United Nations Development Programme
Country: BRAZIL
PROJECT DOCUMENT

Project Title: ***Mainstreaming Biodiversity Conservation and Sustainable Use into NTFP and AFS production practices in Multiple-Use Forest Landscapes of High Conservation Value***

UNDAF Outcome(s): Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded

UNDP Strategic Plan Environment and Sustainable Development Primary Outcome: Legal and regulatory frameworks, policies and institutions enabled to ensure the conservation, sustainable use, and access and benefit sharing of natural resources, biodiversity and ecosystems, in line with international conventions and national legislation

UNDP Strategic Plan Secondary Outcome: Number of countries in which planning and budgeting mechanisms for conservation, sustainable use and access and benefit sharing of natural resources, biodiversity and ecosystems integrated gender equality and women's empowerment principles.

Expected CP Outcome(s): 2) Capacities for integrating sustainable development and productive inclusion for poverty reduction.

Expected CPAP Output (s): 2) Technical advice for the institutionalization of participatory mechanisms for indigenous peoples and traditional populations in programmes oriented to achieve environmental sustainability and poverty reduction

Executing Entity/Implementing Partner: UNDP

Implementing Entity/Responsible Partners: EMBRAPA (Brazilian Agricultural Research Agency)

Brief Description

The project´s objective is to ensure that the biodiversity of Brazilian multiple-use forest landscapes of high conservation value is conserved through a strengthened sustainable use management framework for non-timber forest products (NTFP) and agro-forestry systems (AFS). It will support Brazil's goal of promoting the conservation and sustainable use of biodiversity while reducing poverty and increasing resilience in the rural areas, which are governmental objectives stated in public policies and programs. The project will conserve biodiversity in key forest landscapes - Amazon, Caatinga and Cerrado - all renowned for their outstanding global biodiversity significance but currently under threat from increasing land use pressures across production landscapes. It will address one of the key land use threats to these forests, which is forest degradation driven by small-scale farmers that employ traditional subsistence farming and extraction practices in and around forested areas throughout the landscape, including land clearing, over-exploitation of resources, and poor fire management. This is causing increased encroachment on forest habitats both in areas under conservation and in locations that are strategic for connectivity across the landscape with the result of gradual loss of the global environmental values in these areas. It will seek to facilitate a shift from these unsustainable agricultural practices to an approach that conserves the biodiversity of multiple-use forest landscapes of high conservation value while meeting important social priorities and development goals. The project will therefore focus on the development of a strengthened sustainable use management framework for sustainable NTFP and AFS production. This will be achieved through two Outcomes: 1) Governance and capacity building framework for up-scaling best practices for BD sustainable management and production, and 2) Market and financial frameworks for up-scaling for NTFP and AFS production in high-conservation value forest landscapes. By removing current risks and uncertainties, the project will contribute to the upscaling of sustainable NTFP and AFS production while at the same time enhancing the rights and roles of communities in the sustainable management of BD and improving their livelihoods. Up-scaling and integration of AFS production will provide more environmentally friendly forms of land use in a landscape-level mosaic, increasing connectivity of forest fragments and helping to maintain ecosystem services.

Programme Period:	2014-2019
Award No.	00083645
Project No.	00092021
GEF Project ID:	5091
PIMS #	4659
Start date:	November 2014
End Date	December 2019
Management Arrangements	NIM
PAC Meeting Date	

Total resources required	33,279,452
Total allocated resources:	
o GEF	5,479,452
o Government	27,500,000*
o UNDP	300,000**

*parallel funding
** parallel funding deliver through other projects

Agreed by (Government):

Agreed by (Executing Entity/Implementing Partner):

Agreed by (UNDP):

TABLE OF CONTENTS

LIST OF ACRONYMS

AGENDHA	Advisory and Management in Nature Studies, Human Development and Agroecology
AFS	Agro-forestry Systems
ANATER	National Agency for Technical Support and Extension
APA	Area of Environmental Protection
APP	Permanent Protection Area
APR	Annual Project Report
AWP	Annual Work Plan
BASA	Bank of the Amazon
BB	Bank of Brazil
BD	Biodiversity
BNB	Bank of the Northeast
BNDES	National Development Bank
CAA-NM	Center of Alternative Agriculture – North of Minas Gerais
CBD	Convention on Biological Diversity
CBO	Community-based Organization
CNS	National Council of Extractivist Population
CNPq	National Council for Scientific and Technological Research
CO	UNDP Country Office
CONAB	National Food Supply Company
COPABASE	Cooperative of Sustainable Family Farming based on Solidary Economy
COOPERACRE	Acre Central Cooperative for Trading of Extractive Products
COOPERCUC	Family Farming Cooperative of Canudos, Uauá and Curaçá
COOPERJAP	Cooperative of Small Farmers and Harvesters of Pequi
COPPALJ	Small Producers Cooperative of Lago do Junco
CPAP	Country Programme Action Plan
CSG	Cooperative Grande Sertão
CSO	Civil Society Organization
CSV	Cooperative Serão Veredas
CT	Citizenship Territory
CU	Conservation Units
EMBRAPA	Brazilian Agricultural Research Agency
FLONA	National Forest
GEB	Global Environmental Benefits
GEF	Global Environment Facility
GoB	Government of Brazil
GDP	Gross Domestic Product
ICMBio	Chico Mendes Institute for Biodiversity Conservation
IR	Project Inception Report
ISPN	Society, Population and Nature Institute
IW	Inception Workshop
MAPA	Ministry of Agriculture, Livestock and Supply
MDA	Ministry of Rural Development
MDS	Ministry of Social Development and Fight against Hunger
MIQCB	Interstate Movement of Babaçu Coconut Breakers
MMA	Ministry of Environment
M&E	Monitoring and Evaluation
MUL	Multiple Use Landscape
NBSAP	National Biodiversity Policy, the Biodiversity Strategy and Action Plan
NIM	National Implementation Modality
NGO	Non-governmental Organization
NTFP	Non-timber Forest Products
OEMAS	Environmental State Organizations
PAA	Food Acquisition Program
PB	Project Board

PGPMBIO	General Policy of Guaranteed Minimum Prices
PIR	Project Implementation Review
PMU	Project Management Unit
PNAE	National School Lunch Program
PNAPO	National Policy for Organic and Agroecological Production
PNATER	National Policy for Technical Assistance and Rural Extension
PNPCT	National Policy for Sustainable Development of Traditional Peoples and Communities
PNPPS	National Plan for the Promotion of Sociobiodiversity Production Chains
PPR	Project Progress Review
PROBIO	Project for Conservation and Sustainable Use of Brazilian Biological Diversity
PRONAF	National Program for Strengthening of Family Agriculture
RESEX	Extractive Reserve
RBM	Results-Based Management
RL	Legal Reserve
ROAR	Results-Oriented Annual Report
SDR	Sustainable Development Reserve
SNUC	National System of Nature Conservation Units
SFB	Brazilian Forest Service
SFM	Sustainable Forest Management
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
WWF	World Wide Fund

SECTION I: Elaboration of the Narrative

PART I: SITUATION ANALYSIS

PART I.A. Context

1.1. Environmental context and global significance

1. Brazil is the largest country in South America and one of the world's richest megadiverse countries. It is estimated that 13.1% of the world´s species (1.8 million), occur in Brazil. Brazil tops the list for flowering plants and primates with an estimated 55,000 plant species (22% of the world´s total) and 55 species of primates (24% of world total); ranks second in birds (1,825 species) and reptiles (721 species; and third in palms (387 species). There are 472 species of endangered plants, 618 endangered animal taxa and nine extinct, with birds and fish accounting for 50% of this list. The Atlantic Forest and the Cerrado, two global biodiversity hotspots, and where the vegetation has been largely removed, account for 72% of total endangered species. The country contains several globally important ecosystems. Amongst the six distinct biomes in the country, three of the most important forest biomes are the Amazon, the Cerrado and the Caatinga, which constitute the project´s intervention areas. The Amazon and Cerrado are both listed in WWF´s Global 200 Ecoregions, and the Cerrado is one of the Global Biodiversity hotspots, with high endemism and is highly threatened by land use change.

2. The **Amazon** is the world's largest rain forest encompassing 7,000,000 Km^2, of which 5,500,000 Km^2 are covered by rainforest. Seventy percent of the Amazon forest is located in Brazil, covering 423 million hectares (ha) or 49,8% of the country´s surface (see Table 1). Nowhere in the world are there more species of animals and plants than in the Amazon, both in terms of species inhabiting the region as those coexisting in the same spot. It is estimated that there are 30,000 plant species, about 10% of the plants around the world, with 12,354 already documented. There are about 5,000 species of trees, with an occurrence of up to 300 species in one hectare. Arthropods have diversified explosively in this biome, with the canopy of rainforest trees being the main center of diversification; they dominate in terms of number of species, number of individuals and animal biomass, and are fundamental to the functioning of ecosystems. It is estimated that more than 70% of the Amazon species have not yet been discovered by science. Around 1,800 butterfly species of the 7,500 species in the world occur in the Amazon and 2,500-3,000 bee species of the 30,000 species described. Ants contribute with nearly one-third of the animal biomass of the tree canopy in the Amazon Rainforest, with an estimate of over 3,000 species. It is estimated that there are over 1,800 fish species throughout the Amazon basin, a much higher number than in other basins of the world. Moreover 250 species of amphibians and 550 of reptiles have been recorded only in the Brazilian Amazon. Birds are one of the best-studied groups among vertebrates, with more than 1,800 species, of which 283 have restricted distribution or are very rare. There are 311 species of known mammals. Most of the effort to preserve areas for biodiversity conservation has been addressed to the Amazon, which has 26,3% of its territory protected by conservation units (see Table 2).

3. The **Cerrado** is the world´s species-richest and most endangered savannah within the borders of a single country, with 205 million ha (24,1% of Brazil´s surface). It spans across more than a dozen States and comprises a great variety of unique ecosystems that are particularly species-rich and that are important for maintaining carbon stocks and water resources and for the supply of products that are key for the livelihoods and incomes of the traditional populations inhabiting this biome. The Cerrado landscape is characterized by extensive savannah formations crossed by gallery forests and stream valleys and its plant physiognomies can be grouped in forest, savanna and grassland. Historically the Cerrado vegetation is conditioned by climate, physical and chemical characteristics of the soil, fire, and water table depth, and more recently by anthropogenic activities such as deforestation, livestock and agriculture. It is the home of 12,070 plant species (34,9% endemic), 195 mammal species (9.2% endemic), 837 bird species (4,3% endemic), 180 reptile species (13% endemic), 150 amphibian species (28% endemic) and 1,000 freshwater fish species. Many large mammals that range widely throughout South America have the Cerrado as one of their main habitats. One of the best-known species is the maned wolf (*Chrysocyon brachyurus*), while two

of the most unusual species are the giant armadillo (*Priodontes maximus*) and the giant anteater (*Myrmecophaga tridactyla*).

4. The **Caatinga** is an exclusively Brazilian ecosystem covering over 82 million hectares or 9,7% of the country´s surface (Table 1) and stretching across 10 states of northeastern Brazil; it is also the world´s most populated semiarid region where the local populations explore its natural resources for livelihoood and income generation. The Caatinga hosts 4,440 plant species (16,8% endemic), 148 mammals species (6,8% endemic), 510 bird species (2,9% endemic), 107 reptile species, 49 amphibian and 185 freshwater fish species (58,6% endemic). The Caatinga is the largest dry forest region in South America and certainly one of the richest dry forests in the world. Biotic interchange over evolutionary time with surrounding biomes (e.g. Cerrado, Atlantic Forest and Amazon) has led to significant biodiversity richness. Two of the 10 most threatened birds in the world, the Indigo macaw (*Anodorhynchus leari*) and the Little Blue macaw (*Cyanopsitta spixii*) are found here. Distinctive and endemic plant species include *Godmania dardanoi*, *Cordia globosa*, *Billbergia fosteriana*, *Cereus jamacaru*, *Melocactus oreas*, *Pilosocereus gounellei*, *Copernicia prunifera*, and *Ziziphus joazeiro*. Other examples of endemic species include the spiny rat (*Proechimys yonenagae*) and several lizards (*Tropidurus amathites*, *Tropidurus divaricatus*, and *Tropidurus cocorobensis*).

Table 1. Original Vegetation Cover of Brazilian Biomes

Biome	**Original area**	
	Km²	**% of the national territory**
Amazon	4,230,490.77	49.8
Cerrado	2,047,146.35	24.1
Atlantic Forest	1,059,027.85	12.5
Caatinga	825,750.00	9.7
Pantanal	151,186.20	1.9
Pampa	178,243.00	2.0

Source: MMA, 2007

5. These three biomes contain the largest number of current and potential wild plant species of economic importance. Non-timber forest products (NTFP) play in these biomes the most important role in rural families' livelihoods and incomes than elsewhere in Brazil. The Ministry of Environment (MMA) has identified 131 plant species in the Cerrado, 162 plant species in the Caatinga and 99 plant species in the Amazon that have current and potential economic value, and have local and regional uses such as food, fruit, aromatic, medicine, oilseeds, ornamental, fiber, toxins, forage, timber and beekeeping. The importance of the Brazil nut (*Bertholletia excelsa)*, acai (*Euterpe edulis*) and rubber for the socioeconomics of the Amazon are well known, as are the harvesting of *pequi* (*Caryocar brasiliense*), *baru (Dipteryx odorata)* and *buriti* (*Mautitia flexuosa*), in the Cerrado and *umbu* (*Spondias tuberosa*) and *carnauba* (*Copernicia cerifera*) in the Caatinga.

6. Over 1.44 million Km^2 of the terrestrial surface of Brazil is protected by Conservation Units (CU), representing 16.9% of the territory, mainly in the Amazon where 26.3% of the biome is under protection. (Table 2). The Cerrado biome is still poorly represented in the protected areas system of Brazil with only 8.1% of the total land area protected. Efforts are underway to establish new areas, such as the proposed 38,000 ha Sustainable Development Reserve "Nascentes dos Gerais" in the north of the Minas Gerais State. The same stands for the Caatinga with only 7,4% under protection and there are efforts underway to establish new protected areas such as the 26,715 ha "São Francisco Natural Monument".

Table 2 – Protected areas (Conservation units) in the Amazon, Caatinga and Cerrado biomes of Brazil

Conservation Unit Categories	Biome					
	Amazon		Caatinga		Cerrado	
	Km^2	%	Km^2	%	Km^2	%
Integral Protection	410,192	9.8	9,600	1.1	62,750	3.1
Sustainable Use	691,916	16.5	52,031	6.3	102,477	5.0
Total	1,102,108	26.3	63,631	7.4	165,227	8.1

7. The Brazilian CUs are divided into two main categories: areas of integral protection and areas for sustainable use[1]. In the former category, the use or harvest of natural resources for commercial purposes is not allowed. As can be seen in Table 2 above, the areas under integral protection are low, especially in the Cerrado and Caatinga biomes. Most of the surface area under protection corresponds to the sustainable use category. Within this category, the predominant CU is the Area of Environmental Protection (APA). APAs comprise 3,7% of the Amazon, 6,2% of the Caatinga and 4,9% of the Cerrado CUs. These figures are lower for the Caatinga and Cerrado, where only 1,2% and 3,2% of the area are protected under categories that are not APA, compared with 22,6% in the Amazon.

8. The Ministry of Environment has identified priority areas for conservation and sustainable use of biodiversity through the Project for Conservation and Sustainable Use of Brazilian Biological Diversity (PROBIO). However, despite the advances in setting aside areas for biodiversity conservation, most of the areas of high priority for conservation are still located in the productive landscape and subject to pressures for land use change, mainly for agriculture, forestry and pastures, and disturbed by extensive cattle ranching and other management practices (e.g. fire). It is therefore essential to promote the sustainable management and use of BD with the participation of the local communities that use and manage the BD resources within the sustainable use group and the buffer zones of both groups (integral protection and sustainable use) and other high priority BD areas defined by MMA/PROBIO is of paramount importance and a key measure to ensure BD protection and associated ecosystem services.

1.2. Socio-economic context

National context

9. Family agriculture in Brazil employs almost 75% of all agricultural labor as per the 2006 Agricultural Census; 31.3 million farmers live throughout the country´s rural areas and most of the rural properties (58%) are smaller than 25 ha. There are 4,366,267 family farms, which represent 84.4% of the Brazilian agricultural farms. This large contingent of family farmers (12.3 million) occupy an area of 80.1 million ha, that is, 24% of the area occupied by the Brazilian agricultural farms; they account for 38% of the income generated and employ 74.4% of the workforce in the rural areas. Non-family agriculture represents 15.6% of the rural establishments and occupies 75.9% of the total surface area. The average size of family farms is 18.3 ha, while that of the non-family farms is 313.3 ha. Of the 80.1 million ha of family farms, 45% are covered by pasture, 24% by forests or agroforestry systems (AFS), and 22% by crops. Non-family agriculture also follows these categories, but the share of pastures and forests and/or forests is slightly higher (48.8% and 28%, respectively), while the cultivated area is smaller (17%). Although the area covered by crops and pastures is smaller in family farms (17.6 and 36.2 million hectares, respectively),

[1] The integral protection group comprises: Ecological Station, Biological Reserve, National Park, Natural Monument and Wildlife Refuge. The sustainable use group comprises: Area of Environmental Protection, Area of relevant ecological interest, National Forest, Extractive Reserve, Wildlife Reserve, Sustainable Development Reserve, and Private Reserve of Natural Heritage.

family farming is the major supplier of food to the domestic market and as such plays a key role in ensuring the food security of the country.

10. Most of the family farms and settlements are located on lands where natural resources were once in good conservation status but have been mainly reverted into an agricultural landscape. Most small farmers, local communities and almost all the traditional peoples and communities that live in rural areas practice small-scale agriculture (maize, beans, cassava, rice, pumpkins, banana, and coffee, among others). In addition to traditional small scale farming, most local communities exploit BD resources as a part-time activity under two different production systems: 1) harvesting of NTFP, and 2) AFS in which perennial crops are included. Perennial tree crops are significant in Brazil´s economy, chiefly coffee in the Southeast (also including *C. robusta* in Amazonia) and cocoa, cultivated in the so-called *cabruca* system under the shade of forest trees. Extractive forest products also contribute to Brazil´s economy, with the fruit of the *acai* palm (*Euterpe edulis*) in first place (US$ 91.5 million in 2009), followed by the kernels of the *babaçu* palm (*Attalea phalerata*; US$ 69.1 million), fibers of the *piaçava* palm (*Attalea funifera* and *Leopoldinia piassava*; US$ 62.9 million), leaves of *erva mate* (*Ilex paraguariensis*; US$ 49.4 million), waxy powder from the leaves of the *carnauba* palm (*Copernicia cerifera*; US$ 45.3 million), and Brazil nut (US$ 29.8 million). In 2009, these six products together constituted 89.1% of the total of the NTFP production in Brazil. In the State of Maranhão the *babaçu* palm is an important forest resource for over 300,000 women (and their families) and only in the municipalities of Canudos, Uauá e Curaçá in the Caatinga, the processing of *umbu* fruits involves 45 communities. Most important for the conservation of biodiversity is the fact that the harvesting of the NTFPs occur inside and outside protected areas, and the sustainable management of their populations can be an asset for the conservation of established protected areas and for areas of high importance for biodiversity conservation, even when these areas are not officially protected.

Socio-economics of the Project Intervention Areas

11. The three biomes have different social and economic characteristics. The areas occupied by family farming and the number of family farms are higher in the Caatinga and smaller in the Cerrado, where large properties producing soybean and cattle predominate (Table 3).

Table 3 - Proportion of properties and area occupied by family farms in the selected biomes

Biome	Surface Area of Biomes (km^2)	Family farms (%)	Area occupied by family farms (%)
Caatinga	826,411	50	35
Amazon	4,196,943	10	21
Cerrado	2,047,146	5	12

Amazon Biome

12. The **Amazon** biome harbors a population of 18.5 million inhabitants with an average population density of 6 people per km². Nearly 2 million people (about 10 % of the population) are engaged in family farming. As per Brazilian law, family farms in the Amazon have up to 400 ha, and no more than a permanent and a fixed temporary employee. Livestock production is the main land use in this biome as can be seen in Table 4 below.

Table 4 – Land uses in the Brazilian Amazon

Land Use	Area (million hectares)	(%)
Forest	42.2	38.6
Native grassland	12.0	11.0
Agriculture	12.3	11.3

Land Use	Area (million hectares)	(%)
Cultivated pastures	42.7	39.1
Total	109.2	100.0

Source: IBGE, 2006

13. NTFP harvesting is one of the more traditional sources of income in the Amazon biome. According to IBGE, in 2009 the total extractive production in the Amazon reached US$ 149.5 million, about 0.13% of regional Gross Domestic Product (GDP). Despite this reduced contribution, production of NTFPs is recognized as being of major importance for income generation and food security of the traditional peoples. In 2009, production of acai fruit reached 115,767 tons with a value of US$72.8 million, Brazil nut reached 37,467 tons with a value of US$24 million and babacu reached 80,465 tons with a value of US$ 41 million. AFS have been introduced in the Amazon region through projects coordinated by NGOs and government institutions, often funded by international cooperation agencies.

