federal institutions and contribute both human capacity and funds to enable the Amazon vision to be realized.

Annex 7: Transition Fund

BRAZIL: Amazon Sustainable Landscapes Project

A. Introduction

1. ARPA is the result of efforts led by the GOB and supported by a wide range of local, national, and international stakeholders, including civil society, academic sectors, and donors. Component 1 - Amazon Protected Areas System of the current project will be the third in a series of projects supported by the World Bank and other agencies, which started with the initial ARPA I in 2002 and was followed by a second phase (ARPA II)[57] in 2012. The previous two phases of ARPA focused on reducing the deforestation and degradation of the Brazilian Amazon by: (a) expanding the total area under formal protection; and (b) improving the management of both new and existing PAs. Together these two projects successfully brought an additional 27.6 million ha of forest under protection and improved the management in 59.2 million ha. Under ARPA Phase II, issues of financial sustainability began to be addressed, resulting in the establishment and initial capitalization of a Transition Fund with a view to gradually shifting the financial support for these protection efforts from donor to public financing. A total of US$215 million was established as the Transition Fund target based upon financial modeling of the costs involved in consolidating and maintaining the 60 million ha of PAs supported by ARPA I and II. These estimates incorporate realistic financial projections and budget increase scenarios to lessen the long-term impact of the transition from donations to public funding, ensure an average 3.9 percent annual increase in public funding over the next 25 years, and replace the endowment arrangement of the current FAP. The World Bank has supported ARPA through the following projects: ARPA I (P058503) and ARPA II (P114810).

2. The ARPA Transition Fund will be the implementation instrument for Component 1 - Amazon Protected Areas System.

B. The Amazon Region Protected Areas Program (ARPA)

3. ARPA, the world's largest initiative to create and consolidate PAs, was created in 2002 by Federal Decree No. 4.326/2002 as a three-phase, program with the aim of expanding and consolidating the system of PAs in the Brazilian Amazon to sustain biodiversity conservation. During Phase I, the Program succeeded in creating 24 million ha of new PAs and contributed to the consolidation of 8.5 million ha of forest.[58] In addition, the Program also established the FAP, an endowment fund to ensure long-term financial sustainability for the established PAs. The Program also created a solid foundation for effective FM and monitoring.

4. During Phase II, expected to be finalized by 2017—2018, ARPA supported to date the creation of 4.2 million ha of new PAs, of which 2.8 million ha comprised the PA categories

[57] While ARPA Phase II was launched in 2010, the second World Bank-GEF ARPA was signed in 2012.

[58] PA consolidation is the process of supporting long-term conservation in specific project areas. This requires obtaining sufficient financial and human resources, adequate infrastructure, supportive local constituencies, and capacity for strategic planning, political support, and sufficient ecological information. The ARPA ECI specifies two stages of consolidation.

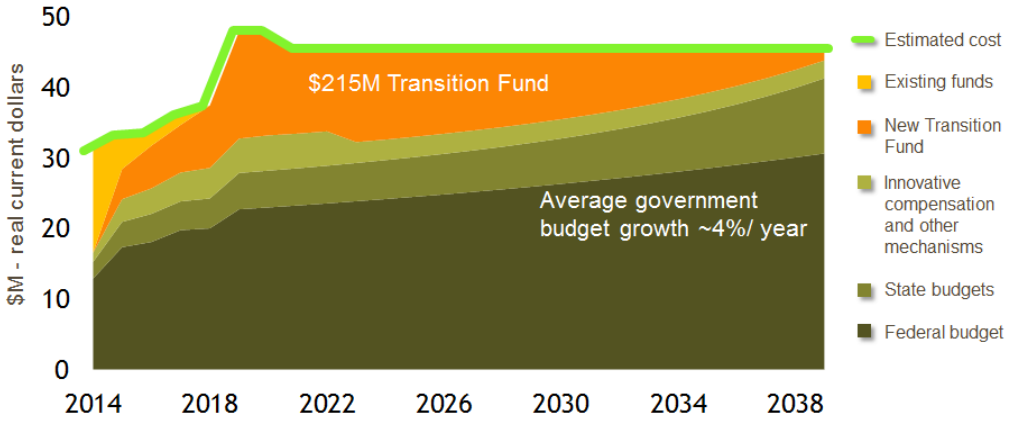
supported by the Program[59] and thus counted toward the Program's 13.5 million ha creation target. ARPA also contributed to the consolidation of 6.8 million ha of existing PAs. During this period, ARPA also expanded its support to 114 PAs, representing 59.2 million ha in the Amazon region. Phase II was also notable for the implementation of 30 community-based projects aiming at the economic development and integration of local communities within and around ARPA PAs. The Program also supported six projects aimed at the development and testing of new models for integrated PA management.

5. As a requirement for the establishment and dimensioning of the FAP, a first estimate of the long-term consolidation and maintenance costs of ARPA PAs were obtained during Phase I. This estimate was refined at the beginning of Phase II, based on a cost model developed using data from Phase I of the Program. The results indicated that the principal amount of funds required by the FAP to generate sufficient investment income to cover those costs were estimated to be US$700 million or more. In addition to the unrealistic amount required to be mobilized, the endowment approach was not attractive to potential donors. At this stage, a Project Finance for Permanence (*Projeto de Financiamento para Permanência*) approach was devised to replace the endowment fund as the long-term sustainable financing strategy for ARPA PA system. This arrangement, its governance, conditions, and functioning, became known as the Transition Fund, a private financing mechanism created through contracts between entities, individuals and legal entities, and Brazilian and foreign donors.

6. First, a cost model was developed to estimate the costs of establishing, consolidating, and maintaining 60 million ha of PAs. Based on the cost model, a financial model was applied to assess the funding gap in relation to the current federal and state government budgets, as well as donor funds already committed, and estimate the required resources over a 25-year transition period, during which donor funds would be gradually replaced by government funds, complemented by new, alternative funding sources, to ensure the maintenance of the program's PAs. The resulting estimate indicated the need for a total of US$215 million in donor funds to cover both consolidation in 2014–2020 and maintenance (2020–2039) costs.

[59] ARPA supports five PA categories according to SNUC, established by Federal Decree No. 4340/2002. These PA categories are Biological Reserves (*Reservas Biológicas*), Ecological Stations (*Estações Ecológicas*), National Parks (*Parques Nacionais*), Extractive Reserves (*Reservas Extrativistas*) and Sustainable Development Reserves (*Reservas de Desenvolvimento Sustentável*).

Figure 7.1. Transition Fund Financing Strategy for Permanence



7. In 2012, partners and donors of ARPA launched the ARPA for Life Initiative, with the goal of raising the totality of funds required by the Transition Fund. In 2014, the initiative obtained the commitment of several donors, in addition to already secured FAP resources that, together, reached the US$215 million target (see Section E. Cost and Financial Modeling), so that the Transition Fund commenced operating. This was officially recognized by Presidential Decree No. 8.505/2015.

C. The Transition Fund

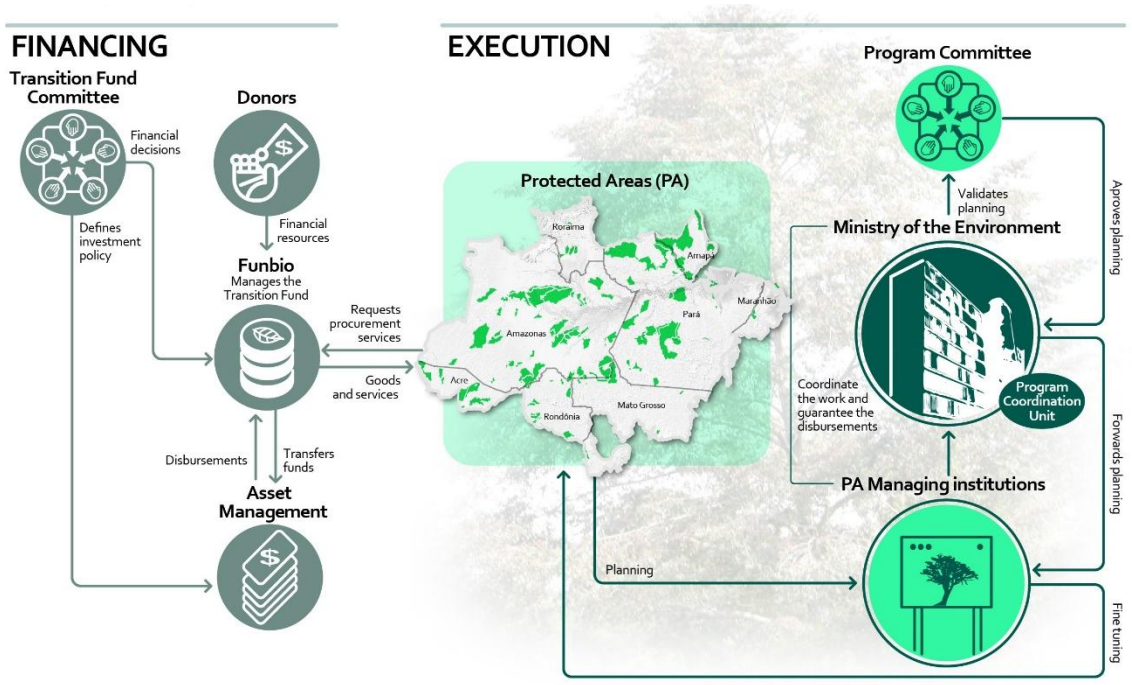
8. **Goals.** The Transition Fund aims to provide resources and incentives for the Federal and Amazonian state governments to (a) enable the creation of 6 million ha of new PAs, (b) complete the consolidation of 60 million ha of PAs and maintain those PAs, according to the Reference Frameworks established for ARPA, and (c) gradually increase the resources provided by governments to ARPA, so that, after a period of 25 years, government funds and alternative funding sources will finance 100 percent of the Program costs, without any additional support from the Transition Fund or any other donor funds.