Caatinga Biome

14. The Caatinga biome extends over an area of 826,411 km², almost all of Brazil´s semi-arid region, covering the States of Ceará (almost 100%), Rio Grande do Norte (95%), Paraíba (92%), Pernambuco (83%), Piauí (63%) and Bahia (54%), and nearly half of Alagoas (48%) and Sergipe (49%), and small portions of Minas Gerais (2%) and Maranhão (1%). The approximate population in the biome reaches 28 million people, equivalent to 15 % of the Brazilian population with a density of 20 people per km^2. It is the poorest region of Brazil. Small-scale farming is the most widespread economic activity in the semi-arid region, followed by services and industrial production, which uses the native vegetation as a source of energy. The concentration of land and resources is a characteristic of this biome, where social inequalities are a major factor of environmental degradation. There is recent evidence of changes in the traditional form of land ownership. Between 1996 and 2006, the total number of farms in the semiarid region increased by 37,000 units and the area used by rural farms decreased by nearly 2,000,000 ha. The increase in the number of rural farms is due to the reduced number of properties of over 1,000 hectares and the increased number of properties between 10 and 100 hectares. These numbers may be showing the impact of the Land Reform Program that by the year 2011 settled 107,317 families in approximately 30,000 km² of land. One of the traditional productive and cultural systems in the Caatinga is the "Fundo de Quintal" (Backyard Pasture), which defines a form of communal use, where each family has a house and a small fenced area and the remaining space is used in common for grazing and for extractive and agricultural activities. Although badly documented, family farmers have AFS adapted to the semiarid region. In this biome the main NTFPs harvested are *umbu* and *licuri* (Syagrus coronata) for food, *carnauba* for wax and *piassava* for fiber. The value of *piassava* production decreased from 2001 to 2010, from US$ 49.5 million to US$ 28.6 million, but the quantity extracted decreased from 95.000 tonnes to 63.000 in the period and the price had a slight decrease (US$ 523/ton to US$ 455/ton).

Cerrado Biome

15. The Cerrado biome covers the Federal District (100% of its area) and 10 states: Goiás (97%), Mato Grosso (39%), Mato Grosso do Sul (61%), Tocantins (91%), Maranhão (65%), Bahia (27%), Piauí (37%), Minas Gerais (57%), São Paulo (32%), and Paraná (2%), including 1,330 municipalities. This biome also occurs in small areas in the Amazonian states of Roraima, Amapá, and Amazonas. The population is predominantly urban, with an average population density of 66 people per km2. In this biome the family farms have a maximum surface of 280 ha. Until the year 2011, the Land Reform Program granted lands to 213,434 families amounting to 96,000 km2. In the Cerrado, agriculture and livestock production to supply the international market are the main economic activities (soy, maize, cotton, and beef). Production of charcoal for the steel industry, mainly in the State of Minas Gerais and more recently in the State of Mato Grosso do Sul is becoming an important economic activity. Of the 9.5 million tons of charcoal produced in

Brazil in 2005, 50% came from native vegetation and mostly from the Cerrado. Livestock production is the predominant land use, with 54 million ha occupied by cultivated pastures followed by 22 million ha of agricultural crops. AFS, as in the Amazon, appear sparsely, as a result of government projects and NGOs, without sufficient dissemination and visibility. It is a common practice to raise cattle amidst the native vegetation, where also NTFP products are harvested, although the system has not yet been evaluated. The Cerrado is very rich in NTFP species that produce edible fruits in large quantities and are greatly appreciated in the region, such as *pequi*, *buriti* and *baru*, among others, which are commercialized in natura as well as processed in the form of preserves, jams and sorbets. As in the other biomes, official figures are far below the actual volume of production, amounts and personnel involved. National production of *pequi* increased from 3,300 tonnes in 2001 to 5,700 tonnes in 2010, and the price increased from US$ 400/ton to US$ 454/ton in this period, with the State of Minas Gerais accounting for nearly 30% of the national production. In this period, the babaçu doubled its production value, with prices rising from US$ 173/ton to US$ 360/ton. The production is highly concentrated, with the State of Maranhão accounting for 95% of the national production value.

1.3. Institutional, policy and legal context

Institutional context

16. Government: The main institutions related with biodiversity conservation, NTFP and AFS are MMA (Ministry of Environment), MDA (Ministry of Rural Development), MDS (Ministry of Social Development), MAPA (Ministry of Agriculture, Livestock and Supply), CONAB (National Food Supply Company), ICMBio (Chico Mendes Institute for Biodiversity Conservation), SFB (Brazilian Forest Service), OEMAS (Environmental State Organizations), ANATER (National Agency for Technical Support and Extension). This set of government institutions implement a number of public policies that are directly or indirectly related to the project, among them: the General Policy of Minimum Prices for Sociobiodiversity (PGPMBIO), the National Policy for Organic and Agroecological Production (PNAPO), the National Policy for Technical Assistance and Rural Extension (PNATER), the National School Lunch Program (PNAE) and the Food Acquisition Program (PAA) (see *Policy and Legal context* below).

17. The **Ministry of Environment (MMA)** promotes the adoption of principles and strategies for knowledge, protection and restoration of the environment, the sustainable use of natural resources, the enhancement of environmental services and the integration of sustainable development in the formulation and implementation of public policies, in a cross-cutting, participatory and democratic manner at all levels of government and society. The areas of responsibility of the MMA are: i) National environmental and water resources; ii) Preservation, conservation and sustainable use of ecosystems and biodiversity and forests; iii) Strategies, mechanisms and economic and social instruments to improve environmental quality and sustainable use of natural resources; iv) Policies for the integration of environment and production; v) Environmental policies and programs for the Legal Amazon, and vi) Ecological-economic zoning. The MMA chairs the Steering Committee of the Amazon Fund (COFA). Through the Secretariat of Extractivism and Sustainable Rural Development (SEDRS), it supports the development of policies, standards and strategies related to the management of NTFPs. In addition, the SEDRS promotes the adoption of sustainable technologies such as AFS, and studies especially on agro-extractivism, their supply chains and sustainable use of biodiversity. The PLANAPO and the *Bolsa Verde* Program are the main MMA policy and program linked to NFTPs and AFS.

18. The **Ministry of Agrarian Development (MDA)** has competencies in the following subjects: i) Agrarian reform; ii) Promotion of sustainable development of the rural segment formed by farmers, and iii) Identification, recognition, delimitation, demarcation and titling of lands occupied by *Quilombo*[2] communities. The MDA, in extraordinary character, coordinates land regularization in the Legal Amazon.

[2] Quilombos are settlements founded by people of African origin.

MDA is also responsible for the Citizenship Territories Program and the National Program for Strengthening of Family Agriculture (PRONAF), encompassing funding and technical assistance to multiple productive activities, such as organic and ecological production, AFS and management of NTFPs. MDA is a very important partner in the implementation of the PAA and the PNAE, which are key programs to this project and is responsible for the National Policy for Technical Assistance to family farmers.

19. The **Ministry of Social Development and Fight against Hunger (MDS)** has the goal of promoting the social inclusion, food and nutritional security, full social assistance and a minimum income for poor families. To this end, the MDS implements numerous programs and public policies for social development, manages the Social Assistance National Fund (SANF) and approves the general budgets of the Industry Social Service (SESI), Commerce Social Service (SESC) and the Transportation Social Service (SEST). The MDS manages cash transfer programs such as the *Bolsa Familia* (Family Grants), which provides cash transfers under a co-responsibility scheme that includes health and education commitments. The Ministry also carries out actions to fight hunger through food production and distribution, promotion of family agriculture, regional development and nutritional education, respecting the Brazilian cultural diversity. It also strives to consolidate the right to social assistance throughout the national territory and to achieve greater effectiveness in the transfer of federal government funding to the States and Municipalities. The promotion of NTFPs and AFS is part of the MDS strategy for food security and poverty reduction of family farmers and traditional communities involved in the management of NTFPs. To develop this strategy, MDS implements a portfolio of projects, transfers funds to the MMA and MDS and participates in boards dealing with NTPF and AFS related policies.

20. The **Ministry of Agriculture, Livestock and Supply (MAPA)** has the mandate to promote the sustainable development and competitiveness of agribusiness for the benefit of Brazilian society. MAPA is leading the Sectoral Plan for Mitigation and Adaptation to Climate Change for a Low Carbon Agriculture (ABC Plan), which aims at organizing and planning actions to promote the adoption of sustainable production technologies. EMBRAPA (Project Executing Agency) and the National Supply Company (CONAB) are MAPA linked institutions.

21. The **National Food Supply Company (CONAB)** is a state-owned company under MAPA, responsible for managing the supply and agricultural policies to ensure the basic needs of society, as well as preserving and encouraging market mechanisms, with the following objectives: (i) plan, regulate and implement the Policy of Guaranteed Minimum Prices (PGPMBIO); (ii) implement other instruments in support of agricultural prices; (iii) implement federal policies regarding the storage of agricultural production; (iv) coordinate or implement official policies for storage, removal and disposal of stocks of agricultural products; (v) implement federal supply policies and regulate the supply of agricultural products to the domestic market; (vi) develop foreign trade related activities, according to guidelines issued by MAPA; (vii) participate in the formulation of the agricultural policy; and (viii) perform other activities that are assigned or delegated to it by the Executive Branch and are consistent with its purposes. CONAB implements two major policies for NTFP based production, the PGPMBio and the PAA.

22. The mandate of the **Chico Mendes Institute (ICMBio)** is to protect the natural heritage and promote environmental development. It manages the Federal Conservation Units, promoting the environmental development of the communities in CUs under the sustainable use category, research and knowledge management, environmental education and promoting ecological management. Through its Social and Environmental Management Area, ICMBio supports communities in CUs to formulate and implement natural resource management projects. ICMBio also promotes joint efforts to formulate rules and procedures for the management of natural resources, including NTFPs, in sustainable use protected areas, in particular Extractive Reserves (RESEX), National Forests (FLONA) and Sustainable Development Reserves (SDR).

23. The **Brazilian Forest Service (SFB)** has the mission to reconcile the use and conservation of forests, valuing them for the benefit of present and future generations, through the management of public forests, the construction of knowledge, capacity building and provision of specialized services. The SFB, through the National Center for Forest Management (CENAFLOR) seeks to improve the management, production, processing and commercialization of agro-extractive and forestry products and services. It provides training for those involved in the management of NTFPs, especially to the Technical Assistance and Rural Extension Agency with emphasis on forestry activities.

24. The **National Agency for Technical Assistance and Rural Extension (ANATER)** is a newly established agency with the mandate of developing the national technical assistance and rural extension policy. Its mission is to strengthen capacities to meet the different demands of rural production among them the management of NTFPs and AFS. Priority areas include the milk production chain, production in the semiarid region through technologies adapted to drought prone areas, and the organic and low-carbon agriculture. Capacity building activities include strengthening the managerial capacities of farmers and extractivists and facilitating access to information and new technologies.

25. **State departments of agriculture and environment (OEMA)** in general are charged with planning, promoting, organizing, directing, coordinating, implementing, regulating, monitoring and evaluating the sectoral actions in regards to promotion and development of agribusiness at state level. The themes covered by OEMA´s include family farming and agroforestry activities, use of renewable natural resources, sustainable development of the rural environment and quality management, transportation, storage, marketing and distribution of products. The project will cover six States: Minas Gerais, Ceará, Bahia, Pará, Acre and Maranhão all of them having environmental agencies as follows: 1) State Secretariat of Environment and Sustainable Development (SEMAD) and the State Forest Institute (IEF) in Minas Gerais; 2) State Superintendence of Environment (SEMACE) in Ceará; 3) Department of the Environment of Bahia (SEMA); 4) State Department of Environment (SEMA) in Pará; 5) Environmental Secretariat (SEMA) and Secretariat of Family Agriculture and Forestry Production (SEAPROF) in Acre; and 6) State Department of Environment and Natural Resources of Maranhão (SEMA).

26. Private Sector: Brazil´s private sector is making important progress in the implementation of corporate environmental responsibility. The **Ethos Institute** and the company **NATURA** have established partnerships between the private sector and rural communities for production of Amazonian biodiversity products. The cosmetics sector stands out in the use of NTFPs and in this sense **NATURA** and **BOTICARIO** are two of the major Brazilian companies in this industry, as well as **BERACA**, which has partnered with the international company L´OREAL. In the food industry other large companies are also partnering with family farmers and harvesters in the Amazon such as **COCA COLA** with producers of *guaraná* (*Paullinia cupana*). Within the framework of the 2014 World Cup the MDS launched the Program "Organic and Sustainable Brazil for the 2014 World Cup", which has provided opportunities for the establishment of several partnerships between large hotel chains and rural communities for supply of products. Large state-owned enterprises such as **PETROBRAS** (oil company), **ELETRONORTE** (energy company) and the **Bank of Brazil** (through its Foundation) also engage in social responsibility by financing development projects through calls for proposals.

27. Cooperatives and farmers' associations play an important role in the agro-processing and sale of agricultural production by purchasing fresh products, processing and commercializing them. In the Caatinga, the **Family Farming Cooperative of Canudos, Uauá and Curaçá (COOPERCUC)**, specializes in *umbu* and wild passionflower, and the **Small Producers Cooperative of Lago do Junco (COPPALJ)**, produces and commercializes organic *babaçu* oil. Cooperatives in the Cerrado include the **Cooperative Grande Sertão (CSG)** that processes and commercializes 240 tons/year of fruits, especially of wild plant species (*coquinho azedo* (*Butia capitata*), passionflower (*Passiflora sp.*), *umbu*, *pequi*, and *araticum* (*Annona crassiflora*); the **Cooperative Serão Veredas (CSV)** processes and commercializes *pequi* pulp, oil and flour, scrapes and oil of *buriti*, frozen fruit pulp of *cajuzinho* (*Anacardium humile*),

coquinho azedo, *mangaba*, *araticum* and jellies of *cajuzinho*, *cagaita* (*Eugenia dysenterica*) and *araticum*, honey, *baru* nut and other products from family farms; the **Cooperative of Small Farmers and Harvesters of Pequi (COOPERJAP)**, specializes in *pequi* derived products, and the **Cooperative of Sustainable Family Farming based on Solidary Economy (COPABASE)** processes and commercializes *baru* nuts. The **Central do Cerrado**, based in Brasilia, collects the production from several associations and farmer cooperatives, thereby enabling economies of scale and visibility for NTFP and AFS in the Cerrado biome. In the Amazon, the **Acre Central Cooperative for Trading of Extractive Products (COOPERACRE)** is the biggest cooperative responsible for the agro-processing and exporting of Brazil nut, *copaiba* oil and rubber tree latex. It brings together 20 cooperatives and rural associations from more than 10 municipalities, working with more than 1,800 extractivist families.

28. Financial Institutions: Three financial institutions provide credits within the framework of the National Program for Strengthening Family Agriculture (PRONAF): the **Bank of Brazil (BB)** at national level, the **Banco of the Northeast (BNB)** in the Caatinga, and the **Bank of Amazonia (BASA)**. Financing includes the establishment of agroforestry systems for sustainable harvesting, agroecology, restoration of Permanent Preservation Areas and Legal Reserves, and family farming in general, industrialization and commercialization of agricultural production.

29. Civil Society Organizations (CSO): A number of CSOs operate in the Amazon, Cerrado and Caatinga biomes working in natural resources management, including NTFPs and AFS. The **Society, Population and Nature Institute (ISPN)** implements the GEF Small Grants Program in the Cerrado and Caatinga biomes. The **World Wide Fund (WWF)** supports communities and indigenous peoples in the Cerrado and Amazon biomes in NTFP management through capacity development for income generation and good environmental practices. The **Center of Alternative Agriculture – North of Minas Gerais (CAA-NM)** is one of the most important NGOs in the Cerrado, and has important initiatives promoting the agrarian reform, family farming, agroecology, including AFS and NTFP, in the North of Minas Gerais. It supports traditional and extractive communities to develop sustainable ways of living through NTFP management, AFS production and agroecology. The **Interstate Movement of Babaçu Coconut Breakers (MIQCB)** emerged in the 1980`s and operates in four states of the Amazon; it was created in 2009, and works with 134 associations that process *babaçu*. **Articulation for the Semi-Arid (ASA)** is a network of 1,000 CSOs working in the development of policies for coexistence with the semiarid (Caatinga and Cerrado) through participatory processes for sustainable development. AFS, agroecology, microcredit, and NTFP management among other issues, are part of ASA´s strategies. The NGO **Advisory and Management in Nature Studies, Human Development and Agroecology (AGENDHA)** works in the Caatinga and supports 30 cooperatives and associations mainly lead by women and involving more than 3,000 people. In the Amazon, the **National Council of Extractivist Population (CNS)** is a national level organization that represents agro-extractivist workers organized in associations, cooperatives and unions.

Policy and legal context

30. The main public policies that are key to NTFP management and AFS production are:

31. The **National Biodiversity Policy,** the **Biodiversity Strategy and Action Plan (NBSAP)** together with the **CBD National Targets for 2020** pursue the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising from the utilization of the genetic resources, components of the genetic heritage and associated traditional knowledge.

32. The **National Plan for the Promotion of Sociobiodiversity Production Chains (PNPPS)** is jointly implemented by the MDA, MDS, CONAB and MMA and seeks to promote the sustainable use of biodiversity and ensure generation of alternative incomes for rural communities through access to credit, technical assistance and rural extension, markets and trade instruments and guaranteeing a minimum price.

33. The **General Policy of Minimum Prices for Sociobiodiversity (PGPMBio)** was established through Decree-Law No. 79 (1996), which defined criteria for the establishment of minimum prices and procurement of agricultural products. More recently, Law No. 11775 (2008) established a direct subsidy to producers, including for biodiversity products. Under this policy, a subsidy is paid to those agroextractivists that could not market their product at the minimum price established by the Federal Government. The subsidy is the difference between the minimum price and the value of the sale. The PGPMBio is coordinated by the MDA, the minimum prices are established by MMA, MAPA, MDA, CONAB, the Ministry of Economy (ME) and the Ministry of Planning and General Budget (MPOG), and it is implemented by CONAB. The Brazilian Government has selected 30 NTFP species for priority intervention aimed to promote their sustainable use. Of these, 13 species have minimum prices established under the PGPMBio (see Table 6 below). Additionally, eight new species are being considered for inclusion in the PGPMBio policy, namely: *buriti* (*Mauritia flexuosa*); *murumuru* (*Astrocaryum murumuru*), *macaúba* (*Acrocomia aculeata*), *fava d'anta* (*Dimorphandra mollis*), licuri (*Syagrus coronata*), *maracujá do mato* (Passiflora cincinnata.), *erva mate* (Ilex paraguariensis) and processed *piaçava* (Attalea funifera).

Table 6 - NTFP species, products and minimum prices under the General Policy of Minimum Prices for Sociobiodiversity

Species	**Common name**	**Product supported by PGPMBio**	**Prices in 2013/2014 (US$) Kg**
Euterpe oleracea	Açaí	Fruit	0.49
Carapa guianensis	Andiroba	Seed	0.52
Orbygnia phalerata	Babassu	Nut	1.13
Dipteryx alata	Baru	Almond	0.11
Hevea brasiliensis	Seringueira	Natural rubber	2.05
Theobroma cacao	Cocoa	Almond	2.48
Copernicia prunifera	Carnaúba	Wax	3.69
Copernicia prunifera	Carnaúba	Powder	2.26
Bertholletia excelsia	Castanha do Brasil	Nut	0.54
Euterpe edulis	Juçara	Fruit	0.84
Hancornia speciosa	Mangaba (Northeast Brazil)	Pulp	1.15
Hancornia speciosa	Mangaba (Southeast and Middle Center Brazil)	Pulp	1.15
Caryocar brasiliense	Pequi (North and Northeast Brazil)	Fruit	0.20
Caryocar brasiliense	Pequi (Southeast and Middle Center Brazil)	Fruit	0.22
Attalea funifera	Piaçava (Bahia State)	Fiber	0.77
Attalea funifera	Piaçava (North Brazil)	Fiber	0.66
Spondias tuberosa	Umbu	Fruit	0.24

34. The **National Program for Strengthening of Family Agriculture (PRONAF)** established in 1996 is implemented by MDA, and its objective is to provide financing to family farmers for agricultural production. PRONAF is an important tool to promote a greater political visibility of family farming in the country and has facilitated access to credits to 781,000 farmers. Although the number is low compared to the total number of farms in the country, the program has nevertheless supported a significant increase in the volume of food produced by family farming and improvement of the socioeconomic conditions of many families, It has also had important impacts on Municipalities, increasing job opportunities, revenues and rising the municipal sector GDP. Disbursements of credits under the program increased from US$0.72 billion in 2001 to US$ 11 billion in 2013.

35. The **Food Acquisition Program (PAA)** was established in 2003 with the objectives of promoting access to food by people in a situation of food insecurity and promoting social and economic inclusion in the rural areas by strengthening family agriculture. It is implemented by MDA and MDS, in partnership with States, municipalities and CONAB. Under the program, the federal government purchases family farmers´ products, paying a limited amount to each farmer, stores the products and freely distributes them in areas where social vulnerability is higher. The PAA is part of the PGPMBio, but it is not restricted to products that have a minimum price; it also purchases NTFPs and AFS products that are not supported by the PGPMBio. Between 2003-2010 the PPA invested a total of US$ 1,6 billion purchasing farm products from an average of about 112,000 farmers annually (2.6% of Brazilian family farmers).

36. The **National School Lunch Program (PNAE)**, was established in 1955 and aims to partially meet the nutritional needs of students through the provision of at least one meal a day in all public schools registered in the school census, seeking to fulfill the nutritional requirements during the school year. Since 2009 the PNAE ensures that at least 30% of the funds transferred from the National Fund for the Development of Education (FNAE) to the Municipalities (which are in charge of purchasing and distributing products to schools) are invested in procuring family agriculture products. In 2014, US$ 1,6 billion will be allocated to school lunches, and 30% would represent an injection of US$ 480 million to family farming, including NTFP food products.

37. The PAA and PNAE represent major advances and opportunities for family farmers, indigenous peoples and traditional communities since both programs offer a regular and stable institutional market, and promote sustainable food production based on livelihoods. Most of the NTFP species supported by public procurement policies come from the Amazon, Cerrado and Caatinga biomes.

38. The **National Policy of Technical Assistance and Rural Extension (PNATER)** is coordinated by the MDA´s Secretariat of Family Agriculture. It was established in 2003 and its objective is to promote and facilitate the processes that contribute to the construction and implementation of strategies for sustainable rural development, focusing on the expansion and strengthening of family farming and their organizations, through educational and participatory methodologies integrated to the local dynamics, seeking to create viable conditions for the exercise of citizenship and improving the quality of life of society.