9. To this end, the Transition Fund intends to finance the acquisition of goods and services to be donated to the PA management agencies for exclusive use in the creation, consolidation, and maintenance of the supported PAs, provided that certain conditions are fulfilled by the federal and state governments (the Disbursement Conditions). The idea is that by 2039 Transition Fund resources will have been exhausted and, consequently, the Transition Fund will be closed and PA operating and maintenance costs will be fully covered by the government budget and alternative funding sources.

D. Structure and Institutional Arrangements

10. ARPA aggregates different public and private entities to achieve its objectives, as established in Presidential Decree No. 8.505 from August 20, 2015, which governs the Program. Figure 7.2 briefly reflects the interaction between the main ARPA entities, including those involved in the operationalization of the Transition Fund.

Figure 7.2. Transition Fund Institutional Arrangements



11. **CFT**. This is the decision-making body of the Transition Fund, with the purpose of supervising compliance with the POM and other instruments that define its functioning. The CFT is composed of nine voting members, of whom seven members are nominated by donors and two members are nominated by the GOB (MMA and Ministry of Planning, Budget, and Management); the latter must also be members of the ARPA Program Committee. Ordinary committee meetings are held annually and usually three extraordinary meetings are also held within this period. Specific responsibilities of the CFT include, among others, the following:

(a) Analyze the technical and financial results of ARPA

(b) Evaluate compliance with the Disbursement Conditions, every two years, according to the reports presented

(c) Decide, every two years, on the maximum annual withdrawal volume of the Transition Fund to pay the eligible expenses in the PAs of ARPA

(d) Determine the investment policy of the Transition Fund

(e) Monitor and analyze the financial performance of the Transition Fund

(f) Monitor, evaluate, and supervise fund management activities carried out by the fund's GF

(g) Evaluate the external and independent audit report prepared in relation to the GF

(h) Approve a strategy for attracting new resources to the Transition Fund, if the CFT determines, in its sole discretion, that it is desirable to raise new resources, as well as approve new donors and/or donations

(i) Appoint the GF and replace it in its sole discretion

(j) Approve, with exclusivity, any modifications in Module 2 of the Operational Manual of ARPA and suggest to the ARPA Program Committee, changes in Module 1 of the manual

(k) Require the GF to contract, at the expense of the Transition Fund, independent consultants for any areas or topics deemed necessary by the CFT

(l) Based on the assessment of compliance with the Disbursement Conditions, identify which PAs or PA management agencies have not met the Disbursement Conditions biennially, and determine how to handle it

(m) Suspend the use of Transition Fund resources for ARPA if the CFT deems that the Disbursement Conditions have not been substantially fulfilled for a period of four consecutive years

12. **ARPA Program Committee.** This is the governing body of ARPA and its composition is set forth in Decree No. 8,505 of August 20, 2015 and Ministerial Order No. 37 from February 14, 2017. The ARPA Program Committee is composed of six representatives from the federal and state governments and six representatives from civil society. It is attributed with overseeing the implementation of the Program, approving operating plans, and recommending adjustments to the Program Operational Manual, among others. It meets ordinarily twice a year. More specific attributions include the following:

(a) Resolve on the strategic planning of ARPA, establishing procedures, guidelines, and criteria for the formalization of agreements and contracts provided for therein

(b) Monitor and evaluate the activities of ARPA

(c) Articulate the participation of Amazon government agencies and state governments, CSOs, and donors in ARPA

(d) Analyze and issue opinions on technical-financial performance reports to ensure the performance and achievement of ARPA goals

(e) Analyze and approve the multiannual planning of ARPA

(f) Approve any changes to Module 1 of the Operational Manual and submit suggestions for changes to Module 2

(g) Convene the Scientific Advisory Panel (*Painel de Aconselhamento Científico*).

13. **MMA.** The MMA is responsible for the overall coordination of ARPA and, through the ARPA PCU, oversees the preparation of operating plans, prepares supervisory reports, carries out M&E of project activities, and secures compliance with project safeguards in collaboration with ICMBio, for federal PAs, and state agencies, for specific PAs under their jurisdiction. It is also the secretariat for the ARPA Program Committee and responsible for communication and information dissemination programs about ARPA.

14. **ICMBio.** The governing body (OG) of federal PAs, ICMBio is a key actor for ARPA, in charge of effectively carrying out all the activities necessary for the consolidation and maintenance of the PAs. In addition, ICMBio coordinates the technical implementation of the Program in federal PAs, identifies and hires PA staff for implementation of activities at the local level, and complements Program implementation funds with their own governmental budgets or other sources.

15. **OGs of the states of Acre, Amapá, Amazonas, Mato Grosso, Pará, Rondônia, Roraima, e Tocantins.** These OGs are responsible for, at the state level, effectively carrying out all the activities necessary for the consolidation and maintenance of the PAs. As ICMBio, they coordinate the technical implementation of the Program in their respective PAs, identify, and hire PA staff for implementation of activities at the local level and complement Program implementation funds with their own governmental budgets or other sources.

16. **FUNBIO.** FUNBIO is appointed by the CFT as the GF of the Transition Fund, to perform the administration of Transition Fund resources in compliance with the provisions of the Operations Manual and the Investment Policy. It is also responsible for procurement activities in accordance with the operating plans and for donating the acquired goods to the PAs, OGs, and the MMA as required. To this end, FUNBIO must comply with the procurement procedures adopted by the Transition Fund.

17. **ARPA counseling bodies.** In addition to the abovementioned entities, ARPA counts on three counseling bodies that meet on a regular basis: the Scientific Advisory Panel, the Technical Forum, and the PA Managers Commission. The Scientific Advisory Panel provides guidance on proposals for the creation and adoption of existing PAs by the Program, methodological issues related to the selection and prioritization of PAs to be supported, and Program planning, implementation, and monitoring. The Technical Forum and the PA Managers Commission provide guidance and problem solving recommendations on the Program's implementation.

E. ARPA Implementation

18. Implementation of ARPA consists of a three-stage management cycle: (a) Program Planning, (b) Program Execution, and (c) Program Monitoring. Each stage feeds into the following one, in a continuous cycle.

ARPA Program Planning

19. The ARPA planning process is conducted with a focus on the creation and consolidation targets of the PAs supported by the Program. To this end, a series of instruments have been developed that integrate several stages of management—from the establishment of guidelines, to

the evaluation of the effectiveness of the actions, strategic planning, and the monitoring of the results. These instruments are as explained in the following paragraphs.

20. **PA Assessment Tool (FAUC).** This is a tool that allows the evaluation of PA management effectiveness and serves as a basis for Program planning and monitoring activities. Developed and adapted for ARPA based on the GEF's Tracking Tools, the FAUC allows the processes of PA consolidation in relation to the goals of the Program to be monitored, guiding the efforts of PA managers and executing agencies. The FAUC evaluates 33 requirements for the management of PAs, subdivided into six elements of evaluation (planning, inputs, processes, products, results, and lessons learned), grouped into two integrated subsystems: Effectiveness and Advancement. The FAUC Effectiveness subsystem comprises all 33 indicators and serves to assess the effectiveness of PA management at systemic and local levels. The FAUC Advancement subsystem comprises 16 indicators, which are considered Program benchmarks (see annex 2: Detailed Project Description), which demonstrate the progress of the status of each PA and are used to evaluate the results of the Program. The ARPA PCU and PA management agencies are responsible for the annual application of the FAUC, as well as for the validation of the information inserted by PA managers in the system.

21. **PEP.** Based on the results of the application of the FAUC, PA managers, and management agencies use this tool to project over a three-year period how each PA plans to enhance its management effectiveness based on the 16 ARPA benchmarks.

22. **ECI.** This is a computational decision support tool used by ARPA: (a) in the selection of PA creation processes to be supported, (b) in the selection of PAs not yet supported by the Program, to finance their consolidation process, (c) to prioritize PA consolidation actions in the PAs already supported by the Program, and (d) in the selection of PAs supported by the Program to advance to stage II consolidation.

23. The ARPA PCU is responsible for validating the results, conducting the negotiation process with PA managers and management agencies, and for the systematization of the results of the planning process in a document containing the proposed amount required from ARPA for the next two-year implementation cycle.

24. As the Transition Fund's GF, FUNBIO is responsible for assessing the Disbursement Conditions based on the verification and compilation provided by the MMA on the status of the Disbursement Conditions' indicators (for details on the Disbursement Conditions, their indicators and weights, see section 0). The Disbursement Conditions' formula is then applied to the total amount required by the Program for the next two-year period that resulted from the application of the financial model and other Program planning tools. The result is then submitted to the CFT, which is responsible for reviewing compliance with the Disbursement Conditions and deciding, based on the application of the weights associated with each Disbursement Condition, the amount of resources that will be made available for the implementation of ARPA for the next biennium.