39. The **National Policy for Sustainable Development of Traditional Peoples and Communities (PNPCT)** was launched in 2007 with the main objective of promoting the sustainable development of traditional peoples and communities, emphasizing in the recognition, strengthening and guaranteeing of their territorial, social, environmental, economic and cultural rights, with respect and appreciation to their identity, their organization and their institutions. A board composed of 15 federal governmental institutions, plus 15 representatives of non-governmental institutions, coordinates and works to reach the policy´s objectives.

40. Brazil established its **Citizenship Territories Program** in 2008. The program´s objective is to promote economic development and universalization of basic services in rural areas through a strategy for sustainable territorial development where social participation and integrated actions between Federal Government, states and municipalities are essential. To this end the country has been divided into 120 territories, which comprise a group of municipalities with similar economic and environmental characteristics, social, cultural and geographical identity and cohesion. Territories are larger than municipalities but smaller than states. Twenty-two ministries participate in the program with interventions covering, among others, sustainable production, education, health, infrastructure, water supply, social development and rights. In 2013 the budgetary allocation to the program was US$3.3 billion.

41. The **Low Carbon Agriculture Program (ABC Program)** launched in 2010 is implemented by MAPA. It seeks to promote the reduction of greenhouse gas (GHG) emissions in agriculture, as envisaged

in the National Climate Change Policy by improving efficiency in the use of natural resources, increasing the resilience of production systems and rural communities and enabling the adaptation of the agricultural sector to climate change. The ABC Program comprises seven initiatives, six of them related to mitigation technologies and one to adaptation: 1) Rehabilitation of Degraded Pastures; 2) Integrated Livestock-Agriculture-Forestry and Agroforestry Systems; 3) Direct Sowing System; 4) Biological Nitrogen Fixation; 5) Planted Forests; 6) Treatment of Animal Wastes; and 7) Climate Change Adaptation.

42. ***Bolsa Verde*** (Green Grants) is part of the Plan "Brazil without Poverty"; it was launched by the MMA in 2011 and consists in quarterly cash transfers of US$ 135 (US$ 550/year) to extremely poor families living in priority areas for conservation for a two-year period (which may be renewed). Beneficiaries represent 47% of the 16.2 million people living in extreme poverty in rural areas. The program aims to link the cash transfers to ecosystem conservation and sustainable use of natural resources in RESEX, FLONAs, Federal SDRs and Settlements Environmentally Differentiated from the Agrarian Reform. Areas occupied by traditional and indigenous peoples can also be included in the program. The program represents an important step toward recognizing and compensating traditional communities and family farmers for the environmental services provided to society.

43. The **National System of Nature Conservation Units (SNUC)** was launched in 2002, comprising the federal, state and municipal Conservation Units (CU). The SNUC consists of 12 CU categories with different protection and use objectives that vary from areas with integral protection to areas that can be sustainably used and conserved. The SNUC covers 17,4% (16,9% terrestrial and 1,5% coastal) of the country´s territory, of which 13,8% comprises CUs under the sustainable use categories, which are the home of traditional communities that depend on biodiversity for their livelihood. Traditional peoples and communities not inhabiting sustainable use reserves live in communal areas, rural settlements and private properties. The Environment National Council (CONAMA), MMA, ICMBIO and the Brazilian 8Environment Institute (IBAMA) are in charge of managing the SNUC.

44. The **National Policy for Agroecology and Organic Production (PNAPO)** was launched in 2012 and is implemented through the **National Plan for Organic Production and Agroecology (PLANAPO)** with the objective to articulate and implement programs and activities that induce the transition to agroecological and organic production as a contribution to sustainable development, and enabling the population to improve their quality of life through the supply and consumption of healthy food and the sustainable use of natural resources. The PNAPO is coordinated by the National Commission for Agroecology and Organic Production (CNAPO) and the Interministerial Chamber of Agroecology and Organic Production (CIAPO). The **Ecoforte Program** was established at the beginning of 2014 under the PLANAPO; it seeks to articulate policies and actions to encourage organic and agroecological food production by investing in networks, cooperatives and production groups that work in agroecology, organic production and harvesting of NTFPs. The program is coordinated by the Banco do Brasil Foundation, in association with the General Secretariat of the Presidency of the Republic, MDA, MAPA, MMA, MDS, CONAB, EMBRAPA, the Ministry of Labor and Employment (MTE) and the National Development Bank (BNDES). The first call for proposals was launched in April 2014 with an allocation of US$ 11.36 million to finance 30 projects to assist 20,000 families of small farmers, rural settlers, indigenous and traditional people and communities.

Part 1.B Baseline Analysis

1.4. Threats to globally significant biodiversity

45. Brazil has made significant efforts to protect high importance biodiversity areas by establishing Conservation Units, which however are more concentrated in the Amazon, where opportunities for

conservation are higher than in the other biomes (see Table 2 above). The complex policy, social and economic factors of the country still foster biodiversity loss, even with the environmental legal framework enforced and the public policies promoting biodiversity sustainable use. The Brazilian biological richness is threatened by biodiversity loss driven mainly by habitat destruction that has resulted in significant loss of forest cover and ensuing biodiversity losses. Specifically, widespread agricultural expansion (including forestry and conversion to pastures, and small-scale agriculture) is the most significant driver of plant population extinction and degradation. Associated to land use conversion, overexploitation of forested areas and unsustainable farming practices gradually and continuously increases degradation of the remaining native habitats. Much of the forest surface still remains in individual farms as legal reserves, land settlements and in the landscape, has high conservation value and is threatened by anthropogenic interventions, namely deforestation, over-exploitation and unsustainable farming practices.

Deforestation

46. The modification of habitats is the major cause of biodiversity loss in the country, mainly due to the conversion of natural landscapes for farming purposes. Deforestation is driven by both large and small scale farmers. Large-scale farmers clear forested areas mainly for pastures for livestock production and cash crops (e.g. soy, cotton, sugarcane) while small-scale farmers carry out traditional subsistence farming and extraction practices in and around forested areas throughout the landscape. Given the important number of small farmers in Brazil (see socio-economic context section above) even small-scale activities represent a significant impact on key forest fragments, including in and around protected areas or along river courses; which are subject to deforestation and degradation for subsistence and income generation. It is precisely on these small-scale farmers that the project focuses on as they are most likely to be able to benefit from increased NTFP/ASF and they also located near forest blocks of high conservation value, and hence where the project focuses.

47. Although the expansion of agriculture for increased productivity represents a gain, it causes the immediate loss of biodiversity and ecosystem services, because of the direct impact on land cover and as a result of the release of nutrients into rivers and water withdrawal for irrigation. The amount of native vegetation that is being suppressed in Brazil is remarkably high, particularly for agriculture and livestock production. The deforestation rate almost continuously grew between 1997 and 2004 when it reached its peak and then decreased during the following six years, with the most significant reduction in 2009. Currently, most deforestation in the Cerrado is concentrated in the southern portions of the Maranhão and Piauí States, and in the Amazon in the so-called Arc of Deforestation and Burning, which covers the southern and eastern portions of the biome. The Cerrado has lost 48.4% of its original vegetation with an annual deforestation rate of 1.4 million ha. A similar situation occurs in the Caatinga, where 46.4% of its vegetation cover has been removed, with an annual rate of deforestation of 276,300 ha. Over 4.1 million Km^2 of the Brazilian Amazon were originally covered by forests, of which 18.3% has been deforested, with 1.8 million ha cleared annually. Livestock production is the economic sector responsible for most of the deforestation to the point that it is estimated that 60 % of the deforested area of the Amazon is occupied by pastures. According to the surveys evaluating the dynamics of deforestation in the Amazon, family farming concentrates the highest rates of deforestation.

48. Table 5 below summarizes the results of monitoring of deforestation in the Amazon, Cerrado and Caatinga biomes between the 2002-2008 period.

Table 5 – Deforestation in the Brazilian biomes from 2002 to 2008.

Biome	Total area (Km^2)	Deforested Área (Km^2)	% deforested (in relation to biome total area in the period)	Annual deforestation	
				(Km^2)	(%)
Cerrado	2,047,146	85,074	4.17	14,200	0.69
Amazon	4,196,943	110,068	2.54	18,344	0.42
Caatinga	826,411	16,576	2.01	2,763	0.33

Source: MMA (2010)

Unsustainable farming practices

49. Current farming practices are resulting in forest degradation, habitat fragmentation, and are contributing to reducing connectivity between forested landscapes and protected areas, leading to loss of biodiversity and ecosystem services and resilience, the latter being of concern taking into account the foreseen impacts of climate change on ecosystems. These practices are land clearing, use of fire and monoculture. Land clearing for agriculture, forestry and cattle raising causes direct losses of biodiversity and ecosystem services, soil degradation, and appearance of invasive species.

50. Fire is used directly on the harvesting areas or in adjacent areas and due to inadequate management may escape and burn harvesting sites, increasing biodiversity mortality, reducing production, promoting land degradation, and increasing the appearance of undesired species. In Brazil as in most of the tropical countries, the use of fire is a traditional practice for the renovation of pastures and clearing of new areas for farming. The spatial distribution of the hotspots reflects its concentration in some regions, with the most extensive and recurrent area corresponding to the so-called Arc of Deforestation and Burning, which covers the southern and eastern Amazon, because most of the fires occur in newly deforested areas. In that region, fires are associated with deforestation and contribute to the destruction of large forest areas. Besides the damage to biodiversity, soil exposure that increases erosion, and degradation of water resources, large amounts of greenhouse gases, especially CO_2 are released into the atmosphere. Fires also affect protected areas, although with lower intensity than the areas immediately surrounding it. Fires in protected areas almost always originate in rural properties outside its boundaries, and mainly affect the edges.

51. Monoculture on its part increases the use of pesticides, reduces biodiversity and associated ecosystem services such as pollination and pest control. Soybean, cotton and sugarcane are the main crops cultivated in the Cerrado, sugarcane and cotton predominate in the Caatinga, and pastures in the Amazon. The net result of monoculture for agricultural purposes is an artificial ecosystem that requires constant human intervention. The simplification of the structure of the environment over vast areas caused by modern agriculture, replaces biodiversity with a small number of cultivated plants and domesticated animals. While monocultures have an important impact on biodiversity, they are not the focus of this project. As above mentioned the project will focus in small scale farmers who live and carry out their economic activities on lands where natural resources were once in good conservation status but have been mainly reverted into an agricultural landscape. Most small farmers, local communities and almost all the officially recognized traditional peoples and communities living in rural areas practice small-scale agriculture (maize, beans, cassava, rice, pumpkins, banana, and coffee, among others). Current farming practices are resulting in forest degradation, habitat fragmentation, and are contributing to reducing connectivity between forested landscapes and protected areas, leading to loss of BD and ecosystem services and resilience, the latter being of concern taking into account the foreseen impacts of climate change on ecosystems. These practices are land clearing, use of fire and monoculture. Forests removed for

agriculture, forestry and cattle raising causes direct losses of biodiversity and ecosystem services, soil degradation, and appearance of invasive species.

Exploitation of native species – GEF entry point

52. Biodiversity products can contribute to link economic development to the conservation of biological and cultural diversity. However, it is necessary that the harvest, management, and in the case of AFS, cultivation of such products, increase in scale, be sustainable and be confirmed as a viable economic alternative. With this focus the MDA, MMA and MDS have joined efforts to strengthen the supply chains of products and services generated from socio-biodiversity resources. The Government of Brazil (GoB) has developed important strategies to this end including the afore-mentioned described PGPMBio, which establishes minimum prices, the PAA, which pays a subsidy to agroextractivists based on the difference between the price achieved by the product and the minimum price of the product, and the PNAE, which ensures that at least 30% of the food for the school lunches come from family farmers, including NTFPs.

53. Although such policies and programs are being implemented with relative success, there are unknown impacts caused by the extraction and use of land in the populations of harvested species, which can compromise not only the economic activity, due to the decline of productive capacity, but also the long term persistence of populations in situ due to limitations in recruitment, survival and growth of plants. The lack of such information affects the improvement and strengthening of these policies, in particular those that have the potential to combine biodiversity conservation with improving the livelihoods of agroextractivist communities. As shown in Table 5 above, large areas of the Amazon, Cerrado and Caatinga have been deforested and the percentage of protected landscapes are especially low in the Cerrado and Caatinga (Table 2). In this context, besides bringing new areas under protection, it is fundamental to promote the sustainable management of biodiversity in the remaining areas, which will largely depend on the successful implementation of public policies that encourage the sustainable use and conservation.

54. In these biomes, in addition to traditional small scale farming, most local communities exploit BD resources as a part-time activity under two different production systems, collection of NTFP and AFS in which perennial crops are included. NTFPs offer a potential for sustainable economic growth of small-scale farming and communities. For instance, the price for oil extracted from *copaiba* in the Amazon, varies from US$3,963-9,750/ton, the *açai* fruits vary from US$276- 833/ton, and the Brazil nut from US$320–818/ton. In 2009, the Brazilian state of Amazonas produced 89% of the 538 metric tons of *copaifera* oleoresin in Brazil, worth approximately US$ 2.2 million; however, 94% of this production originated in only two adjacent municipalities, suggesting that there are opportunities for other areas to get involved in this activity. In the Caatinga biome, *umbu* fruits prices range from US$219–750/ton, the *mangaba* fruits from US$500–1,000/ton and *carnauba* powder from US$1,680-6,845/ton. In the Cerrado, the kernel of the well-known *pequi* was estimated at US$261–1,588/ton and alone represents 10% of the GDP of some municipalities. This contribution is thought to be underestimated, and in reality during the harvesting of pequi in the Cerrado, men and women from all ages harvest the fruits to sell them directly to middlemen, earning a daily income that exceeds fourfold a daily wage in a farm. Also in this biome, the well-known baru nuts generate incomes ranging from US$1,875-14,680/year/family, representing for harvesters 10 to 80 times the official monthly minimum wage over one year, which indicates the importance of NTFP for family income.

55. Harvesting, storing, transportation, processing and sales of these species provide work and income to substantial numbers of rural harvesters, intermediaries, urban wholesalers, processors and retailers. The contribution of NTFP to income can be substantial across different ecosystems, as difference between the prices of these products sold in urban centers can be as high as 1300% the value paid to the producer in the field. Broadly speaking, there are two principal objectives for promoting commercialization of NTFPs: (i) the conservation of biodiversity and, (ii) the improvement of livelihoods. From the conservation side,

commercialization of NTFPs can provide opportunities for (relatively) benign forest utilization and even promote the development of incentives for the conservation of individually valuable species and the environment in which they grow. The rationale is that demand for products from a forested environment will translate effectively into demand for forest conservation. From the perspective of livelihood improvement, commercialization of NTFPs, defined as increasing the value of an NTFP in trade, is expected to increase income and employment opportunities, especially for the poor and otherwise disadvantaged people. This expectation is based on the well-documented importance of many NTFPs in rural livelihoods, the emergence of new markets for natural products, the development of new marketing mechanisms (e.g. green marketing, fair trade), and successful examples.

56. AFS include systems created, modified or validated by farmers according to local conditions of soil, climate, markets and other socioeconomic/cultural considerations. From the viewpoint of biodiversity conservation, there is ample scientific evidence indicating that AFS have a potential contribution to offer alternative and more environmentally friendly forms of land use. AFS can play three roles in biodiversity conservation on a landscape scale: (i) the provision of supplementary, secondary habitat for species that tolerate a certain level of disturbance; (ii) the reduction of rates of conversion of natural habitat in certain cases; and (iii) the creation of a more benign and permeable 'matrix' of different vegetation strata between habitat remnants promoting higher connectivity between forest fragments compared with land uses where trees are less dominant, hence contributing to the integrity of such fragments and conservation of their populations. AFS have evolved from researcher designed arrangements of trees and agricultural crops to tree based practices which include complex, tree crop based agro-forests, parkland savannas, and extraction reserves, and often enriched, forest and fallow vegetation, hence offering small farmers with production systems more sustainable and less environmentally damaging than pastures, which is currently the dominant land use in areas cleared today. AFS used as buffer zones to protect forest fragments and as stepping-stones to provide connectivity through smallholdings between protected areas can contribute to make the matrix more permeable and increase biodiversity, especially in high biodiversity areas. Together, the two approaches, already used in the Brazilian Atlantic Forest, are a promising form of sustainable land use adaptable to the needs of small-scale farmers. Moreover, AFS practices have often been shown to increase levels of wild biodiversity on farm land, and may also play a supporting role in the conservation of biodiversity in remnants of natural habitat that are interspersed with farm land in tropical land use mosaics. AFS may be used to provide connectivity among forested areas in corridors. There is proof that AFS enable the creation of conditions for the highest regional diversity of native bees, which are key to ecosystem services such as pollination. As such, support for AFS should be a priority in buffer zones of protected areas, so as to increase their ecological effectiveness, as well as in efforts to reconnect forest fragments. In fact, farmers have developed AFS production based on systems they have created, modified or validated according to local conditions of soil, climate, markets and other socioeconomic/cultural considerations.

57. AFS and sustainable NTFP harvesting can contribute as a component of a wider conservation strategy encompassing a spectrum from intensively transformed to little disturbed forests aimed to promote diversity both at species, ecosystem and landscape levels; but without safeguards there is a risk of overexploitation. The overexploitation of resources can lead to local extinction of populations. Even when overexploitation does not result in immediate extinction, if the rate of removal is greater than the carrying capacity of the population it cannot be restored and it may gradually lead to extinction. The most drastic negative effect on biodiversity is the exploitation of timber for commercial purposes that causes a contraction in the distribution of populations due to the extinction of local populations or reduction in the genetic variability of exploited species, as is the case of mahogany (*Swietenia macrophylla*) in the Brazilian Amazon. Given the important number of farmers in Brazil, also small-scale activities represent a significant impact on biodiversity of forested areas, including in and around protected areas or along river courses. These areas are constantly subject to deforestation and degradation due to selective extraction and overharvesting of a number of NTFP species by small farmers and local communities for subsistence and income generation. The most direct consequence of NTFP extraction is the alteration of the rates of

survival, growth and reproduction of harvested individuals, which can affect the structure and dynamics of populations. Even with long-term population persistence of harvested populations negative effects on other members of the ecological community occur. The ecosystem can have its nutrient cycling altered, which depends on the intensity of harvest and of the plant part harvested. For instance, the exploration of the Brazil nut in the Amazon, associated with deforestation, has dramatically reduced populations in some areas of occurrence. Harvesting of this species has raised concerns on its sustainability, with contrasting results obtained by scientists. It is not known if current harvesting levels and practices are negatively affecting or not the future persistence of populations this species. The effort made in Brazil with the creation of sustainable use CUs, where local communities can use biodiversity, is a great step towards conserving biodiversity though sustainable use, but still needs to be well documented to understand the impacts on the components of biodiversity and evaluate the need for eventual course correction.

1.5. Programmatic Baseline and Long term solution

58. While BD products (NTFP and AFS) do show the potential to generate conservation and livelihood benefits, their mainstreaming into the formal economy without the necessary safeguards to ensure sustainable management could eventually pose a risk to BD due to overharvesting or returning to other land uses if BD products fail to provide sustained incomes, in both cases leading to habitat degradation. The current Brazilian public polices promoting the commercialization and value chains are assets that need to be improved with reliable knowledge on all stages of production. Indeed, socio-economic, ecological, technological and market constraints need to be overcome (see barriers section below) through appropriate technology, products with value-added, environmental and social economic safeguards and capacity development. The value of BD products has been underestimated although these resources constitute a "hidden" proportion of land-based livelihoods that have provided food security and income for many generations. Sustainable harvesting of BD products in private properties, community areas and reserves is essential for BD conservation, to complement agricultural practices and improve the livelihoods of many rural peoples, playing a significant role in poverty mitigation, contributing to food security and promoting the conservation of biodiversity and ecosystem services, and maintaining genetic stocks.

59. The GoB has taken steps to foster the production and commercialization of products from biodiversity as a mechanism to improve family income, promote local economy, and empower local communities and their livelihoods. This baseline investment is valued at US$103,268,117 over 5 years and is described below grouped under the main lines of interventions of the project:

Governance and capacity building framework for up-scaling best practices for BD sustainable management and production

60. **EMBRAPA** expects to invest US$ 5.7 million in the next five years on programs to promote AFS and the NTFP species targeted by the project in the Amazon, Caatinga and Cerrado biomes. These resources will be invested in research, development and making the solutions available for farmers (through technology transfer) and decision makers in the three biomes. Most of these resources will be addressed to the development of AFS models (species composition, productivity, and design) and NTFP product and management methods, use in restoration projects and for production in Permanent Protection Areas (APP) and Legal Reserves (RL)[3] as per the new Forest Code. There are however several shortfalls in these programs, namely the dispersion of objectives, they are spread out over wide geographical areas and are generally more concerned with including the NTFP species in AFS systems or in monocultures, with very few efforts dedicated to the management of natural forests for production and biodiversity protection.

[3] Permanent Protection Area (APP): Protected area covered or not by native vegetation, with the environmental function of preserving water resources, landscape, geological stability, biodiversity, facilitate gene flow of fauna and flora, protect the soil and ensure the well-being of human populations. Legal Reserve (RL): area comprised within a rural property, other than an APP, and necessary for the sustainable use of natural resources, conservation and rehabilitation of ecological processes, conservation of biodiversity and protection of native fauna and flora.

61. The Citizenship Territories (CT) provide a framework for coordinated investments of federal funds (e.g. MDA, MDS, MMA) in support of the productive sector. The project has selected six CTs[4] for intervention, and within these the **MDA** will invest in technical assistance and rural extension to producers, specialized technical assistance to rural women and supply of inputs to support family farming. MDA investment during a 5-year period is estimated in US$42,200,860. Funding is significant, however it is mainly directed to traditional agricultural and livestock production given that production from NTFP and AFS is low, there is little information available and technicians do not have training in NTFP and AFS. The project will build on these investments to mainstream harvesting limits and best practices to promote sustainable production and build the capacities of technical assistance and extension services.