25. Information on the total Transition Fund resources to be disbursed in a given biennium is used by the MMA, ARPA PCU, and PA management agencies to detail the Program's operational plans. Based on the planning and monitoring tools of ARPA (FAUC, PEP, and ECI),

the MMA makes the first proposal of budget ceilings for each PA, PA management agency, and the ARPA PCU itself. This result is discussed with the PA management agencies for possible adjustments and then submitted to the ARPA Program Committee. The Program Committee, considering the CFT's decision on the resources to be made available to the Program, evaluates and adjusts the proposal, and informs the MMA and FUNBIO of the final decision. Once the ARPA Program Committee has approved the ceilings, the operational plans are detailed and inserted into FUNBIO's project management system (*Sistema Cérebro*).

ARPA Program Execution

26. ARPA's Transition Fund administrative and financial procedures are described in detail in Module 2 of the Program's Operational Manual.[60] ARPA implementation through the Transition Fund is conducted by ICMBio and state OGs, coordinated by the MMA, in accordance with the operational plans for each PA as approved during the planning stage. Eligible PAs and eligible expenses to be supported by the Program are also listed in the Program's Operational Manual.

27. All resources donated to the Transition Fund are pooled in a single fund and are not individually tracked by the donor. Those resources are used up to the limit of disbursements approved by the CFT for the given biennium, in accordance with the rules contained in the Transition Fund's Operational Manual,[560] rather than of specific donors.

28. As in Phase II of ARPA, there are two main ways of disbursing funds from the Transition Fund: (a) acquisitions or contracting carried out by FUNBIO or (b) through *conta vinculada*. The Transition Fund adopts FUNBIO's procurement rules, detailed in FUNBIO's Procurement Manual,[61] for all acquisitions and contracts. No Procurement Plan or similar document is prepared or submitted to donors. Under this strategy, multiple rules and requirements are avoided, streamlining the Transition Fund's operation. Decentralized execution is conducted through *conta vinculada*, a bank account under FUNBIO's name and managed by PA staff, to cover small expenses. *Contas vinculadas* are a mechanism for distribution of funds that allow more autonomy to PA managers to spend small amounts of the PA's budget on daily operation and maintenance of PA offices. FUNBIO reviews reported expenses and monitors (through the *Cérebro* system and field visits) and approves new requests for advances of grant funds. A copy of all supporting documentation is maintained.

29. The Transition Fund adopts a series of standardized financial and technical reports (see table 7.1). These have been designed to meet the requirements of all Transition Fund donors, avoiding the necessity of multiple reporting formats tailored to specific donors, with different submission schedules, ensuring greater transparency and efficiency.

Table 7.1. Transition Fund Reports

Report	Recipient	Objective	Responsible	Frequency

[60] *Manual Operacional do Programa Áreas Protegidas da Amazônia*. Outubro 2015. Available from http://programaarpa.gov.br/wp-content/uploads/2015/10/MOP-ARPA-FASE-III-outubro.pdf
[61] *Procedimentos Operacionais de Compras e Contratações*. Available from http://www.funbio.org.br/transparencia/politicas-e-salvaguardas/.

Report	Recipient	Objective	Responsible	Frequency
Report A. ARPA implementation and financial progress	CFT, ARPA Program Committee	Update the ARPA Program Committee and the CFT on the ongoing verification of financial and government implementation objectives	MMA	Semiannual partial/annual
Report B. ARPA comprehensive progress report	ARPA Program Committee (approval), CFT, general public	Allow the ARPA Program Committee and the CFT to assess the performance of ARPA and enable the CFT to assess compliance with the Disbursement Conditions	MMA	Biennial
Report C. ARPA biennial financial needs plan	ARPA Program Committee (approval), CFT	CFT is informed about the allocation of available resources to the PAs	MMA	Biennial
Report D. Extended efficiency assessment (complementary to Report B)	ARPA Program Committee, CFT, general public	Provide an adaptive administration of ARPA, including evaluation and possible changes to the Program benchmarks and Disbursement Conditions by the ARPA Program Committee and the CFT	MMA	At least every five years
Report E. Cost model review	ARPA Program Committee, CFT, general public	Enable program decision makers to understand the long-term costs of achieving the objectives of ARPA	MMA	At least every five years
Report F. Review of the financial model	CFT, ARPA Program Committee	The MMA updates its expectation of increased funding from governmental and nongovernmental sources in investments to fulfill the objectives of ARPA and the Transition Fund	MMA	Annual
Report G. Validation of the cost model	CFT	Provide the CFT with an independent understanding of ARPA's long-term costs	FUNBIO	At least every five years (or when authorized by the CFT)
Report H. Financial analysis	CFT	Enable the CTF to adjust the Transition Fund strategy based on financial realities	FUNBIO	Annual
Report I. Transition Fund's external financial audit	CFT, ARPA Program Committee	Ensure regularity of accounting	External Auditor (hired by FUNBIO)	Annual
Report J. Performance of Disbursement Conditions and recommendation of amount to be disbursed	CFT, ARPA Program Committee	To enable the CFT to make informed decisions about disbursements	FUNBIO	Biennial
Report K. Ad hoc audit of program performance	Donors, CFT, ARPA Program	Ad hoc	Independent consultant (hired by	Ad hoc

Report	Recipient	Objective	Responsible	Frequency
	Committee		FUNBIO) as authorized by the CFT or ARPA Program Committee	
Report L. Donor-specific finance	Donors, CFT	Update donors regarding financial results of their donations	FUNBIO	Biannual

30. To ensure the realization of the US$215 million financial commitments and the effective contribution of alternative funding sources toward the US$215 million Transition Fund target, additional activities carried out by the Program include ongoing efforts to (a) raise additional funds and (b) identify alternative funding sources and propose implementation mechanisms. These are complementary activities where more work is needed.

31. The need to develop and test a methodological approach to reconcile indigenous peoples claims and concerns with the creation and consolidation of the PAs in the Amazon will also be addressed.

ARPA Program Monitoring

32. Monitoring is carried out jointly by the ARPA Coordination Unit at MMA, FUNBIO, and the PA management agencies (OGs). They are responsible for the preparation of periodic reports on the subjects most directly related to the specific responsibilities each carries out in the implementation of the program (see ARPA Program Execution section). These include financial, performance and impact monitoring, as well as additional program assessment reports.

33. FUNBIO is responsible for monitoring the detailed execution of financial resources, financial balances, and account rendering. OGs are responsible for monitoring the execution of resources within the PAs, following their physical-financial performance and progress in the program's planned targets according to the FAUC and PEP planning tools. The OGs, together with the ARPA Coordination Unit at MMA, also monitor the execution of the governmental, financial, and in-kind co-financing. The ARPA Coordination Unit is also responsible for in situ monitoring, for monitoring PA creation and management effectiveness, progress in the Program's creation and consolidation targets, and the implementation of the components of the Program.

34. In addition, FUNBIO conducts an independent external audit every year, which analyzes its balance sheet and accounts, as well as the accounts of e ARPA and the Transition Fund.

Investment Policy and Asset Management

35. The Investment Policy sets forth the policy, objectives, and restrictions that apply to the investment of the fund assets of the ARPA Transition Fund. As defined in the ARPA Operational Manual, the CFT is responsible for directing and monitoring the investment management of the Transition Fund's assets, but may delegate certain of its responsibilities to FUNBIO, committees, professional service providers, and other support. The adoption of, or revision to, this Investment Policy are nondelegable decisions of the CFT.

36. The CFT delegates, to FUNBIO, the responsibility of engaging one or more asset managers. Additionally, the CFT may employ additional specialists such as tax attorneys, auditors, actuaries, and others to assist in meeting its responsibilities and obligations to administer the Transition Fund's assets prudently.

37. The asset manager is one (or more) specialized company in the financial markets, Brazilian and international, contracted through an international open selection conducted by FUNBIO, with reference terms, including selection criteria, approved by the CFT. The financial investments of the Transition Fund's resources will be carried out by the asset manager on behalf of FUNBIO and shall follow the Investment Policy approved by the CFT.

38. The asset manager(s) have full discretion to make all investment decisions for the assets placed under its direct management, while observing and operating within all policies, limitations, and philosophies as outlined in the Investment Policy and any limitations specifying permissible categories of investments.

39. The CFT also established a Finance Subcommittee, attributed with reviewing monthly investment results, discussing these as needed with the asset manager(s) and FUNBIO, and making any recommendations to the CFT regarding the evaluation, selection, and replacement of asset manager(s), as well as potential changes to the Investment Policy.

Disbursement Conditions

40. The Disbursement Conditions are a set of indicators to support the CFT in defining the amount of resources to be disbursed every two years to the PAs supported by ARPA. Through the Disbursement Conditions it is possible to measure the evolution of actions and commitments considered essential for the fulfillment of the objectives of ARPA and the Transition Fund.

41. Eleven Disbursement Conditions have been established, which may be amended by the CFT. Five of those are mandatory, that is, non-compliance will prevent the contribution of funds from Transition Fund to ARPA. Of the remaining six Disbursement Conditions, two assess the execution of ARPA as a whole, while four evaluate the execution of ARPA by PA management agencies. Each of these conditions has its set of metrics to calculate the indicator, as well as a different weight in the assessment of compliance and, hence, on the determination by the CFT of the total amount of resources to be disbursed. Finally, frequency of assessment of the Disbursement Conditions vary from one, two, or more years.