62. **MMA** implements the Green Grants Program (*Bolsa Verde*), which provides cash transfers to extremely poor families carrying out environment-friendly production activities in their living and working surroundings[5]. To be accepted by the program, the selected families must follow the conditions set out in the management or sustainable use plans of each of the territorial units where they live (e.g sustainable use reserves, settlements). The program benefits more than 57,000 families in the Amazon, Cerrado and Caatinga biomes. One of the major challenges of the program is to promote the productive inclusion of families, so they can overcome their extreme poverty. To address this, the MMA is in the process of outsourcing technical assistance services to assist 15,500 families in the Alto Acre and Marajo CTs (Amazon biome). However, the challenge remains in terms of qualification and training of technical staff that will provide these services, which are not prepared to deal with the management of NTFPs and AFS. The GEF project will develop a capacity building programme targeting capacity development of technical assistance and extension services in sustainable NTFP and AFS production. The costs of training technicians are therefore considered as the project baseline, which have been estimated in US$718,000.

63. Several NGOs implement activities in the selected CTs. In the Amazon the **National Council of Rubber Tappers (CNS)** represents rubber tappers and agroextractivists of the Amazon. The CNS is important as a mechanism for representation of forest peoples and networking for safeguarding civil rights and sustainable development initiatives. **Institute SEMEIA** supports actions to safeguarding conservation units through sustainable development. SEMEIA sponsors business social responsibility projects; scholarships; research and development, development for decision making models.

64. In the Caatinga, the **Natural Flavor Network of the Sertão (RSNS)** is a network for discussion and political organization that brings together formal and informal organizations of farmers, traditional communities and entities that support family agriculture in the Brazilian semi-arid region. It is composed of projects and entities that organize actions to benefit and sale the products produced by family agriculture. **Carnauba Institute** promotes environmental action for conservation of the Serra da Meruoca, the Acaraú River and the Caatinga; it has published studies on the productive chains of goats and sheep, beekeeping, services for family farming products marketing and institutional strengthening.

Market and financial frameworks for up-scaling for NTFP and AFS production in high-conservation value forest landscapes

65. Within the selected CTs, the MDA and the MDS focus their funding toward supporting infrastructure and services in rural areas, procurement of food products from family farmers and organization and strengthening of family farming networks. The **MDA´s** estimated investment for a 5-year period amounts to US$10,908,698 while the **MDS´s** estimated investment for the same period totals US$43,740,589[6].

[4] Cerrado: 1) CT Alto Rio Pardo, 2) CT Medio Mearim; Caatinga: 3) CT Sertao do Sao Francisco, 4) CT Sobral; Amazon: 5) CT Alto Acre e Capixaba, 6) CT Marajo. See Part II, section 2.1 for details on the selected Cts.

[5] Families receive a grant of R$300 every 3 months, or R$1,200 annually (US$545/year) for a period of 2 years, which may be renewed for another two years.

[6] The estimated distribution of the latter amounts per biome for the 5-year period is: US$14,083,186 for the Cerrado biome CTs, US$34,783,409 for the Caatinga biome CTs and US$5,782,692 for the Amazon biome CTs

Although federal funding is significant, it is mainly directed to traditional agricultural and livestock production given that production from NTFP and AFS is low and productive chains to access markets are not organized, there is little information available and technicians do not have training in NTFP and AFS. Nevertheless these investments provide a robust baseline on which to build upon. MDS funding lines (e.g. PRONAF Florestal, PRONAF Agroecologia and PRONAF Mulher) could provide financing for AFS but are not requested due to lack of dissemination of information to potential beneficiaries. The PAA and PNAE purchase NFTP and AFS products but purchases do not include safeguards.

66. Government funds are also channeled for credit programmes through the **Brazil Bank**, **National Development Bank (BNDES)**, **Bank of the Northeast (BNB)** and **Bank of the Amazon (BASA)**. BNDES and BNB have developed some credit instruments focusing in micro, small and medium sized businesses to provide working capital, but still require further adjustments to be accessed by farmers. There are no specific credit lines for NTFP production. In the case of AFS, credit lines have been developed. In the Amazon BASA manages the Constitutional Fund for financing of the North (FNO Floresta), which offers credits with a 9-year grace period and return period of 16 years covering rural operations up to 100%. In the Cerrado the Constitutional Fund for financing of the Center-West (FCO Pronatureza) is managed by the Brazil Bank and offers credits with a 10-year grace period and return period of 20 years. In the Caatinga farmers may access the Constitutional Fund for financing of the Northeast (FNE Verde) managed by BNB, which provides credits with a 6-year grace period and return period of 12 years. The credit lines are flexible in all three situations, including procurement of equipment and machinery. Despite the existence of credit lines these are not easily accessed by small farmers, return rates are very low and the number of borrowers decreases annually. Moreover, these credit lines do not include technical coefficients for AFS. The project will build upon these credit programmes and help the financial institutions to mainstream environmental safeguards into their lending procedures and increasing funding for sustainable production as well as developing credit lines for sustainable NTFP production.

67. A number of cooperatives, producer associations, universities and NGOs implement productive initiatives, including NTFP and AFS in the CTs. In the Cerrado, the **Center for Alternative Agriculture of Northern Minas Gerais (CAA-NM)** implements *Projeto PAIS* for development of social technologies for food security, targeting people and traditional communities, land reform settlers and people benefited by social programs; production is purchased by the PAA and PNAE. CAA-NM also provides technical assistance services for AFS and environmentally friendly agriculture through MDA funding. The **Federal University of Minas Gerais** implements projects targeting training for sustainable production and use of medicinal and aromatic plants. The **Grande Sertao Cooperative** supports landscape conservation initiatives in the Cerrado. It promotes land use changes that favor diversified crops, agroforestry and silvopastoral systems as well as NTFP harvesting. Activities involve more than 3,000 farmers covering more than 170,000 ha and the production is purchased by the PAA and the private company Natura. The **Interstate Movement of Babaçu Coconut Breakers (MIQCB)** implements projects for agro-ecologic production, processing of *babaçu* oil and strengthening of member organizations. The organization is pro-active in the defense of the rights of babaçu nut breakers to access palm forests. Their work provides an opportunity for strengthening women´s organizations through exchanges and awareness raising. The **Association of Settlement Areas of Maranhao State (ASSEMA)** promotes family production and sustainable use of babaçu palm forests; it produces and commercializes soap, charcoal and flour and grains like rice, beans and maize that are organically produced and represents an opportunity for spreading sustainable babaçu production in rural settlements. The **Small Producers Cooperative of Lago do Junco Grande (COPPALJ)** has 147 members and produces organic babaçu and has developed trading facilities for small outlets in rural areas and promotes income generation; it has important experience regarding market organization that could be useful to the project.

68. In the Caatinga the **Family Farming Cooperative of Canudos, Uauá and Curaçá (COOPERCUC)** has 204 members mostly women and processes native Caatinga fruits for the domestic and international markets, reaching France, Italy and Austria; it has experience in establishing partnerships with government

and non-government agencies. The NGO **AGENDHA (Advice and Management in Nature Studies – Human and Agroecological Development)** implements technical assistance and rural extension service focused in marketing of food to schools in 15 cities in the Northeast. **Articulation in the Semiarid – Ceará (ASA Ceará)** leads the "One Million Cistern Programme" which seeks to promote water storage and management for human and productive uses and has triggered popular mobilization for sustainable coexistence with the semiarid ecosystem through strengthening of civil society, family farming and dissemination of technologies. It has experience in enhancing networking capacities of producers. **Cáritas Diocesana de Sobral** assists family farming organizations in establishing AFS and collecting seeds for agroforestry initiatives, which has derived in the creation of community seed banks; it has experience in enabling civil society forums and mobilizing resources for grassroots organizations. The Rural Workers Trade Union of Santana do Acaraú (STTR) develops actions for advancing agro-ecology and family farming through fairs and training courses.

69. In the Amazon the **Central Cooperative of Extractivist Commercialization of Acre (COOPERACRE)** comprises 25 cooperatives with 1,800 members; it promotes sustainable production of Brazil nuts, rubber and copaiba oil, and seeks to add value to the productive chain.

70. As for the private sector, **Natura**, a Brazilian multinational cosmetic company stands out as one of the most important private companies using and promoting benefit sharing for biodiversity products. Natura purchases natural products from 36 communities providing successful examples of value chains and benefit sharing. In 2012, these trade agreements mobilized US$ 5.2 million. For example, in the Iratapuru community, Amapá State in the Amazon, the company has been learning from traditional and local communities, while contributing to the generation of income through the purchase of raw materials. The Mixed Extractivist Producer Cooperative of the Iratapuru River comprising 30 families sells crude Brazil nut oil to Cognis, a processing company that refines the essence and delivers it to Natura, which in turn, uses it to manufacture shampoos, conditioners and soaps. The community is paid for oil provision, and also receives a percentage of Natura products´ sales and through the resources derived from this operation and investments by Natura, the community has built and operates an oil extraction plant. Production is certified through Forest Stewardship Council's standards. In addition, a percentage of total sales are allocated to a Sustainable Development Fund that promotes other economic initiatives in the community to enhance its technical and commercial management capacity. One of the priority territories for Natura overlaps with the project´s intervention area (Citizenship Territory of Alto Acre and Capixaba).

71. **Tobasa Bioindustrial** is located in Tocantinópolis, Tocantins State. It develops the industrial use of babaçu coconut, provides financial and logistical support to the Apinajé indigenous community, and promotes the generation of 1,500 indirect jobs through harvesting of coconut, forest management and agro-silvopastoral systems. It produces crude oil, clarified oil and coconut soap. **Florestas do Brasil S.A.** operates in Maranhão State. The company promotes sustainable harvesting of babaçu palm forests and AFS, working with communities of collectors, and other private producers. The company produces babaçu oil, babaçu flour, and charcoal.

Long-term solution

72. Multiple uses of forests can contribute to a conservation strategy based on sustainable use by providing a more equitable strategy to satisfy the demands from multiple stakeholders, an environment-friendly harvesting approach, and an option for adding more value to forests making them less prone to deforestation. Although the GoB recognizes that NTFP and AFS represent potential alternatives for sustainable conservation and use of BD and has in fact developed innovative policies in this regard and allocated important budgets for their application, it has failed to mainstream BD-related issues into these programs due to the sizeable challenges involved (large surface area of the country and lack of appropriate technology and technical assistance for farmers). This means that global benefits currently delivered by BD in reserves, private properties, community areas and rural settlements will be eroded over time as

external pressures will increase loss of genetic resources and traditional knowledge, unless biodiversity is sustainably mainstreamed into the economy. Brazil is now at a crossroads. There are important public policies supporting BD, but at the same time the intense economic growth is causing significant and rapid degradation of the natural environment and loss of biodiversity, traditional knowledge and livelihoods. This situation presents a unique opportunity to put in place a framework that can plan, manage and upscale the appropriate mixes of NTFP, AFS and protection that enables the conservation of critical habitat patches and maintains forest connectivity across high value landscapes. Within this framework, the **proposed long-term solution** is to promote AFS and sustainable harvesting of NTFPs in areas of high biodiversity to reduce land conversion and degradation, increase restoration, promote connectivity, and conservation in buffer zone areas and legal reserves. Promotion of AFS and sustainable harvesting of NTFP will improve family income, promote local economy, and empower local communities and their livelihoods.

73. Despite the commitment of the GoB and other stakeholders, and the strong baseline that seeks to promote the production and commercialization of BD products, the programs do not provide the grounds for ensuring the long term solution since they do not address the potential risks or provide the structures to incorporate NTFP and AFS as part of a mosaic of land uses that maintains biodiversity, ecosystem functions and resilience. Key gaps that these baseline programs fail to address include the lack of information on spatial distribution, demographic impacts of harvesting and harvest yields of the resources; lack of accurate information on the contribution of BD products to the economy and the economic gains that can be earned by NTFP and AFS; lack of adequate technology and management methods; and commercial viability. A key difference between most NTFPs and agricultural products is that the former is harvested from locations that can be distant from the home and over which the collectors are not always right-holders. Prices are highly variable. Storage, processing and transport may be more or less complex, depending on where the product is produced, the nature of the product, the degree of processing, and the requirements of the consumers. NTFPs include many perishable fresh fruits that require careful storage and handling and a fast transport to market, or some level of primary processing close to the point of origin (see sub-section 2.3 on incremental reasoning for further information on impacts on the baseline without the GEF intervention).

Barriers to long-term solution

74. Barrier #1: The governance framework to promote up-scaling of NTFP and AFS production that mainstream BD conservation in high-conservation value forests is insufficient, and there are limited institutional and technical capacities for up-scaling best practices for sustainable production of BD.

75. *Regulatory issues*: Current policies and programs (PGPMBio, PAA, PNAE) promoting BD harvest and commercialization do not spell out precautionary measures to avoid overharvesting or the use of inadequate management practices. The establishment of specific harvesting levels is hindered by a lack of sound and reliable information on sustainable management and the thresholds that can be achieved without compromising the resources and associated BD in the long run. Although there is much work done in the fields of AFS and NTFPs and willingness to adjust public policies, the existing findings need to be consolidated, gaps in knowledge and information identified and filled, and limits set in different locations of the landscape (e.g. buffer zones; corridors for connectivity; and legal reserves).

76. Existing studies on species ecology are punctual, have been undertaken on few populations and for short periods of time. As a result they do not provide reliable data on production of fruits, and population regeneration and persistence in different land use and harvesting pressure scenarios. The sustainable harvesting levels are unknown since there are no long-term studies on population dynamics. There are ongoing studies for Brazil nut, pequi and baru although they are being undertaken in areas other than the project´s territories of intervention. Current management practices (e.g. use of fire, livestock grazing in

coquinho azedo production areas, harvesting of pequi fruits directly from the tree instead of the ground) are not necessarily sustainable and have not been sufficiently documented.

77. The Brazilian fiscal framework is complex and includes numerous taxes and fees[7] at federal, state and municipal levels that represent a heavy burden on production, especially the food producing sectors, which include NTFP and AFS products. They increase the production, transportation and commercialization costs of NTFP and AFS products; in certain cases taxes are higher for these products than for agribusiness products. The transaction costs, including direct costs and administrative costs, are difficult to bear by the agro-extractivist production, which is notably characterized by its low performance. The impact of taxes needs to be reviewed and alternative proposals developed to address this issue at federal and state levels.

78. *Decision-making and strategies:* Definition and approval of regulations and to an extent financial availability is hindered because of awareness constraints. Even though the environmental sector is aware of the importance of NTFPs and AFS for forest conservation, other sectors such as agriculture and finance do not have this perception, and there is still a low awareness about the importance and value of BD throughout the landscape; and in protected areas, its contribution to economy and livelihood is less well documented and unknown. The general belief is that NTFP and AFS production involves risks and uncertainties that do not justify investment, hence there is a low appeal for increasing production and profitability remains weak. There is little information available and generally does not reach decision makers, or is not used by them because they lack awareness and knowledge. The information that is available is academic, dispersed and is not organized in such a way that it may contribute to decision-making. There are no awareness raising initiatives on NTFP/AFS targeting decision makers.

79. There is a lack of knowledge on the contribution of environmental services in the landscapes where NTFPs are harvested and AFS implanted. For instance in the Cerrado biome extensive livestock production has a low production of meat per hectare but has a low impact on biodiversity and other environmental services provided by the Cerrado, while intensive livestock production has a high impact due to deforestation and cultivation of pasture monocultures. Extensive goat and sheep production in the Caatinga impacts on the vegetation through over-grazing and needs special management practices to reduce such impacts. Producer decisions are guided mainly by economic reasons, prioritizing income generation in the short term and without considering the impacts on the environment. Studies comparing conventional production with AFS/NTFP taking into account social, economic and environmental variables need to be undertaken to provide decision makers information and knowledge on the impacts of policies and management practices on ecosystem services, and help them understand the circumstances in which maintaining ecosystems and their services may generate greater economic benefit than promoting economic processes that degrade and deplete ecosystems.

80. *Land use issues (planning and tenure)*: Extractivism requires surface areas greater than those of the family plots, usually small, between 25 and 50 ha. This implies the need to access public lands or third party lands to harvest NTFPs. Producers harvest resources in their own lands, of third parties, community areas of settlements or sustainable use reserves (RESEX, RDS and FLONA). Harvesting of NTFPs in sustainable use reserves is permitted to dwellers in and around the reserve within the use areas defined in the management plans. Settlements on their part define community areas where harvesting of NTFPs is allowed. Harvesting in third party areas depends on the landowners permission, which may not necessarily be secured especially at times when prices of certain products are favorable and landowners may not allow

[7] Social Integration Programme, Contribution for Social Security Financing, Tax on Industrialized Products; Imposto deRenda Retido na Fonte (IRRF), Impostode Renda Pessoa Física (IRPF), contribuição à Seguridade Social (INSS), Impostosobre Circulação de Mercadorias e Serviços (ICMS), Imposto sobre a Propriedade de Veículos Automotores (IPVA) e Imposto sobre Serviços de Qualquer Natureza (ISS), além de salário-educação e contribuições ao Instituto Nacional de Colonização e Reforma Agrária (INCRA), ao Serviço Brasileiro de Apoio a Micro e Pequenas Empresas (SEBRAE) e ao Serviço Nacional de Aprendizagemdo Cooperativismo (SESCOOP).

harvesting in their lands; or when harvesting may result in damages to the landowner (e.g. broken fences, damaged trees, livestock may be scared off, wildfires).

81. There are examples of resource use agreements such as the Free Babaçu Act in the State of Maranhao and the Pequi Law in the States of Minas Gerais and Mato Grosso, which seek to protect the *babaçu* and *pequi* and guarantee access of harvesters to resources. However, conflicts may arise with private landowners where previous agreements have not been accorded. Producers lack the capacities to negotiate resource use agreements to ensure access to resources. This is compounded by the lack of information on sustainable harvesting limits and best management practices to ensure that access to resources in the different types of lands (reserves, settlements and private properties) is sustainable. Another risk is the possibility of criminalizing harvesters for squatting, which has happened with babacu harvesters. By demonstrating that NTFP and AFS are less harmful to BD; setting sustainable harvest limits and facilitating consensus on access, best practices can be promoted in protected areas buffer zones, corridors to interconnect forest fragments and legal reserves. In this sense the Forest Code provides an opportunity for rehabilitating Areas of Permanent Protection (APPs)[8] and legal reserves through AFS production and NTFP harvesting.

82. *Insufficient technical support to farmers*: Technicians lack the capacities to promote sustainable management, production and commercialization of BD resources. There is a lack of specific training programmes and support mechanisms addressing the capacity building needs of technicians and producers throughout the productive chain. Current educational and training programmes do not include these subjects and are centrally focused on cash crops (i.e. grains, sugar cane) and livestock. Consequently, most rural communities do not receive adequate information and technical support to sustainably manage biodiversity. Conventional farmers usually do not practice sustainable management of BD, especially in the case of NTFP (for AFS guidelines have been developed), due to lack of appropriate technologies and guidelines, access to information and training. An additional problem is the lack of capacity to comply with standing sanitary regulations, which contributes to hamper the commercialization of products. Although there are successful experiences on sustainable management, production, and commercialization of BD products, these are few, are either too recent to be evaluated, do not survive for a long period of time or depend on small-scale support from projects, and have not been adequately systematized for replication. Best practices on biodiversity management need to be identified and replicated to help improve the governmental programs supporting the exploration, use and commercialization of biodiversity products, as well as promoting innovative uses for BD.

83. <u>Barrier #2: Market and financial barriers hinder opportunities for up-scaling NTFP and AFS production in high-conservation value forest landscapes</u>

84. Access to markets is complex and there are different types of markets for NTFP and AFS, e.g. public and private markets, which in some cases share common barriers and in others confront barriers of their own[9].

85. *Stable high quality production (supply) (public and private markets).* <u>Reliability issues:</u> Production differs significantly between years and geographical areas in part because there are information gaps related to how production of different products varies with environmental conditions and production practices. This means that it is difficult to estimate volume, quality, seasonality, costs, regions and niches for most NTFP and to a lesser degree for AFS products (depending on the species). In turn this means that

[8] APP comprises the margins of rivers, which must be preserved. APPs vary according to the width of the river.

[9] Lessons learnt in other supply chain management projects funded by the GEF (e.g. Central American Markets for Biodiversity (CAMBio): Mainstreaming biodiversity conservation and sustainable use within micro-, small, and medium-sized enterprise development and financing) have demonstrated that market access is a key issue, particularly for much small-scale production of NTFP and AFS.

it is hard to carry out multi-annual planning of production, securing volumes that will ensure stable contracts with buyers and adequate prices and affects the timely delivery of NTFP production at the end of the productive chain. This issue is compounded by the weak organizational capacities of cooperatives and associations since most organizations working with NTFP and AFS are informal, they are not organized to manage trade-oriented production toward more complex markets and have difficulties in complying with current legislation and commercial contracts. Members of these organizations often live in remote places and work with small volumes of perishable goods that may require special attention in transportation and warehousing facilities[10]. These, together with the fact that cooperative members are liable for economic losses, make them less attracted to joining collective actions, and gradually lead to the weakening of the cooperative system. On the other hand harvesters are becoming more attracted to establishing themselves as micro entrepreneurs, an option that requires registration in the Cadastro Nacional de Pessoas Jurídicas (National Cadaster of Juridical Persons) and applying for a series of official permits and documents, which compliance may be cumbersome, demanding time and the scarce resources of people and organizations in remote places.

86. Quality issues: Mainstream research and technology development in Brazil is almost fully directed to agribusiness and commodities production. The lack of technology and innovation targeting NTFP and AFS results in a lack of specific equipment and tools, and together with the inappropriateness of the few available increase losses, reduces production, increase costs, compromise sanitary aspects and contribute to increase plant mortality and reducing population persistence. Current technologies used by rural communities can compromise the productivity and quality of products. This affects operational planning and production activities of cooperatives and associations. Other shortfalls common to most products include the lack of appropriate packaging throughout the productive chain (e.g. for transporting fruits from the fields to the processing units and for commercialization), and processing facilities do not comply with sanitary regulations

87. Many quality standards required by conventional markets have not yet been adapted to the specificities of extractive production, not matching prevalent conditions. Poor quality throughout the production chains increases costs and reduces profitability while endangering people´s health and wellbeing (e.g. harvesters climb acai palms without safety equipment, harvesting of baru from the ground causes back pains). In some cases, these are not inclusive for smallholders and harvesters. Such is the case of MAPA´s Unified System for Sanitary Agriculture and Livestock Sanitation (SUASA), a sanitary inspection system for legalization and start-up of agro-industries, which however has not yet delivered specific and simplified sanitary regulations to include small farmers´ agricultural and livestock production.