42. Table 7.2 details the Disbursement Conditions, their coverage, and weight.

Table 7.2. Transition Fund Disbursement Conditions

No	Disbursement Condition	Coverage	Weight
1	ARPA's Operational Manual aligned with the objectives of the Transition Fund	ARPA	Prerequisite
2	Absence of PA net area loss	ARPA	Prerequisite
3	Financial reports by PA	PA management agency	Prerequisite
4	Presentation of consolidations plans	PA management agency	Prerequisite

No	Disbursement Condition	Coverage	Weight
5	Requirement of additional resources by the MMA to complement the Transition Fund	ARPA	Prerequisite
6	Increase in the execution of ICMBio's government budget	ARPA	5%
7	Implementation of biodiversity monitoring	PA management agency	5%
8	Creation of new PAs (according to Program Planning)	ARPA	15%
9	Increase in non-salary resources	PA management agency	25%
10	Consolidation performance	PA management agency	25%
11	Number of employees	PA management agency	25%

43. With the exception of Disbursement Condition No. 6, failure to comply with the other non-prerequisite conditions will result in a reduction of Transition Fund resources to be disbursed to the PAs in proportion to the conditions' weights. Disbursement Condition No. 6 is based on the multiplication of the percentage increase in ICMBio's government budget, in comparison with the previous period, multiplied by the condition's weight.[62]

44. This mechanism ensures that Transition Fund resources will only be made available to the extent that the CFT determines that the Federal Government and PA management agencies have fulfilled their responsibilities and/or targets for ARPA.

Cost and Financial Modeling

45. To estimate the resources required by the Transition Fund to achieve its objectives and for ARPA PA system to be 100 percent financed by government funds and alternative funding sources in 25 years, a two-stage approach was adopted. First, a cost model was developed, to estimate the costs of establishing, consolidating, and maintaining 60 million ha of PAs. Based on the cost model, a financial model was applied to assess the funding gap and estimate the required resources over the 25-year transition period.

46. The cost estimates for the creation, consolidation, and maintenance of ARPA PAs were produced through a detailed and consultative process involving more than 30 PA experts from diverse organizations, including the MMA, ICMBio, FUNBIO, and WWF. This estimation process began in 2010 and efforts were made by the partner organizations to keep it updated.

47. The purpose of this exercise was to estimate the medium- and long-term needs for a minimum effective conservation level of ARPA PAs, 60 million ha in total. The results were based on post-consolidation and maintenance costs for each ARPA PA, existing or future, as well as costs associated with the creation of new PAs. A model that considers the structure and goals of ARPA was developed and is used to reliably estimate the resource demand for ARPA.

[62] For details of the formula to apply the Disbursement Conditions, see annex 2.3, Module 2 of the ARPA Operational Manual - *Manual Operacional do Programa Áreas Protegidas da Amazônia*. Outubro 2015. Available from http://programaarpa.gov.br/wp-content/uploads/2015/10/MOP-ARPA-FASE-III-outubro.pdf.

48. Cost estimates were developed based on the analysis of historical expenditures for specific management activities of Phase I ARPA PAs.[63] All expenditures were classified by type (for example, PA management plan elaboration, Council Meetings, and so on) and by PA type (consolidation stage) and were adjusted considering inputs from ICMBio and PA professionals, as well as economic conditions such as exchange rates and projected fund returns. Estimates were then refined based on the progress of individual investments already made in PAs (considering, for example, the PA consolidation stage and whether they were managed by the federal or state government). The expenses/cost estimates for all the PAs were aggregated to produce the total investment estimate required by ARPA, including also expenditures/operational costs per year. It is important to point out that the differences between PAs were considered in the financial model, so that the cost estimates reflected specific PA conservation objectives. Thus, differences in PA category, logistics, threats, pressure, and PA size provided different costs for the same ARPA benchmark.