88. Variety of production: The possibility of exploring a greater range of BD products, improving current commercialization and developing new markets as well as livelihoods, can be hampered by high transaction and high exclusion costs. The lack of economies of scale derive in high transaction costs since it is costly for each producer to gather information, analyse, and decide to whom to sell, guarantee the quality of his products, draft contracts and deliver his produce. Competition by NTFP producers for a same product in a certain area derives in high exclusion costs by impeding all potential beneficiaries from obtaining benefits from its use and affecting sustainability

89. *Stable high quality markets (demand).* Lack of or weak marketing mechanisms and market chains for many AFS and NTFP products in many rural areas or regions is a disincentive for their adoption. NTFP production is small and perishable; products are commercialized locally and without much processing due to the lack of adequate technologies and financing for investments and working capital, which hinders increased market participation. Since market participation is small and producers are poor and do not have

[10] A good example is the production of açai *in natura* in the State of Amapa that requires accessing final destination in less than 24 hours after being collected.

resources to store, process and transport products there is a great dependence on middlemen who do have the capacity to access the farms and pay in cash.

90. There is a lack of a systemic vision of productive chains for NTFP and AFS products given that there are few detailed studies and there are weaknesses throughout the different stages that result in few products having added value. The lack of studies is related to the informality of production. Other gaps in productive chains refer to organizational issues (low organizational capacity), production (low offer of quality products), distribution (difficulties with access and logistics) and commercialization (access to markets).

91. Most producers are aware of the existing public programmes that guarantee markets and minimum prices (public markets) but there are certain limitations to access these markets. Public purchases determine a maximum amount that each producer can sell, there are delays in payments and producers may not comply with all required paperwork. Buyers and sellers, especially at small scale, lack the knowledge and capacities to establish contacts and negotiate terms for supply of products to private markets. Production is low and geographically dispersed therefore private companies do not buy directly from producers. Most producers are not associated to cooperatives therefore it is difficult for them to collect significant volumes to interest companies in dealing directly with them. Cooperatives lack the financial capacity to finance their operations while waiting for the companies to disburse payments.

92. *Finance for high quality production (public and private markets).* Despite a highly developed financial system offering a vast array of credit lines for family farmers and medium size businesses, financial opportunites rarely reach family farmers and traditional peoples and communities. Although the banking system has reviewed many of their credit lines to assist conventional forest production covering modalities that include NTFP and SAF, there are still many difficulties in making these credits available to potential beneficiaries.

93. Access is limited given the lack of technology (appropriate tools and equipment for production and limited options to add value to products) and uncertainties related to the economic aspects of NTFP and AFS production (quality and volume of production, price variation and commercialization). Since NTFP and AFS production are an informal activity and producers are poor, they are generally not able to comply with all the requirements to access financial resources for investments and working capital to fund their operations (purchase of tools, storage facilities, value adding and marketing). Small businesses, smallholders and harvesters require cash replenishments that are not easily available through normal banking due to heavy transaction costs and interests. Financial institutions commonly apply the same criteria used for cash crop and livestock production hence interest rates and mortgages are not compatible with field reality. Furthermore, with a few exceptions banks do not have financial coefficients for cropping systems involving multiple species needed for BD friendly AFS. Criteria for approval do not include environmental standards and there is no accompanying technical assistance. Specific financial and technical indexes have not yet been developed for many of BD products, together with other financially appropriate mechanisms for the poor such as revolving funds and communal banks. Moreover, the location of conventional banking facilities, generally in urban areas, often does not facilitate access by organizations located in isolated and remote areas.

94. Increasing credit access to smallholders, quilombolas, traditional communities and women is hindered by the absence of rural extension services in many areas and poorly designed technical assistance. Current technical assistance programs lack information about credit and financial opportunities for NTFP and AFS. Another shortfall is the weak coordination and linkages between government agencies´ databases that contain information of the different organizations, which prevents improving access to working capital intended for the commercialization of NTFP and AFS products.

95. Supply of adequate credit and financing to local harvesters has a direct impact on BD and people's livelihoods. Obstacles in accessing credit will inevitably increase the dependence on middlemen and market speculators. This dependence will lead to increased debts of harvesters, who in turn will have to indulge in non-sustainable harvesting practices, directly affecting BD and their livelihoods. NTFP impoverished environments lead to less valued forestlands that are more prone to have a different value, for instance as grazing areas.

96. Annex 2 includes a problem analysis for the 12 species included in the project. The analysis covers the current situation of each species in terms of environmental safeguards; reliability, quality and diversity of NTFP supply and AFS production; market access; credit and financing; and capacities.

1.6 Stakeholder analysis

97. Table 7 summarizes the key stakeholders and their roles and responsibilities regarding conservation and sustainable use of biodiversity, in particular NTFP and AFS. These stakeholders will be involved in project implementation through the Stakeholder Involvement Plan included in Section IV, Part III, below.

Table 7 - Key stakeholders in project implementation

Stakeholders	Interests/roles in the project
EMBRAPA	Project Implementing Partner. Member of the Project Board. Will be in charge of overall coordination of project activities. Thirteen field units in the selected landscapes in each biome will be involved in providing technical expertise, implementing project activities, promoting partnerships and coordinating with the relevant stakeholders (government agencies, cooperatives, producer associations, NGOs), participating in the platforms to be established by the project to improve NTFP and AFS market access and discuss public policies. Five of these units will coordinate the Local Committees to be established as part of the project management arrangements. Cofinancier.
Ministry of Environment (MMA)	MMA is in charge of the environmental policy and is a key institution in designing and implementing public policies for biodiversity. Member of the Project Board. Cofinancier. MMA will be a key beneficiary of project results and will be a fundamental partner as it implements several programs and policies that will be channeled to the project intervention areas and where proposed policies will be tested and adjusted for further upscaling at biome level. Will participate in preparation of proposals as input for formulating public policies to support agro-extractivism, use and conservation of biodiversity; design of training and information materials. Member of the platforms to be established in each territory to improve market access and discuss public policies. Will benefit from the information produced by the project, which may be used for implementation of the Forest Code. Will contribute to upscaling of project results and lessons learned to other territories.
Ministry of Agrarian Development (MDA)	MDA coordinates the rural extension plan. Member of the Project Board. Cofinancier. Will have a key role in capacity development and implementing current public policies, testing new initiatives and proposing new policies. Will participate in preparing proposals as inputs for public policies and programmes, preparation of training and information materials. Will use the information produced by the project to train its technicians, finance training for producers in AFS, for directing its investments in the target landscapes for more effective support to productive activities and improve its credit programmes. Will participate in platforms to be established by the project to improve market access. Will contribute to upscaling of project results and lessons learned to other

Stakeholders	Interests/roles in the project
	territories.
Ministry of Social Development (MDS)	The key role of MDS is to channel public investments at territorial level for social development, promoting social inclusion, food and nutritional security, full social assistance and a minimum citizen income to poor families. Member of the Project Board. Cofinancier. Will participate in preparing proposals as inputs for public policies and programmes, preparation of training and information materials. Will use the information produced by the project to train its technicians, finance training for producers in AFS, for directing its investments in the target landscapes for more effective support to productive activities and improving purchases under the PAA (Food Acquisition Programme) from the project target landscapes. Will participate in platforms to be established by the project to improve market access. Will contribute to upscaling of project results and lessons learned to other territories.
Ministry of Agriculture, Livestock and Supply (MAPA)	Promotes the sustainable development and competitiveness of agribusiness. Together with MMA, MDS and MDA determines the minimum prices for BD products. Member of the Project Board. Will participate in preparing proposals as inputs for public policies and programmes; will contribute to the inclusion of best management practices in the safeguards for BD production.
National Supply Company (CONAB)	CONAB is the public company in charge of buying NTFP and AFSs products and ensuring fair prices. It also defines, with MAPA, the minimum prices for agricultural and BD products. Will support productive activities and training in the target landscapes incorporating project information. Will use the information produced by the project to improve its purchases of NTFP and AFS products from the target landscapes. Will participate in platforms to be established by the project to improve market access.
Chico Mendes Institute (ICMBio)	Manages the Federal Conservation Units, promoting the environmental development of the communities in CUs under the sustainable use category, research and knowledge management, environmental education and promoting ecological management. Will participate in the development of information and training materials and collaborate in training of producers on the best practices of sustainable management of NTFPs and AFS in CUs and their buffer zones through providing personnel, infrastructure and mobility.
Brazilian Forest Service (SFB)	Charged with the management of forests. Will collaborate in training of technicians on the best practices of sustainable management of NTFPs through providing personnel, infrastructure and mobility. May test project results in National Forests.
National Agency for Technical Assistance and Rural Extension (ANATER)	This institution is being established by the Federal Government to promote technical assistance and rural extension to family farmers. Will participate in the development of information and training materials and collaborate in training of producers on the best practices of sustainable management of NTFPs and AFS. It will benefit from project results to expand the technical assistance using the capacity building materials prepared by the project.
Brazilian Institute of Renewable Resources and Environment (IBAMA)	IBAMA undertakes environmental monitoring and policing and applies administrative penalties, particularly in regards to the prevention and control of deforestation, fires and forest fires, among other functions. As such it will benefit from the best practices and sustainable harvesting levels to be generated by the project that it may use to monitor harvesting levels as well as the use of unsustainable practices.
State departments of agriculture and environment (OEMA)	Include: 1) State Secretariat of Environment and Sustainable Development (SEMAD) and the State Forest Institute (IEF) in Minas Gerais; 2) State Superintendence of Environment (SEMACE) in Ceará; 3) Department of the Environment of Bahia (SEMA); 4) State Department of Environment (SEMA) in Pará; 5) Environmental Secretariat (SEMA) and Secretariat of Family Agriculture and Forestry Production (SEAPROF) in Acre; and 6) State Department of Environment and Natural Resources of Maranhão (SEMA).

Stakeholders	Interests/roles in the project
	In charge of the environmental policy at state level. OEMAs participate in the Citizenship Territories´ Boards. Will participate in preparing proposals as input for public policies and programmes in support of agro-extractivism and AFS; collaborate in training of technicians on the best practices of sustainable management of NTFPs and AFS through providing personnel, infrastructure and mobility. Will help testing and implementing project results for upscaling to other areas. Will be members of the platforms to be established by the project to improve market access.
Municipalities	Will contribute to capacity development by mobilizing beneficiaries and providing facilities. Through the PNAE (School Food Programme) may contribute as an outlet for NTFP and AFS products and contribute to design and implementation of local sustainable use policies linked with federal and state public policies. Will disseminate project results and lessons learned within their own development programmes and projects.
CSOs: - MIQCB: Interstate Movement of Babaçu coconut breakers - ASSEMA: Association of Settler Areas of Maranhao State - CNS: National Council of Extractivist Populations - CAA-NM: Center for Alternative Agriculture of Northern Minas	Partners in developing project activities in the field. Will be information sources for the project on NTFP and AFS production. Will collaborate in preparing training and information materials and providing support to mobilization of producers and technicians for training. Will use the information generated by the project within their own initiatives and collaborate in dissemination of information to their beneficiaries. Will participate in the platforms to be established by the project to improve market access. May collaborate through lobbying for a more effective implementation of NTFP and AFS related public policies and programmes in the territories.
Cooperatives - COPPALJ: Small Producers Cooperative of Lago do Junco - Grande Sertão Cooperative - COOPERCUC: Family Farming Cooperative of Canudos, Uauá and Curaçá - COOPERACRE: Central Cooperative of Extractivist Commercialization of Acre	Cooperatives have a key role as commercialization channels of NTFP and AFS products, supplying public and private markets. Will be partners in developing project activities in the field. Will provide support in identification of gaps and problems in productive chains (e.g. constancy and quality of production, volume of production, identification of buyers); validation of new products and technological/methodological solutions proposed by the project. Will disseminate project results among its members. Will participate in the platforms to be established by the project to improve market access.
Workers Unions and Associations - STTR: Union of Rural Workers of Rio Pardo de Minas	Will collaborate by providing support for mobilization of producers and technicians for training and disseminating project results among its members. Will participate in the platforms to be established by the project to improve market access. May collaborate through lobbying for a more effective implementation of NTFP and AFS related public policies and programmes in the territories.
Family Farmers/ Agroextractivists	Key beneficiaries of project results. Will participate in project activities through their associations, testing the technological and financial solutions proposed by the project.
Private companies - Natura - Beraca	Key role as commercialization channels for NTFP and AFS products. Will be partners in developing project activities in the field. Will be important in sending market signals to stimulate adoption of sustainable practices among producers and

Stakeholders	Interests/roles in the project
- Tobasa - Florestas do Brasil	in adjusting their purchasing policies to promote purchase of sustainable products from the target landscapes. Will participate in the platforms to be established by the project to improve market access and enter into contracts with producers, cooperatives and associations to promote sustainable purchases.
Banks - Banco do Brasil - Banco do Nordeste (BNB) - Banco da Amazonia (BASA)	Provide funding for productive activities. Will be partners in the development of favorable credit terms and technical indices for AFS and NTFP production to be incorporated in their financing programmes. Bank officers will be trained in the new financial programmes mainstreaming environmental safeguards so they may facilitate access of beneficiaries to credits and financial products.

PART II: STRATEGY

2.1. Project Rationale and Policy Conformity

Rationale and summary of GEF Alternative

98. The rationale behind the Project is that demand for products from a forested environment will translate effectively into demand for forest conservation. From the perspective of livelihood improvement, the commercialization of NTFPs and AFSs - defined as increasing the value of traded NTFP and AFS products - is expected to increase income and employment opportunities, especially for the poor and otherwise disadvantaged people. This expectation is based on the well-documented importance of many NTFPs and AFS products in rural livelihoods, the emergence of new markets for natural products, the development of new marketing mechanisms, and successful examples. NFTP and AFS have been shown to produce conservation benefits, but need to be upscaled to provide significant impacts at the landscape level. Although AFS are less diverse in species than NTFP producing-forests, they contain more species and greater spatial and temporal variation in the structure of vegetation than monocrops, hence being better for the environment and its associated services. AFS provide farmers more food and incomes than does NTFP, and cannot be avoided either in the Conservation Units (CU), buffer zones or within the sustainable use CU (RESEX, SDR and FLONA)[1]. The mixture of NTFP harvesting areas with AFS provides a more permeable matrix for biodiversity than monocrops and should be promoted as a viable option conciliating income and biodiversity conservation. NTFP can play an important role in family income and subsistence, but very rarely will be enough to supply the total income to farmers. There is no restriction to the use of AFS in Protected Area buffer zones. It is also possible within sustainable use reserves (RESEX, SDR and FLONA) and generally represents a small portion not compromising its viability as a tool to protect biodiversity.

99. The project will conserve biodiversity in key forest landscapes - Amazon, Caatinga and Cerrado - all renowned for their outstanding global biodiversity significance but currently under threat from increasing land use pressures across production landscapes. It will address one of the key land use threats to these forests: forest degradation driven by small-scale farmers that employ traditional subsistence farming and extraction practices in and around forested areas throughout the landscape, including land clearing, over-exploitation of resources, and poor fire management. This is causing increased encroachment on forest habitats both in areas under conservation and in locations that are strategic for connectivity across the landscape with the result of gradual loss of the global environmental values in these areas. The project will seek to facilitate a shift from these unsustainable agricultural practices to an approach that conserves the BD of multiple-use forest landscapes of high conservation value while meeting important social priorities and development goals.

[1] Extractive Reserves (RESEX), Sustainable Development Reserves (SDR), National Forests (FLONA)

100. To achieve this, the project will take a dual approach, the first one aiming at strengthening the governance framework and the second one at enhancing market and financial access; and will intervene at three levels: national, regional (biome) and local. The first approach will be to establish the foundations for sustainable management and production by developing safeguards for harvesting, production and incentives that optimize the contribution of existing policies to the conservation of globally significant BD. This will include setting harvesting limits to prevent the intensification of wild resource use beyond sustainability thresholds; increasing the understanding of the value of NTFP production and its contribution to economy and livelihoods; and strengthening the decision-making system for differential pricing and incentives for NTFP and AFS production across the landscape.

101. The second approach will be market/trade-based, seeking to improve returns from NTFP and AFS and providing the incentive for adoption at scale thereby increasing conservation dividends. This will include improving information on production levels in order to access different markets; improving quality; developing markets; and improving access to financing for production at scale. The aim is to increase the returns to producers from sustainable utilization of wild resources in situ, so creating a utilitarian incentive to maintain natural habitat rather than convert land to contra conservation land uses. Equally, increasing cost efficiencies will ensure that the landholder retains a greater part of the margin and increase the relative price of wild harvests against unsustainable land uses.

102. The project´s strategy will aim at removing bottlenecks in the production chain of NTFP and AFS products[11]. By focusing on the production chain the project will be able to integrate the cultural, social, economic and environmental dimensions in its work and help promote stability of production, sustainable growth, and equity, and benefiting the stakeholders involved in the chains. To do so, it will build on ongoing policies and programmes that have been established to increase NTFP production, but which fall short due to a number of governance and market constraints.

103. Capacity development will be a key aspect of the strategy. One aspect will be to raise awareness of policy and decision makers by providing them with information and knowledge to enable them to improve the current public policies on sustainable use and conservation of biodiversity. The lessons and experiences acquired during project execution will contribute to feed decision makers with qualified information to this end. Another aspect will be to build the capacities of the technical assistance services and producers through appropriate training materials and training events for the different target audiences, enabling them to implement sustainable practices, technologies and methdos, access credit opportunities, add value and market their production, thereby improving incomes and livelihoods.

104. Intervention at national, regional and local levels will provide a comprehensive approach to ensure mainstreaming of sustainable management of NTFP and AFS production (see Table 14 below). At national level the project will make available a full set of information to improve public policies seeking to ensure that environmental safeguards optimize inputs of NTFP and AFS production to biodiversity conservation in multiple use landscapes; better decision making by policy makers for mainstreaming and managing NTFP and AFS; and increasing credit and financial opportunities for sustainable NTFP and AFS production. At regional (biome) and local levels the project will work with government bodies and CSOs

[11] The production chain is defined as a set of elements that interact in a production process to offer products or services to the consumer market. In the case of NTFP and AFS products, the production chain can be visualized as the link and interrelationship of various elements seeking to offer to the market in natura or processed products. In general, for the project purposes, this system consists of the following five segments: 1) Suppliers of inputs, who offer basic goods for productive activities, such as tools, machinery, products and technologies; 2) Producers, who use and manage the land to produce fruits, oils, fibers from farms and forested areas; 3) Processors, which are agribusinesses that pre-process (e.g. cleaning, drying and storage of grains), benefit (standardize and package products), or transform the raw products (e.g. oils); 4) Buyers, who in the case of NTFPs are usually middlemen, and in the case of regions with more organized social capital they are cooperatives and associations; and 5) Consumer Market, which is the end point of sales and consist of groups of consumers; and can be domestic or foreign.

to develop and test best practices and technologies for sustainable production; build the capacities of extension services to deliver training, knowledge and information to producers on best practices, safeguards and market access; pilot ways to promote access to resources within the framework of conservation compatible land uses; improve the reliability, quality and diversity of NTFP supply and AFS production and commercialization channels (public and private) to increase market value and access. Interventions at all levels will ensure successful upscaling of sustainable management at territorial level and the definition of public policies for further upscaling after project closure.

105. The project will thus support Brazil's goal of promoting the conservation and sustainable use of biodiversity while reducing poverty and increasing resilience in the rural areas, which are governmental objectives stated in several policies and programs. By removing current risks and uncertainties, the project will help Brazil to upscale the sustainable NTFP and AFS production while at the same time enhancing the rights and roles of communities in the sustainable management of BD and improving their livelihoods. Up-scaling and integration of AFS production will provide more environmentally friendly forms of land use in a landscape-level mosaic, increasing connectivity of forest fragments and helping to maintain ecosystem services. This is important because most priority areas for conservation, as listed by the Probio, are not protected and therefore subject to land use change and degradation. The sustainable use of biodiversity will consequently contribute to preserve the biodiversity and environmental services by increasing the value for NTFP and AFS products from a matrix more permeable to biodiversity. This will alleviate pressure in the areas of high value for biodiversity conservation, including existing Conservation Units or those which creation has been requested by local communities. In order to significantly contribute to biodiversity conservation, this strategy must be upscaled beyond the project intervention areas, impacting larger areas within the selected biomes, and this can only be achieved through appropriate public policies. Consequently, the ultimate goal of the project is the improvement of the public policies promoting biodiversity conservation and sustainable use.

106. The project will target family farmers and traditional peoples and communities. NTFP harvesting and AFSs are more environment-friendly activities to be implemented near CUs and in areas of high importance for biodiversity conservation than conventional agriculture, cattle raising and forestry. These activities are more suitable for family farms that use more intensively human labor than large farmers. Family farmers and traditional communities rely on biodiversity as a source of goods (food, fiber, oils, medicine, and building material) and income, and are the main groups targeted by the current policies promoting biodiversity sustainable use. Consequently, targeting family farmers and traditional communities living in the buffer zones of conservation units and in areas of high value for biodiversity conservation will bring more benefits for biodiversity conservation. The upscaling of NTFP harvesting and AFSs by family farmers and traditional communities will reduce deforestation and degradation and increase vegetation cover contributing to reduce pressure and promote connectivity in areas of high value and priority for biodiversity conservation, including the conservation units and the buffer zones.