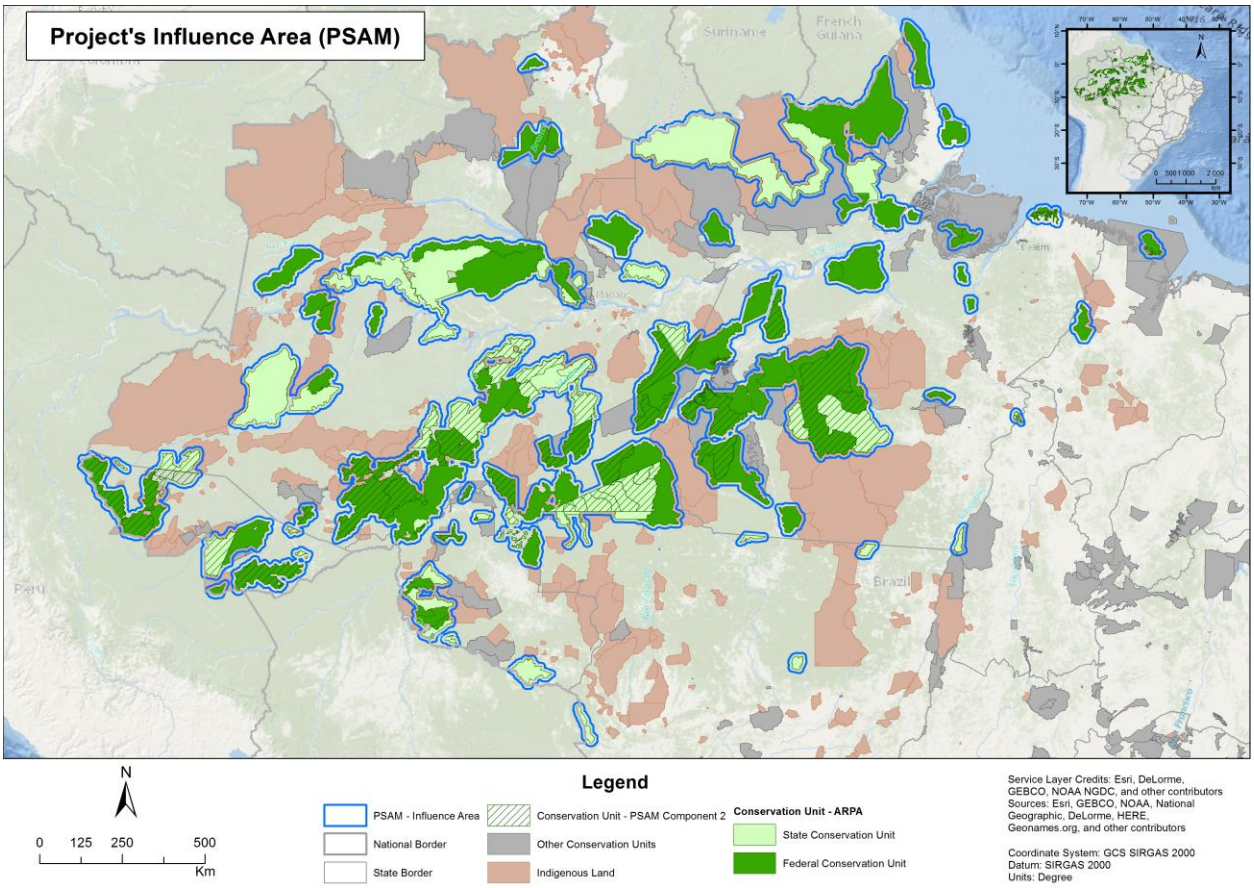
49. It should be noted that the consolidation goals of ARPA PAs (both Consolidation Stage I and Consolidation Stage II PAs) refer to basic levels of environmental conservation management. That is, ARPA supports the expenses/costs related to the acquisition of goods and/or services necessary for PAs to be able to manage and protect their natural resources. More advanced levels of consolidation would require additional resources. The expenses/costs of land regularization, development of sustainable productive systems, development of new management tools, and research or environmental education, among others, were not considered in the estimation exercise.

50. Given the cost model estimates, a financial model was used to calculate the funding gap in relation to the current federal and state government budgets, as well as donor funds already committed, for ARPA PAs. Estimates of the additional resources required over the 25-year transition period were then obtained, including increases in government budget (separating expenses related to salaries of PA permanent staff from those associated with maintenance costs and investments), potential alternative funding sources (conservative models considering other government-based funding sources), payment for ecosystem services (conservative estimates, considering a null contribution at that moment given the non-regulation of Brazilian Law No. 9985/2000 - articles 47 and 48), as well as additional donor funds. The total costs were estimated for both consolidation in 2014–2020 and maintenance (2020–2039).

[63] Leonardo Geluda, Manoel Serrão, Manuela Muanis, Jon Tua, Daniela Oliveira, Marisete Catapan, and Samuel Tararan. 2012.. *Quanto custa o Programa Áreas Protegidas da Amazônia? : Uma modelagem financeira para as Unidades de Conservação do Arpa*. Funbio, Rio de Janeiro. 46p. (available from http://www.funbio.org.br/quanto-custa-o-programa-areas-protegidas-da-amazonia/).

Annex 8: Map of Project Intervention Area

BRAZIL: Amazon Sustainable Landscapes Project



Source: Prepared by MMA