Target sites and species

107. The project will concentrate most of the actions in 3 CTs (one CT per biome), namely CT Alto Rio Pardo (Cerrado); Sertão do São Francisco (Caatinga) e Alto Acre e Capixaba (Amazon). These CTs were selected because they represent areas where Embrapa has a longer term work going on, long term experience,large quantity of Embrapa technicians and partnerships involved, occur most of the NTFP species, and there are important AFS experiences. In the other 3 CTs (Medio Mearim - Cerrado; Sobral - Caatinga, and Marajó - Amazon) project actions will also be important, but with less volume given the fact that Embrapa is beginning to work in the region (Medio Mearim, part of the Marajó), or there are not important NTFP (Sobral).

108. Selection of priority areas for project interventions was based on the Citizenship Territories (CT) concept[12] and taking into account the following criteria: 1) high priority for biodiversity conservation and sustainable use (based on PROBIO/MMA maps); 2) high biodiversity use by local communities; 3) occurrence and significant harvest of important biodiversity species; 4) social organization, 5) presence of capacity development and research initiatives by EMBRAPA, other governmental institutions and NGOs; and 6) governmental programmes aimed to promote biodiversity sustainable use.

109. The areas fulfilling the above criteria were crosschecked with current governmental actions under the Territories of Citizenship Program. The sites were selected following intense consultation with Government bodies and EMBRAPA partners. EMBRAPA local units conducted meetings with local organizations such as worker unions, NGOs, agroextractivist cooperatives and local associations to obtain contributions for the selection of target territories. Three working meetings with officers from MMA, MDS, MDA, CONAB, ICMBio, SFB and EMBRAPA units and Headquarters and four meetings with the secretariat of MMA, MDA, MDS, and the direction of ICMBio were conducted to raise information and demands of these stakeholders and to select territories. A general videoconference with all EMBRAPA units involved in project planning was followed by six videoconferences with leading EMBRAPA units working of each target territory. Additionally, continuous contact with directors and technicians of EMBRAPA units working in the selected territories was held to endorse the selection and commitments. As a result the following six CTs were selected:

Table 9 - Citizenship Territories selected as project priority areas for intervention

Biome	**Cerrado**	**Caatinga**	**Amazon**
Citizenship Territories	Alto Rio Pardo	Sertao do Rio Sao Francisco	Alto Acre e Capixaba
	Medio Mearim	Sobral	Marajó

110. These CTs stretch across more than 21.5 million ha that contain large expanses of forests (between 51% and 84% of their surface areas) and have been classified as of high to extremely high importance for biodiversity conservation and sustainable use. They reflect diverse social, economic, cultural and environmental realities and will serve to provide different scenarios for developing experiences and lessons learned that could be later replicated at broader levels. Table 10 summarizes the main characteristics of the selected CTs. A detailed description of the CTs is included in Annex 3 and maps in Annex 4.

111. The project will deliver global environmental benefits at various levels. At CT level, it will have a direct effect on CUs (protected and sustainable use categories) and their buffer zones; and indirect effects on the surroundings and area of influence of such CUs. At regional level, the project will have in the longer-term effects through replication on the whole of the forested surface of each selected CT. Finally, project experiences and lessons learned will be upscaled at national level covering the three selected biomes, and other biomes.

[12] As mentioned in sub-section 1.3, par.39 above the Citizenship Territories comprise a geographical area covering a group of municipalities with similar economic and environmental characteristics, social, cultural and geographical identity and cohesion. Territories are larger than municipalities but smaller than states.

Table 10 - Main characteristics of the selected Citizenship Territories

Biome &	**Cerrado**		**Caatinga**		**Amazon**	
Citizenship Territory (CT)	**Alto Rio Pardo**	**Medio Mearim**	**São Francisco**	**Sobral**	**Alto Acre e Capixaba**	**Marajó**
State	Minas Gerais	Maranhão	Bahia	Ceará	Acre	Pará
# Municipalities	15	16	7	17	5	16
Surface area of CT (hectares)	1,650,000 ha	876,000 ha	6,170,000 ha	840,000 ha	1,530,000 ha	10,500,000 ha
Percentage of forests	60.98% (1,151,700 ha)	51.79% (453,680 ha)	64.36% (3,971,012 ha)	83.74% (703,416 ha)	77.93% (1,192,329 ha)	83.77% (8,795,850 ha)
Priority and Importance for Biodiversity Conservation and sustainable use (Probio)	Extremely High/Very High	Very High	Extremely High/Very High	Extremely High	Extremely High/ High	Extremely High/ High
Threats to forests	• Deforestation in small areas for Family agriculture and livestock production, and production of charcoal • Inadequate management of soils, forests and water • Use of fire to clear areas for agriculture (manioc and beans) and livestock (pasture renovation)	• Deforestation of primary forest remnants for agriculture and livestock production • Inadequate management of soils, forests and water • Removal of secondary palm forests to increase pastures and annual crops • Use of fire to clear areas for annual crops and pastures	• Deforestation in small areas for Family agriculture and livestock production, and production of charcoal • Use of fire • Inadequate management of soils, forests and water • Over-grazing by goats and sheep. Goats graze on native vegetation causing the death of plants, affecting mainly the natural regeneration of *umbu*	• Use of fire in subsistence agriculture (manioc and beans) • Inadequate management of soils, forests and water • Over-grazing by goats and sheep. Goats graze on native vegetation causing the death of plants, affecting mainly the natural regeneration • Over-grazing of native grasses accelerates degradation of soils leading to disappearance of herbaceous and shrub species.	• Deforestation for livestock production (cultivated pastures) • Use of fire in subsistence agriculture (manioc and beans) • Inadequate management of soils, forests and water	• Deforestation (illegal) for lumber production • Over-exploitation of acai • Use of fire in subsistence agriculture (manioc and beans) • Inadequate management of forests • Buffalo raising compacts soils in rainy seasons and destroys native vegetation

Biome & Citizenship Territory (CT)	Cerrado		Caatinga		Amazon	
	Alto Rio Pardo	Medio Mearim	São Francisco	Sobral	Alto Acre e Capixaba	Marajó
Protected Areas	• 14,371ha (0.87%) • 100% protection categories	Only Quilombola áreas: 10,057ha	• 1,239, 800 ha (20.07%) • 100% sustainable use categories	• 36,293 ha (4.32%) • 17.28% protection categories • 82.72% sustainable use categories	• 1,009,830 ha (92.17%) • 37.83% protection categories • 62.17% sustainable use categories	• 5,504,532 ha (52.62%) • 100% sustainable use categories
Main land uses	• Forestry (eucalyptus) • Family agriculture (mainly manioc and beans) • Family cattle production • NTFP harvesting in forests and silvopastoral areas	• Family agriculture, mainly rice and manioc • NTFP harvesting • Livestock production with predominance of medium and large scale properties but with important participation of small farmers • Pisciculture	• Family agriculture and livestock production • NTFP harvesting	• Family agriculture and livestock production	• Family agriculture and livestock production • NTFP harvesting	• Family agriculture and livestock production • NTFP harvesting
# of small farmer families	16,097	20,859	31,768	22,484	9,374	37,652
Type of production to be promoted by the project	AFS NTFP	AFS NTFP	AFS NTFP	AFS	AFS NTFP	AFS NTFP
Species selected	• Pequi • Araticum • Coquinho azedo • Veludo • Maracujá do mato	• Babaçu	• Umbu • Licuri • Maracujá do mato	N/A	• Brazil nut	• Açai • Andiroba

112. Within these CTs, 12 plant species have been selected on the basis of the following criteria: i) volume harvested; ii) importance for rural communities; iii) occurrence nearby or within conservation units; and iv) public policies supporting their harvesting, commercialization and management. Of these, seven species already have a minimum price established by the GoB, and others are under analysis by the GoB to be included in this policy (see Table 11 below). The project will develop harvesting limits and best practices for sustainable management; add value through increasing the harvested volume (by promoting purchases of these products and commercialization channels) and the quality of products (through equipment, methods and processes to improve quality); it will estimate the production of these species to plan their use, processing and commercialization. The project will build the capacities of key stakeholders on the above issues; and provide inputs to develop financial opportunities and to improve the current public policies on minimum prices (PGPMBio) and commercialization (PAA, PNAE and private markets).

Table 11 – Selected Species

Species	Common name	Harvested part	Minimum Price established	Biome	Citizenship Territory
Bertholletia excelsa	Brazil nut	Fruit	Yes	Amazon	Alto Acre e Capixaba
Carapa guianensis	Andiroba	Seed	Yes	Amazon	Alto Acre e Capixaba, Marajó
Euterpe oleracea	Açaí	Fruit/palm heart	Yes	Amazon	Marajó
Caryocar brasiliense	Pequi	Fruit	Yes	Cerrado	Alto Rio Pardo
Annona crassiflora	Araticum	Fruit	In study	Cerrado	Alto Rio Pardo
Tachigali subvelutina	Veludo	Trunk	No	Cerrado	Alto Rio Pardo
Passiflora setacea	Maracujá do mato	Fruit		Cerrado Caatinga	Alto Rio Pardo
Passiflora cinccinata	Maracujá do mato	Fruit	In study	Cerrado Caatinga	Alto Rio Pardo
Butia capitata	Coquinho azedo	Fruit	No	Cerrado	Alto Rio Pardo
*Orbygnia phalerata**	Babassu	Fruit	Yes	Cerrado	Médio Mearim
Spondias tuberosa	Umbu	Fruit	Yes	Caatinga	Sertão do S. Francisco
Syagrus coronata	Licuri	Fruit	In study	Caatinga	Sertão do S. Francisco

(*) The most accepted name for *Orbygnia phalerata* is *Attalea speciosa*

113. A problem analysis of the 12 species was undertaken covering the current situation of each one in terms of environmental safeguards, reliability, quality and diversity of NTFP supply and AFS production, market access, credit and financing, and capacities. Table 12 below summarizes the problem analysis. For each species, the problems were rated as “high”, “medium” or “low”; “high” meaning that there is still a long way to go to solve the problem and “low” to no major problems. See Annex 2 for the detailed analysis.

114. The project will also support the development of AFS designs (e.g. choice of species, their spatial distribution and planning, deployment and management), hence making available options for BD-friendly

land uses. The project will develop the capacities of technicians, students and leaders for implementation of the AFS designs and their dissemination to the family farmers. Dissemination and adoption of AFS will contribute to implementation of the new Forest Code, which allows the use of AFS to restore Areas of Permanent Protection; to reduce the pressure of unsustainable management practices (e.g. deforestation and fires); and to increase the surface of lands that are more permeable to BD, increasing connectivity between forest fragments. By end of project a full set of information on each species will be available, and the experiences and lessons learned may be extrapolated to other regions.

Table 12. Summary of the problem analysis of the 12 selected species

Species	Problems (high, medium, low) high = long way to solve the problem / low = no major problems											
	Environmental Safeguards			Reliability, quality and diversity of NTFP supply and AFS production						Market access	Credit and financing	Capacities
	Species ecology	*Pre-harvest*	*Harvest*	*Transportation*	*Processing*	*Reliability of production*	*Quality of production*	*Productivity*	*Commercial products*			
Pequi	Low	Medium	Medium	Medium	Medium	High	Medium	No	Medium	Medium	High	High
Araticum	Medium	Low	Low	Low	Medium	High	Medium	No	Medium	Medium	High	High
Coquinho Azedo	Medium	High	High	High	High	High	Medium	No	Low	Medium	High	High
Maracujá do mato – 2 species	Low	High	Medium	Medium	Medium	High	Medium	No	High	High	High	High
Veludo	Medium	Low	Low	Low	Low	High	Low	No	Low	low	High	High
Babaçu	Medium	Medium	High	High	High	Medium	Medium	No	High	High	High	High
Brazil nut	Medium	Low	High	High	High	High	High	Yes	Medium	Medium	High	High
Andiroba	Medium	Medium	Medium	Medium	High	High	High	No	Medium	High	High	High
Açai	Low	Medium	High	High	High	High	High	Yes	Medium	Medium	High	High
Umbu	Medium	High	High	High	High	High	Medium	Yes	Medium	High	High	High
Licuri	Medium	High	High	High	High	Medium	Low	No	Medium	High	High	High

Gender equality

115. Women play a very important role in NTFP management and development of agroforestry systems. They are usually responsible for collecting and processing products, innovating and creating new goods for the market and sometimes are also in charge of commercialization. Although AFS is mainly an activity carried out by men, women participate in deciding the species to be cultivated, promote diversity and focus on food security. Women have a traditional role as the primary users and managers of natural resources, but they are frequently excluded from processes and decisions related to their use and management.

116. The project will take into account these different roles and issues and will mainstream in its interventions the following key strategic orientations that will guide the activities to ensure that they contribute to reduce current gender inequalities:

- Full acknowledgement of the contribution of women to the use and management of natural resources;
- Guarantee women's rights to information, knowledge, skills, resources and participation in decision-making;
- Building on and strengthening women's experiences, knowledge and capacities in NTFP and AFS, ensuring that the needs of women are incorporated in public policies. This will include providing training to women's organizations, networks and support groups, as well as opportunities to share experiences; and
- The use of gender analysis to understand the different roles and responsibilities of women and men in natural resource use and management, in order to design interventions that are equally relevant for both.

Traditional Peoples

117. Within the project´s selected priority areas the main groups of traditional peoples and communities include *Quilombolas* (Afrodescendants), *Fundos de Pasto* (pastoral communities living in communal areas), *Geraizeiros* (people living in the northern portion of the Minas Gerais State, where the Cerrado is known as Gerais), *Extrativistas* (harvesters), and *Quebradeiras de Coco* (female harvesters of babaçu). To overcome the traditional exclusion and impoverishment of these peoples, the GoB is promoting the construction of a new policy targeting traditional peoples and communities. One of the components of this policy is sustainable production based on agroecology, AFS and NTFPs. Moreover, the MDA, MDS and MMA have established offices in charge of issues related with traditional peoples and communities. In this context, the project in designing its interventions will promote the involvement of MDA, MDA and MMA; the involvement of traditional peoples and communities through participatory processes; and develop specific training on AFS and NTFP tailored to the needs and idiosyncrasies of traditional peoples and communities.

Outreach Strategy

118. The project will develop and implement an outreach strategy with the purpose of raising awareness of all stakeholders on the project and disseminating information on project progress, on the ground activities, results and lessons learned to a wide range of target audiences (public institutions, private companies, cooperatives, producers, community based organizations and indigenous peoples). This outreach strategy will also include a grievance mechanism through which the population in general, and local communities in particular, will be able to channel any concerns derived from project implementation and receive the corresponding feedback.

Fit with the GEF Focal Area Strategy and Strategic Program

119. The project aims to remove current risks and uncertainties, leading to the upscaling of sustainable

NTFP and AFS production while at the same time enhancing the rights and roles of communities in the sustainable management of BD and improving their livelihoods. Up-scaling and integration of AFS production will provide more environmentally friendly forms of land use in a landscape-level mosaic, increasing connectivity of forest fragments and helping to maintain ecosystem services. The project is thus consistent with GEF Strategic Objective 2 of GEF 5: *Mainstream biodiversity conservation and sustainable use into production landscapes, seascapes and sectors* and in particular Outcome 2.1: *Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation*. The project will have a secondary impact on Strategic Objective 1: *Improve Sustainability of Protected Area Systems* as it will also contribute indirectly to increase the sustainability of different protected areas by increasing BD friendly production in adjacent areas, either by maintaining original forest cover (in the case of NTFPs) or analogous multi-strata AFS.

120. The project will thus contribute to the following GEF-5 SO outcomes and indicators.

GEF SO/SP	Expected Direct Outcomes	Indicators
BD-SO2	**2.1**: Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation	Landscapes and seascapes certified by internationally or nationally recognized environmental standards that incorporate biodiversity considerations (e.g. FSC, MSC) measured in hectares and recorded by GEF tracking tool

121. The project is also consistent with the Aichi Biodiversity Targets, namely Targets 3 (*by 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions*), 5 (*by 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced*) and 7 (*by 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity*).

2.2. Project Objective, Components/Outcomes and Outputs

Project objective

122. The need to reconcile economic and conservation objectives in a sustainable manner for agriculture is a major issue. Public policies can potentially modify farmers' choices in terms of land uses and practices and thus affect both the ecosystem and the dynamics of biodiversity. Brazil is implementing several public policies aimed to support biodiversity use, but to increase their importance and contribution for biodiversity conservation there are several technological, capacity, market and financial constraints that need to be removed.

123. The proposed project is targeted at addressing the identified barriers that currently impede the upscaling of sustainable use and conservation of biodiversity through the harvesting of NTFP and AFS in areas of high value for biodiversity. In this sense, the objective of the proposed UNDP/GEF Project "Mainstreaming Biodiversity Conservation and Sustainable Use into NTFP and AFS production practices in Multiple-Use Forest Landscapes of High Conservation Value" is to ensure that **the biodiversity of Brazilian multiple-use forest landscapes of high conservation value is conserved through a strengthened sustainable use management framework for non-timber forest products (NTFP) and agro-forestry systems (AFS).** The project will overcome the identified barriers to achieve the stated

objective through two outcomes: 1) Governance and capacity building framework for up-scaling best practices for BD sustainable management and production, and 2) Market and financial frameworks for up-scaling for NTFP and AFS production in high-conservation value forest landscapes. Table 14 below shows how the different project outcomes and outputs fit into the three levels of project intervention (national, biome and territorial levels).

Table 14 - Summary of project intervention levels (outcomes and outputs)

Outcomes/Outputs	**Scope of Direct Interventions**		
	National	**Regional (Biome)**	**Local (Territory)**
Outcome 1- Governance and capacity building framework for up-scaling best practices for BD sustainable management and production			
Output 1.1: Environmental safeguards optimize inputs of NTFP and AFS production to BD conservation in multiple use landscapes.	X	Amazon Caatinga Cerrado	6 Citizenship Territories
Output 1.2: Improved decision–making support and strategies for policy makers at federal, state and local levels for mainstreaming and managing AFS and NTFP in production landscapes	X	Amazon Caatinga Cerrado	6 Citizenship Territories
Output 1.3: Extension services deliver capacity building to small rural farmers on best practices, safeguards, and market access for NFTP and AFS		Amazon Caatinga Cerrado	6 Citizenship Territories
Output 1.4: Resource Use Agreements incorporate new safeguards and guidance for mainstreaming NTFP		Amazon Caatinga Cerrado	6 Citizenship Territories
Output 1.5: Data system for information and networking consolidates and replicates best practices on NTFP and AFS		Amazon Caatinga Cerrado	6 Citizenship Territories
Outcome 2: Market and financial frameworks for up-scaling for NTFP and AFS production in high-conservation value forest landscapes			
Output 2.1 Improved reliability, quality and diversity of NTFP supply and AFS production increase market value and access in 6 high biodiversity forest landscapes		6 Citizenship Territories	6 Citizenship Territories
Output 2.2: Market access improved for BD products		6 Citizenship Territories	6 Citizenship Territories
Output 2.3: Credit and financing mechanisms increased for AFS and for NTFP management	X	6 Citizenship Territories	6 Citizenship Territories

Project outcomes and expected results

Outcome 1: Governance and capacity building framework for up-scaling best practices for BD sustainable management and production (GEF: US$ 3,145,130; Co-finacing: US$ 16,100,000)

124. This outcome will strengthen the governance framework for land-use planning and sustainable management in forested multiple use landscapes by putting in place the regulations and capacities for mosaics of production practices that optimize connectivity across the landscape and provides sustainable livelihoods for small and medium scale farmers and communities. MMA, MDA, MDS, MAPA and EMBRAPA will work in close coordination to implement this outcome and ensure mainstreaming of results into public policies.

Output 1.1: Environmental safeguards optimize inputs of NTFP and AFS production to BD conservation in multiple use landscapes.

125. This output seeks to make available a set of management procedures and rules aimed to ensure the sustainable harvest of NTFP and the monitoring of NTFP and AFS production. The knowledge from the actions from this output will allow informed decision making for a common interinstitutional framework between the relevant institutions (EMBRAPA, MDA, MDS, MAPA, CONAB and MMA) in order to design and implement public policies that promote products from areas of high value for biodiversity, including differential economic schemes.

126. The project will carry out studies (yield studies, regeneration surveys, harvest assessments and harvest adjustments) for the 12 selected species to determine the sustainable harvesting limits for each species (see table 15).

Table 15 - Selected species per biome and Citizenship Territory

Biome	CT	Species
Cerrado	Alto Rio Pardo	Pequi, araticum, coquinho-azedo, maracujá do mato, veludo
	MedioMearim	Babaçu
Caatinga	Sao Francisco	Umbu, maracujá do mato, licuri
	Sobral	N/A
Amazon	Alto Acre Capixaba	Brazil nut
	Marajo	Açai, andiroba

127. In project year (PY) 1 the project will undertake the selection of populations for each species (8-15 populations each) representing harvested and intact populations, under different land uses and management. Between PY2-3 demarcation and sampling of the structure of the selected populations will be carried out, as well as sampling of anthropic (harvesting, land use, management) and environmental (soil, topography, climate) variables. To ensure the inclusion of the spatial and temporal variations inherent to wild species and the anthropic effects (eg. harvesting, fire, etc), this activity will be implemented in areas that exceed the limits of the target territories in different land use scenarios and proximities to forest patches of high BD values. Activities will build upon EMBRAPA´s infrastructure and expertise with the species and subjects. The project will undertake periodic monitoring of populations´ yields and between PY3-4 will analyze the data collected for each species and define the sustainable harvesting limits. Yield studies will be based on the annual monitoring of fruit production on the same plants in every population in order to have a diagnosis of fruit production throughout the years and fluctuation between years. The purpose of monitoring fruit production will be to have information on fruit production and its associated variation available to estimate the potential production according to forest area sizes harvested by farmers. This information will be important for planning harvesting, processing and commercialization. Fruit yield is not part of the monitoring methodology for there is no known reason to expect it to be affected by management practices for long-lived plants the project will be working with. However the regeneration surveys are part of the methodology to monitor population health, and as such will be conducted for all species.

128. On the basis of the results of the previous studies and harvesting limits established and with the help of the local knowledge of experienced harvesters, between PY3-5 the project will identify, assess and consolidate best management practices and prepare technical management guidelines for sustainable management of NTFP and AFS. The project will publish the technical management guidelines and make them available to cooperatives, producer associations, NGOs, extension services, federal institutions,

agricultural schools through printed, audio-visual and online materials. These technical management guidelines will be the basis for preparing training materials and courses targeting extension services and rural leaders (Output 1.3).

129. The project will monitor NTFP and AFS production in the six CTs by collecting information on products and species commercialized; quantity and quality; buyers; suppliers (eg. family farmers, cooperatives, associations, private company); destination of production (eg. school lunch, processing, private companies, donation); geographical location of suppliers; and prices paid. These data will be sought annually between PY1-4 from cooperatives´ records, CONAB records on purchases made through the PAA and PGPMBio, municipalities´ records on purchases made through the PNAE and surveys in fairs and to rural workers´ unions. Monitoring in the field will be undertaken by EMBRAPA Field Units, Universities, NGOs and cooperatives with the participation of local communities of NTFP harvesters and family farmers.

130. Furthermore, the Project will make use of mapping and surveys to localize and estimate areas producing NTFP and AFS as a monitoring tool and eventually for production planning. Mapping will allow a picture of the location, geographical distribution and size of productive areas, and will have a twofold purpose. Firstly, it will be used to enable estimation of the current (realized) and potential production, which will be important information for production planning and capacity development initiatives[13]. The mapping information may also be used as inputs for the establishment of resource use agreements (Output 1.4) and for monitoring their implementation as well as for monitoring the use of sustainable management practices. Overlapping the areas with NTFP harvest and AFS uses with the PROBIO maps will contribute to indicate to the Government and even private sector those areas of particular importance for initiatives promoting these more environmentally friendly uses. Secondly, the project will conduct subsequent mappings to compare with the initial mapping and monitor the expansion on the use of sustainable management practices, as described in Annex 5 - Biological Monitoring Plan. Given the high costs associated with mapping, the project will work in selected areas within the target territories, which will be used to estimate the use of sustainable managed area in the whole territories.

131. Between PY2-5 data (harvesting limits, best practices, mapping and survey results) will be organized and made available through the project databank (Output 1.5) to decision makers, including the Municipalities, State Secretariats of Agriculture and Education, CONAB, ICMBio, MDA, MMA, and MDS, producers, private sector and other interested parties. The project will publish and disseminate an annual report summarizing productive and environmental information such as areas with higher production, production potential for different land uses (e.g. in forests, pastures, degraded areas), sustainable harvesting limits that do not affect species populations in buffer zones of CUs. The technical information will be useful in determining the best locations for production and harvesting, defining infrastructure necessary to promote sustainable production, definition of minimum prices, establishing commercialization agreements, planning supply chains (production, transportation, infrastructure and processing), financing establishment of infrastructure (e.g. processing plants), and capacity development programs.

132. The information will also be useful for proposing differential policies for products derived from areas in or near high conservation priorities, such as extractive reserves or key connecting sites in the landscapes. Differential policies such as differential prices, tax reductions and favorable policies for NTFP collection in these areas will be proposed to ensure that harvesters have access to production areas. In PY2 the project will undertake a feasibility study on the taxes, fees and regulations that affect production, transportation, processing and commercialization of NTFP and AFS. Between PY3-5 the project will prepare proposals for tax and fee reductions and regulations to incentivize NTFP and AFS supply chains

[13] This approach has been successfully used to estimate production and consequently potential income in a area being demanded by traditional populations and CSOs for the establishment of a Sustainable Use Reserve in the Cerrado

that will be presented to MAPA, MDS, MDA, ICMBio, State Governments, CONAB and MMA and will carry out awareness raising with these institutions seeking to promote the adoption of the proposed policies and regulations.

133. The project will promote community involvement (farmers and traditional peoples and their organizations) in the development of safeguards. Communities will work alongside technicians to determine sustainable harvesting limits, identify current practices and technologies and developing best practices to ensure sustainable management succeeds. The Project will also collaborate with local communities in order to enable them (as part of the capacity building of harvesters and family farmers) to set up social control mechanisms to enforce the sustainable management of NTFP species and AFS. This is particularly important in the buffer zones of protected areas (e.g. National Parks, Biological Reserves) and within sustainable use CUs (RESEX, RDS and Flona). Within conservation units, ICMBio has the legal mechanisms to formally mainstream sustainable practices in the management plans and enforce their use. The combination of this social regulation initiative by harvesters and family farmers together, ICMBio regulation within CUs and the incentive coming from differential prices for products that comply with best practices (this latter to be achieved through Outcome 2 below) will significantly contribute as a mechanism for land use planning and management.

Output 1.2: Improved decision–making support and strategies for policy makers at federal, state and local levels for mainstreaming and managing AFS and NTFP in production landscapes

134. The purpose of this output is to collect information on the socioeconomics of production and incomes generated by NTFP and AFS and their trade-offs with BD conservation and ecosystem services. These results will then contribute to support the development of strategies for informed decision making at all government levels (federal, state and municipality). The dissemination of high quality and reliable information will contribute to raise awareness on the contribution of NTFP and AFS to the economy and social aspects of regions, communities, products and activities as well as the bottlenecks hampering their upscaling. The output will help decision makers influence ongoing federal and local policies and programs. At federal level higher minimum prices could be established within the PGPMBio for products coming from sustainably managed areas; and the PNAE could grant priority for procurement of products coming from sustainably managed areas. At local level Municipalities could also grant priority for procurement of sustainable products to be purchased with the resources they receive within the framework of the PNAE and PAA programs.

135. Between PY1-4 the project will estimate the contribution of NTFP and AFS to BD conservation and ecosystem in the selected territories and trade-off scenarios will be modeled. In PY1, the project will organize a workshop with the participation of EMBRAPA units and external socio-economic specialists to analyze the opportunities to run a trade-off analysis of the business as usual (BAU) strategy for land use compared to AFS and NTFP harvesting and how they vary depending on the policy and incentive changes. In this workshop, methodologies (including the Targeted Scenario Analysis – TSA), will be discussed and their viability assessed, with common protocols defined. This trade-off analysis will be developed in three territories, one belonging to each biome (Amazon, Caatinga and Cerrado).

136. Based on these results as well as those from Output 1.1, between PY2-4 the project will outreach to decision makers at ministries, federal agencies, states and municipalities, as well as academia, NGOs, international agencies, workers unions, cooperatives, and private companies to raise awareness on the relevance of sustainable NTFP and AFS production. Information to be disseminated will include: sustainable harvesting limits; best management practices; guidelines for production; main bottlenecks in the supply chains; nutritional value and health benefits of BD products; environmental services, economic and social value of BD products (trade off analysis); type of products, volume, producers, species commercialized, and suppliers (eg. family farmers, cooperatives, associations, private company). The project will also prepare specific reports targeting the media and including information such as sustainable

harvesting limits; supply chains; nutritional value and health benefits of BD products and environmental services, economic and social value of BD products.

137. In addition the project will undertake between PY3-5 public hearings in each territory targeting the CT Board, Municipalities and Ministries (MDA, MDS, MMA, ICMBio, SFB) to disseminate information and raise awareness on mainstreaming NTFP and AFs into planning of resource use agreements and technologies, processes and methods to promote access of harvesters to resources.

Output 1.3: Extension services deliver capacity building to small rural farmers on best practices, safeguards, and market access for NFTP and AFS

138. Under this output the project will provide capacity building to enable the extension services to deliver adequate awareness raising and training to small rural farmers on best practices, safeguards and market access for NFTP and AFS. The project will design in PY2 a training program with the participation of EMBRAPA, ANATER, EMATER, CONAB, regional NGOs, the Citizenship Territory Boards and the UNDP/GEF Small Grants Programme. It will include key subjects such as sustainable NTFP and AFS production; environmental safeguards; best management practices; legal and sanitary issues of production and commercialization; and public and private markets for commercialization. The program will be implementedby the Local Committees to be established in each territory[14] with the participation of State bodies, municipalities, regional/local NGOs, cooperatives, Citizenship Territory Committee, Federal Education and Technology Institutes and universities.

139. The program will be implemented between PY2-4. As information is made available through Output 1.1 above, it will be incorporated into the training program. This will also enable feedback. It will target 540 technicians from rural extension agencies, EMBRAPA technicians, technical staff from research institutions; universities, and agricultural technical schools; community leaders (this latter in conjunction with GEF SGP). It will include developing training materials for each target audience (kits with booklets, videos, posters, folders, best practice manuals). Training will be delivered through: 1) courses in the territories including field visits to the demonstration units to be established by the project; 2) workshops to identify bottlenecks and opportunities in each territory; 3) field days in the NTFP harvesting fields and AFS farms for policy makers and technicians; 4) videos that will be disseminated through EMBRAPA´s "Field Day" TV program[15]; and 6) radio contents to be disseminated through EMBRAPA´s *Prosa Rural* radio program[16].

140. In this manner the project will address the training needs of technicians working in the project intervention areas to build their capacity to provide training to stakeholders within the BD production chain. Developing the capacities of governmental extension services and community leaders will contribute to identify and replicate best practices on biodiversity management; and will help improve the governmental programmes supporting the exploration, use and commercialization of biodiversity products, as well as promoting innovative uses for BD.

141. Between PY3-5 the technicians trained through the previous activity will undertake producer exchange programmes that will comprise training courses, field days, study tours, sharing of experiences, and information materials, reaching an estimated 2,980 producers (direct beneficiaries) in the six target

[14] Local Committees will be established in each CT with the objectives of: i) ensuring coordination of the project objective with the local plans (both institutional and sectorial) as well as ongoing or planned interventions or investments by the local partners and/or beneficiaries; ii) supporting implementation of project activities; and iii) coordinating stakeholder participation (see Part III Management Arrangements for further details on the Local Committees).

[15] TV program produced by the EMBRAPA Technological Information Division; the Project will prepare audio-visual materials that will be disseminated through this TV program.

[16] Radio program produced by the EMBRAPA Technological Information Division; the Project will prepare information to be disseminated through this radio program.

MUL landscapes.

Output 1.4: Resource use agreements incorporate new safeguards and guidance for mainstreaming NTFP

142. The Project will seek through this output to pilot the development of resource use agreements that incorporate the environmental safeguards and best practices to promote the access of NTFP harvesters to resources on a sustainable basis. Resource use agreements are defined as agreements established following negotiations with the participation of communities, Government bodies and even private third parties such as farmers and private companies. The aim of the resource use agreements is to allow NTFP harvesters to access resources in third party areas, communal areas, and sustainable use CUs, following the observance of the agreed rules[17].

143. The project will seek to develop one resource use agreement for each biome. In PY3 the project will assess the feasibility of developing these agreements, including cross-referencing information on species (taking into account socio-economic and environmental variables), harvesting areas (RESEX, community lands in settlements or private properties), mapping information generated under Output 1.1, and will identify potential landscapes and stakeholders for piloting the agreements. The results of the assessments will be validated through workshops in each biome, with key stakeholders including CT Boards, RESEX Committees, MDA/INCRA, producer associations, ICMBio, state environmental agencies, Brazilian Institute for Environment and Renewable Natural Resources (IBAMA), and law enforcement bodies and will raise awareness with the proposed participants of the pilot agreements. BetweenPY3-5 the Project will provide technical support to draft and negotiate the pilot agreements.

144. In addition, capacity building will also be provided to IBAMA, ICMBIO, MDA/INCRA, State governmental agencies, Municipal land use planning staff and law enforcement bodies for mainstreaming of new safeguards and best practices for AFS and NTFP in resource use agreements, including for example specific recommendations for land use in buffer zones of conservation units and the promotion of more friendly BD uses through differential financing, technical assistance, reduced taxes and differential prices for products.

Output 1.5: Data system for information and networking consolidates and replicates best practices on NTFP and AFS.

145. This output will develop a data system for information and networking to consolidate and replicate best practices on NTFP and AFS. This will include databases and networks on successful initiatives and best practices including those identified in technical institutions as well as from creative farmers, and research programmes and grants tailored to the needs of producers. In PY2 the project will design the databases and networks, including aspects of interoperability and user friendly access. Between PY3-5 information on best NTFP management practices, best AFS production design, implementation and management practices, and examples of successful NTFP and AFS initiatives will be uploaded and made available to the public through EMBRAPA and the MDA, MDS and MMA internet sites. This data system would also incorporate the results of the mapping undertaken through the monitoring plan (Annex 5) of the

[17] The resource use agreement approach will significantly contribute to the promotion of sustainable practices and continuous access to areas not owned by harvesters, thereby contributing to the use of sustainable practices in large areas and to reduce conflicts between parties. Collaboration between local communities and third parties has been seen as a tool for facilitating biodiversity conservation and failure to do so has resulted in a lack of local interest in conservation, therefore hindering achievement of conservation objectives. Models have been developed for collaborative resource management, which allow people to access the selected resources under certain conditions. In return the resource users undertake monitoring and regulating of resource harvesting levels and protection of the resource use areas. It is a 'rights for responsibilities' arrangement, which empowers resource users to manage the resources on which they themselves depend.

current spatial distribution in the wild in the six territories of the 5 key species being harvested. In addition these maps would be cross-referenced in the data system with the mapping of the high priority BD areas as defined in the PROBIO. The data system will be freely available to the public in general without restrictions.

146. The information will be especially useful to decision makers, as well as to the members of the platforms that will be established under Output 2.2 to connect suppliers and buyers with the purpose of improving commercialization channels for NTFP and AFS products (e.g. government institutions, cooperatives and associations, and private companies). It will be used to guide the definition of differential price policies to promote NTFP and AFS rather than traditional agriculture in high priority areas. As data becomes available on harvesting rates and safeguards this will also be included in the data system along with the lesson learned from best practices; market opportunities and other additional information obtained through other outputs of the project.

147. In PY4 the project will prepare a document proposing priority research fields for financing and will disseminate the document to financial institutions such as EMBRAPA, MDA, MDS, MMA, National Council for Scientific and Technological Research (CNPq), and State Research Foundations and raise awareness on the relevance of the proposed research fields.

Outcome 2: Market and financial frameworks for up-scaling for NTFP and AFS production in high-conservation value forest landscapes (GEF: US$ 2,037,415; Co-financing: US$10,200,000)

148. This Outcome will work to overcome barrier #2 through a threefold approach. The first approach will be to improve the reliability, quality and diversity of NTFP and AFS products to ensure an adequate market supply. The second approach will involve improving current markets, connecting suppliers and buyers, and developing new markets to match sustainable yields potentials for different products and production approaches, hence exploring a greater range of products and contributing to diversify rural incomes. The third approach will be to develop favorable bank credit terms and technical assistance for BD products with key banks that provide funding in the three selected biomes and increase public funding for NTFP and AFS that are favorable to landscape conservation.

Output 2.1. Improved reliability, quality and diversity of NTFP supply and AFS production increase market value and access in 6 high biodiversity forest landscapes.

149. The project will implement this output through a dual approach. The first one involves quantification and mapping of the 12 selected species in terms of volume, quality, seasonality, costs, regions and niches, and productivity of the harvested resources. In PY1 the project will establish 2 AFS demonstration units in each CT totaling 12 units, which will be located in farms. In the case of NTFPs the project will select sampling units comprising a known and sustainably managed population for each species in each CT, totaling 72 sampling units, which will be located in farms, communal areas, CUs and buffer zones of CUs. Between PY1-4 the project will collect the above-mentioned data. This will allow generating information on production areas, suppliers, and volume and quality of production under the best practices disseminated by the project, which in turn will help to achieve constancy, quality and reliability for improved market access. This information will be uploaded to the data bank under Output 1.5.

150. In addition, the project will provide this technical information to the ongoing programmes of the MMA, MAPA and MDA to support the development of productive chains to increase production volume, improve quality of products and reduce costs. By knowing the location of production areas and suppliers and quality of production the institutions will be able to direct funding for training of suppliers, investments in infrastructure and processing, as well as public purchases.

151. The second approach involves the development of new technological products, processes and

methods for high quality and reliable sustainable production of NTFP and AFS suited to different locations and land use types in the forested multiple use landscapes. The project will gather information on harvesting, storage, transportation and processing problems as well as existing technologies, methods and processes in PY1. On the basis of this information the project will adapt existing technologies, design new ones, test the products, equipment and methods to solve the identified problems in PY2-3. Information materials on the proposed solutions will be prepared and disseminated to extension technicians, producers and harvesters between PY2-4. The project will make available the technical solutions to government agencies, private sector and producers.

152. In the case of AFS, the project will support the choice of species, spatial distribution and planning and management of the systems. These activities will take into account ecological succession, that is, that throughout the life of the system, consortia of species that succeed in time and space will be considered in order to streamline the system and make the most of sunlight and local ecological conditions in each phase of its development. Thus, at each harvesting period there will be an opportunity to introduce adjustments that include e.g. pruning, replanting, inclusion of new species, changes in spacing, density and stratification, among other interventions that may cause changes in the design of the system.

153. Table 16 below includes the products, processes and methods to be developed for each biome and species.

Table 16 - Products, processes and methods to be developed per biome and species

Biome	**CT**	**NTFP/AFS**	**Products/Technologies**
Cerrado	Alto Rio Pardo	Araticum	Equipment for nut extraction
		Pequi	Oil extraction process
		Coquinho azedo	Harvesting method Storage method
		AFS	2 designs for display of crops and trees (selection of species, spatial distribution and planning and management of the systems)
	MedioMearim	Babaçu	Equipment to extract seeds from fruits Methods to produce charcoal from the whole fruit Methods to produce powder from fruit epicarp.
Caatinga	Sao Francisco	Umbu	Development of cereal bar with umbu fruits Processing method Packaging
		Silvopastoral systems	2 designs for display of trees (selection of species, spatial distribution and planning and management of the systems)
	Sobral	Silvopastoral systems	4 designs for display of trees (selection of species, spatial distribution and planning and management of the systems)
Amazon	Alto Acre Capixaba	Brazil nut	Harvesting method Storage method Transportation method Packaging
		AFS	2 designs for display of crops and trees (selection of species, spatial distribution and planning and management of the systems)
	Marajo	Acai	Method for improvement of oil quality Harvesting equipment Transportation method

Biome	CT	NTFP/AFS	Products/Technologies
			Pulp processing method
		AFS	2 designs for display of crops and trees (selection of species, spatial distribution and planning and management of the systems)

Output 2.2 Market access improved for BD products

154. During the PPG phase, the project team discussed with EMBRAPA units and representatives of local communities the need to set up platforms to coordinate and enhance current private and public efforts to promote sustainable production in the CTs.

155. In this sense, the project will set up platforms that connect suppliers to buyers to enable economies of scale and predictability of income; identify and develop commercialization channels with private and public companies for BD products; assess and develop new markets for new species and products; provide a forum for NTFP and AFS stakeholders to discuss views and regulations; provide transparency and build trust thus increasing biodiversity socio-economic benefits from up-scaling sustainable NFTP production at a country level.

156. Three platforms will be established during PY2-3, one in each biome (in a CT to be selected during project implementation), made up by government agencies, private sector, producer associations and cooperatives. The lead government agency for each platform will be selected during their establishment, taking into account convening power and ability to provide funding to ensure the financial sustainability of the platforms. Platform membership is indicated in Table 17 below.

Table 17 - Key stakeholders in each biome that will integrate the platforms

Biome	Cerrado	Caatinga	Amazon
Government agencies	EMBRAPA, ANATER, MDA, MDS, CONAB, State Governments		
Cooperative, NGOs, producer associations	- Interstate Movement of Babaçu Coconut Breakers (MIQCB) - Centre for Alternative Agriculture of Northern Minas (CAA-NM) - Union of Rural Workers of Rio Pardo de Minas (STTRRPM) - Cooperative of Family Farmers and Agroharversters Grande Sertão (COOPERSERTÂO)	- Cooperative of Family Farmers of Canudos, Uauá e Curaçá (COOPERCUC) - Cooperative of Small Rural Extractivists from Lago do Junco (COOPPALJ)	- National Council of Extractivist Populations (CNS) - Central Cooperative of Extractivist Commercialization of Acre (COOPERACRE)
Private Sector	Beraca, Natura, Tobasa, Florestas do Brasil		

157. The platforms will constitute the mechanism to convene and coordinate the public and private sector to promote sustainable production in each CT and to define the sustainability priorities and policies

for NTFP and AFS; and reach agreement on the key above-mentioned issues. The project will seek to help the platform members develop a long-term space where the public and private sectors can align, take ownership and develop joint concrete actions to promote sustainable and BD-friendly NTFP and AFS productive chains. The platforms will be based on the following principles: neutral, empowerment and social inclusion, multi-stakeholder, strong facilitation, and conflict resolution.

158. Establishment of the platforms will build upon UNDP´s experience developing National Commodity Platforms under its Green Commodities Program, providing lessons learned and guidelines to facilitate multi-stakeholder dialogue and providing the expertise and analysis to scale up action in the project´s target landscapes.

159. The platforms will prepare annual work plans identifying the responsibilities of the different members, and promoting agreements and partnerships to implement activities within the framework of the project. Each platform will hold plenary meetings where representatives of each of the involved sectors participating will be convened throughout the project´s lifetime. All members will be invited. The plenary sessions will consist of presentations given by different working groups, stakeholders and institutions related to issues identified in the work plans and that have a direct relation to promoting the sustainable NTFP and AFS production chains. They will be an opportunity for stakeholders to voice opinions and reach consensus on key issues.

160. The project will also support the platforms with a financial sustainability study during their first year of operation. Funding (public and private) for platform operation is expected for the duration of the first 2 years of the platforms, after which the leading agency will be expected to take over the leadership of the national platform.

161. Within the framework of the platforms, the project will seek to improve the commercialization channels with private and public companies for products from 5 species (see Table 18), as well as identifying market demands for new products that could be developed from the selected species. These activities will be undertaken through co-financing[18].

Table 18 - Products and markets to be developed

Biome	CT	Products	Type of market
Cerrado	Alto Rio Pardo	Pequi pulp	Public and private
	MedioMearim	Babacu products (*)	Public
Caatinga	Sao Francisco	Umbu jelly	Public and private
Amazon	Alto Acre Capixaba	Brazil nut	Public and private
	Marajo	Acai	Public and private

(*) Several babacu products could be promoted eg. fruits, nuts, oil, flour, charcoal made from the fruit; specific products will be selected with the participation of the concerned stakeholders during project implementation

162. These products have been selected for being the most important in each biome in terms of production volume, uses and sales volumes; production chains exist but are informal and need

[18] As per PPG findings, this cofinancing will come from the government and specifically EMBRAPA given that value adding is still an activity of low interest for the private sector. Given the dispersion of production, low value, lack of technology and knowledge, it is still risky for the private sector to invest in it. There are few exceptions such as Natura, which adds the sustainability concept to its brand aiming at consumers who are concerned with the environment, Tobasa and Florestas do Brasil explore the products directly (Brazil nut and babaçu). Government investment is needed at this stage; otherwise no private company will invest in value adding or if they do it, it will result in little social benefit. In this context, government support and cofinancing, involving MMA, MDA, MDS and CONAB, will be directed to market access and development, including supply chain logistics.

strengthening. Between PY2-4 the project will connect suppliers and buyers to establish contracts for commercialization of the above-mentioned products seeking to promote priority purchases and differentiated prices for sustainable NTFPs. The project will work with selected associations and cooperatives (1-2 per biome) to promote long-term contracts with buyers (at least three years). This activity will build upon the best management practices and sustainable harvesting limits developed under Output 1.1, quantification and mapping of species (production volume, quality, location of production areas, identification of suppliers) and technologies and methods developed under Output 2.1, as well as the training of extension technicians and producers under Output 1.3. By increasing the volume of public purchases of sustainable NTFP products by the PAA, PNAE and PGPMBio and securing contracts with private buyers the project expects to benefit at least 1,000 producers. Increasing volumes of natural products or products with low processing levels should aim at the public commercialization programs: PAA, PGPMBio and PNAE. All these policies and programmes are an excellent outlet for NTFP and AFS products and will be explored as incentives that will initiate change during the project´s lifetime. In the longer term is expected that the higher added value products can be channelized into private markets and premium prices obtained following sustainable management practices.

163. The project will also undertake feasibility studies to identify market demands for new products that could be developed from the selected species. The studies will be undertaken with the participation of the private sector and cooperatives. It will analyze the requests for patents in Brazil and worldwide for different species to identify the types of products that are being targeted by companies and carry out a survey to identify the most promising products that could be developed in each biome. The results of the feasibility studies will be made available to the platforms.

Output 2.3: Credit and financing mechanisms increased for AFS and for NTFP management

164. This output will seek to create an enabling environment for the development of credit and financial mechanisms that are appropriate and favor the sustainable production of NTFP and AFS products, and their mainstreaming into the formal economy, thereby helping to improve the livelihoods of smallholders, NTFP harvesters, and inhabitants of RESEX, SDRs, land reform settlements, and indigenous and traditional peoples communities. To this end, project interventions will promote the necessary conditions to strengthen and leverage existing credit and financial mechanisms, as well as designing and assisting the start-up and implementation of new mechanisms adapted to the specific conditions of production chains in the intervention territories. Credit institutions (e.g. Banco do Brasil, BNB, BASA) will be key project partners in developing financial options for ASF and NTFP mixes that are favorable to landscape conservation and disseminating them in the selected landscapes.

165. EMBRAPA will undertake between PY1 and PY2 a study that will include the preparation of six issue papers characterizing the credit and finance environment at each CT and including current barriers and opportunities. The study will be prepared in close collaboration with MDA, banks (BASA, BNDES, BNB, BB), MAPA, MDS, MMA, IBAMA, Land Reform and Colonization Institute (INCRA), Brazilian Foundation for Indigenous Peoples (FUNAI), ICMbio, SFB, local cooperatives and associations, municipalities, workers' unions and private companies. It will be validated through regional workshops and a seminar and will contain recommendations for changes in credit and financing and technologies. For instance, in the CT Sobral, recommendations will include results by the *Project for management of the Caatinga vegetation for livestock production*. The information collected will feed GoB institutions and financial services agencies with valuable data in order to upgrade and upscale the combined production of fodder, fuelwood and beekeeping, therefore enhancing vegetation cover in susceptible drought areas under sustainable forest management systems and AFS. Similar situations will occur in the other CTs, according to the territories´ realities and the project´s technical recommendations.

166. On the basis of the results of the study, the project will prepare information materials and training contents that will be incorporated into the capacity building program for technicians under Output 1.3,

who will thus be able to disseminate information on credits and financial mechanisms and improving information access to an expected 11,000 producers in the CTs throughout the project´s lifetime.

167. In PY2 the project will work with government institutions (MDA and MAPA) and banks (BNB, BNDES, BASA, Banco do Brasil and Caixa Economica Federal) to improve specific credit lines that will be adapted to NTFP production chains. Credit lines will be adapted to include sustainable management of NTFP and AFS. For example, Sustainable Forest Management in the semi-arid is currently oriented toward production of fuelwood. The new credit lines should include provisions for enhancing sustainable use of wild fruits like *umbu* through management practices to avoid fires, overgrazing, to promote controlled harvests, enhanced pollination and the conservation of biodiversity. Negotiations will be conducted with BNB, BNDES, BASA, Banco do Brasil e Caixa Economica Federal to include project recommendations on sustainable management and technical indexes in the credit lines. The project will produce a report targeting these institutions and containing the main results from the study carried out in PY1 as well as the results of previous EMBRAPA work on sustainable management of AFS and NTFP.

168. Between PY2 and PY5 the project will provide training to credit officers in issues such as NTFP and AFS production chains, sustainable production and environmental safeguards; and will support the dissemination of information on the new improved credit lines to cooperatives, associations and workers´ unions to raise awareness as well as the interest of the potential beneficiaries. The credit lines will be made available to associations and cooperatives in the six CTs.

2.3. Project Indicators, Risks and Assumptions

Project indicators

169. The project indicators are detailed in the Logical Framework – which is attached in Section II, Annex A of this Project Document.

Table 19 - Project Indicators

Intervention Logic	Objectively Verifiable Indicators	Targets (End of Project)	Comments
Project Objective: The biodiversity of Brazilian multiple-use forest landscapes of high conservation value is conserved through a strengthened sustainable use management framework for non-timber forest products (NTFP) and agro-forestry systems (AFS)	Surface area (ha) of forests in MUL of the Amazon, Cerrado and Caatinga biomes with sustainable production of BD products (*) through direct effect of the project	1,092,896 ha	(*) BD product is defined as any plant part extracted from the forest and from AFS. The surface area under direct effect of the project comprises CUs and surrounding areas (in 4 CTs), and productive landscapes where there are no CUs (in 2 CTs)
	Surface area (ha) of forests in MUL of the Amazon, Cerrado and Caatinga with sustainable production of BD products that will be achieved through indirect effects of the project	• 215,525 ha (areas under AFS in all CTs and Terra Grande Pracuuba Resex in Marajó) • 14,959,566 ha (remaining forest surface of the selected CTs. To be achieved in the long term)	
	Number of heat foci as a proxy for the use of fire as management technique	10% reduction in each CT	Reduction in heat foci indicates fewer areas deforested and will allow increasing the recovery of

Intervention Logic	Objectively Verifiable Indicators	Targets (End of Project)	Comments
			deforested areas; in both cases contributing to biodiversity conservation. Monitoring will be undertaken through satellite data provided by the National Institute for Space Research (INPE) http://queimadas.inpe.br which carries out operational monitoring of fire outbreaks and forest fires through remote sensing, and predicting the risk of fire and vegetation. The site "SIG Focos Geral" displays heat foci on a GIS with several options: periods, regions of interest, satellites, maps (e.g. deforestation, hydrography, roads, etc.) and may export data in several formats (.txt, html, shp kmz). The project will monitor heat foci in the intervention areas using this database. See more details in Annex 5 Biological Monitoring Plan.
	Conservation and production security of 5 key species enhanced through maintaining population growth rates stable or increasing measured through a population asymmetry index and size class distribution fit to the J reverse distribution model [Brazil nut, acai (Amazon), pequi, araticum (Cerrado) and umbu (Caatinga)]	Index > 0 (Inferred from population structure distribution models and the impact of anthropic variables)	The impact of sustainable management will be measured through population recruitment. If the impact is not significant the populations will continue recruiting with individuals changing size classes in the long term and maintaining a population structure similar to the non-exploited areas. A population´s stable condition (where recruitment is constant) indicates that the forest provides such conditions; therefore recruitment stability of a population works as a proxy to indicate that the forest is also in good environmental condition.
Outcome 1: Governance and capacity building framework for up-scaling best practices for BD sustainable management and production	Improved institutional capacities of EMBRAPA to effectively influence the planning, implementation, monitoring and mainstreaming of NTFP and AFS into production practices at the landscape level as measured by a % of increase in the capacity scorecard	20% increase	
	Number of NTFP species that have	At least one species per	This will be measured

Intervention Logic	Objectively Verifiable Indicators	Targets (End of Project)	Comments
	differentiated minimum prices (PGPMBio) in each biome	biome	through a sample of municipalities in each CT. Baseline will be estimated in PY1 since not all municipalities have the information organized. The sample will comprise those municipalities that have well-organized information.
	Percentage of target population that makes use of the technical management guidelines prepared by the project	Mid term: Technical guidelines for at least 5 species End of project: 10% of target population	
	Number of Citizenship Territories and/or CUs that adopt AFS for restoration of degraded lands as a strategy for planning and implementation of the Forest Code	At least 1 in each biome	The new Forest Code now allows the use of AFS to restore APPs (Permanent Protection Areas). APPs comprise the margins of rivers, which must be preserved. The size of APPs varies according to the width of the river.
	Number of producers that adopt sustainable production of NTFP and AFS through: a) Direct effect of the project b) Indirect effect of the project (replication)	a) 2,980 b) 5,425	
	Increased know-how of extensionists on NTFP and ASF as measured by the number that obtain at least 70% score in evaluations of project training on NTFP/AFS	At least 540 obtain over 70%	
Outcome 2: Market and financial frameworks for up-scaling for NTFP and AFS production in high-conservation value forest landscapes	Degree of improvement in production chains of 5 species for increased market value and access	• Brazil nut: sanitary quality of nut production • Açai: sanitary quality of pulp production • Umbu: quality of processed pulp • Pequi: oil production cost • Babaçu: productivity in nut extraction	
	Percentage of public purchases of BD products by key government programmes (PAA, PNAE and PGPMBio[19]) based on NTFP and AFS best practices	At least 20%	

[19] PAA: Food Acquisition Program. PNAE: National School Lunch Program. PGPMBio: General Policy on Minimum Prices for Socio-biodiversity Products

Intervention Logic	Objectively Verifiable Indicators	Targets (End of Project)	Comments
	Number of associations/cooperatives that maintain contracts for supply of products with the same buyer(s) (public and/or private) over a period	At least 5 associations/ cooperatives (1-2 per biome) for at least 3 years	This indicator will measure the change in the trend of supply of products before and at the end of the Project. By end of Project suppliers should have greater constancy of supply to a same buyer. Baseline will be estimated in PY1 by analyzing the supply records of selected associations/cooperatives for at least 5 years previous to Project inception.
	Increase in percentage of producers that access financing (e.g. credits, grants) for NTFP and AFS production and management subject to environmental criteria	20%	
	Percentage of increase in the share of BD products in family incomes	15% (average for different CTs and production systems)	

Risk analysis and risk management measures

Risk	Rating	Risk Mitigation Measure
Political risk: Governmental policies and programmes do not mainstream project results and lessons learned	Medium to Low	Different sectors of Federal and State governmental institutions will be involved as partners in project implementation, which will significantly contribute to mainstream project results and lessons learned to improve the public policies and designing new ones. The key Ministries (e.g. MMA, MDS, MDA and MAPA) in charge of public policies and programmes targeting biodiversity and agroextractivists will be members of the Project Board. These ministries will also be members of the Local Committees together with State governments and CSOs (see Part IV Management Arrangements for details on the roles of the Project Board and the Local Committees). The project will also establish platforms that will constitute a mechanism to convene and coordinate the public and private sector to promote sustainable production in each CT and to define the sustainability priorities and policies for NTFP and AFS; and reach agreement on these issues. Capacity building and awareness raising to policy and decision makers will facilitate mainstreaming of best practices, tools and instruments into the policies and programmes.
Political risk: Governmental priorities change drastically reducing the support for use of biodiversity products	Low	Federal legislation promoting the use of biodiversity and supporting traditional peoples and populations is being reinforced within the Brazilian Institutions and society. Traditional peoples and populations are well organized, participating in most policy decision-making levels and within their own organizations, unions, NGOs and with strong support from civil society. Furthermore, there are demands from different sectors and Federal and State institutions for better management and conservation of biodiversity and the improvement of governmental programs addressing this issue, especially regarding traditional peoples and communities and small farmers. The project will fill in information and knowledge gaps that will help in better understanding the value of biodiversity and will develop technology and mechanisms to increase sustainable flows of socio-economic benefits that will contribute to livelihoods, thus enhancing the level of awareness at different

Risk	Rating	Risk Mitigation Measure
		levels of society.
Institutional risk: The Ministries (MMA, MDS, MDA and MAPA) and public agencies (ICMBio and CONAB) involved in the project do not allocate sufficient budgets to implement their commitments under the project.	Medium	Governmental elections will be held in October 2014, which may affect the timely allocation of budgets in the short term, but the risk is lower in the medium term. The project will negotiate and advocate for timely planning and management of institutional budgets. The Ministries will participate in the Project Board, which will be a useful space for awareness raising on the importance of securing budgets on a timely basis, and with quality and quantity for each of the institutions responsible for enforcing the environmental and forestry laws. Moreover, constant contact with managerial staff of the ministries and related institutions will contribute to ensure a timely allocation of funds.
Institutional risk: Difficulties to coordinate project implementation within EMBRAPA due to different perceptions and priorities in different EMBRAPA units.	Medium	The missions, roles and historical work of each EMBRAPA unit in the project intervention areas and their fields of specialization have been taken into account in defining their participation in order to minimize possible conflicts. Other aspects that will help minimize this risk are the involvement of EMBRAPA Headquarters (which coordinates the different units) in the Project Board as a decision-making member; as well as the establishment of Local Committees. These will comprise the EMBRAPA units and local stakeholders and will serve to connect the project objective with local plans and priorities (both institutional and sectorial) and ongoing or planned interventions or investments by the local partners and/or beneficiaries.
Institutional risk: Lack of interest of small farmers and traditional peoples and communities to adopt sustainable management practices	Medium	Selection of the intervention areas has taken into account aspects such as the importance of biodiversity products in the economy of the rural population and presence of organizations (e.g. producer associations, cooperatives, NGOs) that work in NTFP management and AFS. A number of these organizations have been identified, which will be invited to participate in the Local Committees and the Platforms, hence involving them in planning and implementation of the project. The project will make use of participatory approaches to promote the engagement of small farmers and traditional peoples, especially in activities such as promoting local knowledge, identifying best practices, developing technologies and methods, field demonstrations, training, policy discussions and promotion of market access.
Institutional risk: Staff turnover due to changes in the managerial level of ministries and their related institutions	Low	Most governmental managers and officers are permanent employees and during the PPG phase a number of work meetings were conducted with them. In the event of significant changes of personnel in any GoB partner institution, the project will promote meetings and prepare information materials to inform and raise awareness on the value of the project for sustainable management and conservation of biodiversity and related public policies and programmes.
Environmental risk: Climate change does not affect BD in reserves, communal, private and rural settlement areas.	Low	In the medium and long run, vegetation cover will be an even more important asset for rural populations as a result of climate change. Areas with adequately conserved biodiversity will continue to be reliable sources for biodiversity goods and services as long as best practices for conservation and sustainable management are implemented. The project will develop and disseminate sustainable management practices and technologies that will reduce pressure on forests as well as increase connectivity and effectiveness of protected areas within the landscape, thus contributing to increase forest resilience in the long run. The project will also ensure that climate change issues are included in the design of awareness programs, planning tools and guidelines.
Financial risk: Lack of interest of credit and financial institutions on NTFP	High	The project will promote the involvement of credit and financial institutions (MDA, Banco do Brazil, BNB, BASA, Caixa Federal) through several approaches. One will be raising awareness on the value of biodiversity and the need for measures to secure its conservation and sustainable use. Another

Risk	Rating	Risk Mitigation Measure
and AFS production		approach will be undertaking financial assessments to demonstrate the feasibility of adjusting the existing credit instruments to mainstream environmental safeguards and sustainability criteria. The development of technological inputs will help increase investment returns thereby generating interest of the credit and financial institutions.
Market risk: Lack of interest of potential buyers in buying NTFP and AFS products from the Territories targeted by the project.	Low	The project will set up platforms that connect suppliers to buyers to enable economies of scale and predictability of income; identify and develop commercialization channels with private and public companies for BD products; and assess and develop new markets for new species and products. Within the framework of the platforms, the project will work with the public and private sector to improve the commercialization channels for products from 5 species (pequi, umbu, babacu, acai and Brazil nut). The project will work to increase the volume of public purchases of sustainable NTFP products by the PAA, PNAE and PGPMBio and securing contracts with private buyers. Initially, the volumes of natural products or products with low processing levels will aim at the public commercialization programs (PAA, PGPMBio and PNAE). All these policies and programmes are an excellent outlet for NTFP and AFS products and will be explored as incentives that will initiate change during the project´s lifetime. In the longer term it is expected that the higher added value products can be channelized into private markets and premium prices obtained following sustainable management practices.

2.4. Incremental reasoning and expected global, national and local benefits

Incremental reasoning

170. The project addresses some of the main barriers to overcoming the threats posed to globally significant biodiversity in the Amazon, Cerrado and Caatinga, namely: i) the governance framework to promote up-scaling of NTFP and AFS production that mainstream biodiversity conservation in high-conservation value forests is insufficient, and there are limited institutional and technical capacities for up-scaling best practices for sustainable production of biodiversity; and ii) market and financial barriers hinder opportunities for up-scaling NTFP and AFS production in high-conservation value forest landscapes.

171. Under the "business-as-usual" (BAU) scenario the threats to biodiversity in the areas of high value conservation forests, within and outside conservation units, will continue to negatively impact on biodiversity. The Citizenship Territories will continue to loose important biodiversity areas to other land uses and economic activities carried out without due observance of principles for sustainable use and conservation of biodiversity. Driven by favorable national and international markets for cash crops and beef, deforestation will continue despite the existing Forest Code regulations, threatening forest remnants in private properties, small farmer settlements and traditional communities. Without alternatives, family farmers and traditional communities will continue to use low profit, unsustainable land use practices that underestimate the value of forest remnants and rural properties. The consequence will be the maintenance of poverty levels and increased purchase of family farms by large producers mostly dedicated to production of cash crops and cattle with evident negative impacts on biodiversity and livelihoods. Moreover, this scenario will contribute to the disaggregation of social organizations that currently advocate for sustainable land use.

172. Without GEF support, the potential role of the current public policies promoting the commercialization of biodiversity and family farmers´ products will continue to have a limited impact. Sustainable production relies on appropriate technology and adequate financing and credit opportunities.

In the absence of GEF support, technologies and methods for sustainable production will continue to be limited as will access to financial and credit instruments thereby limiting upscaling of sustainable biodiversity and AFS production. Limited capacities to implement sustainable management of biodiversity and AFS will continue to limit the expansion of these activities to larger areas. These shorfalls will reduce the possibilities of increasing the supply of sustainable biodiversity products and hence the opportunity to use public purchases and private companies as outlets of production.

173. Without the GEF, the knowledge gaps on production, which includes product quality, reliability of production and diversity, will continue to limit access to markets. An unreliable production does not allow to secure contracts and commitments with private companies, and consequently producers must rely on middlemen to commercialize the production, which usually means lower prices than could be achieved by trading products directly with the buyers. The low volumes of low quality products will continue to be informally commercialized in local, unstructured markets, therefore the low level of attraction and commitment of both suppliers and buyers to sustainable production will persist. Producers will not access and take advantage of the opportunities for improving quality, diversifying production and making production more reliable. Family farmers and traditional communities will continue to lack the capacities to overcome these barriers and therefore will continue to lack interest in accessing credits. Under the BAU scenario financial institutions will not be interested in developing suitable credit and financing mechanisms for NTFP and AFS hence indirectly contributing to maintain these activities as marginal and not recognizing their importance for biodiversity conservation.

174. Under the GEF Alternative, the project will conserve biodiversity in three key forest landscapes - Amazon, Caatinga and Cerrado – all of them renowned for their outstanding global biodiversity significance but currently under threat from increasing land use pressures across production landscapes. It will address one of the key land use threats to these forests, which is the forest degradation driven by small-scale farmers that employ traditional subsistence farming and extraction practices in and around forested areas throughout the landscape, including land clearing, poor fire and water management and insufficient soil coverage. This is causing increased encroachment on forest habitats both in conservation units and in locations strategic for connectivity across the landscape with the result of gradual loss of the global environmental values in these areas.

175. The project will seek to facilitate a shift from these unsustainable agricultural practices to an approach that conserves the biodiversity of multiple-use forest landscapes of high conservation value while meeting important social priorities and development goals. To achieve this, the project will take a dual approach. Firstly, it will focus on the development of a strengthened sustainable use management framework for NTFP and AFS and establishing an enabling environment for upscaling to attain significant impacts at the landscape level (Outcome 1). The project will work to develop safeguards for harvesting, production and incentives that optimize the contribution of existing policies to the conservation of globally significant biodiversity. This will include setting harvesting limits to prevent the intensification of wild resource use beyond sustainability thresholds; developing capacities for extension, technical assistance and production; improved monitoring to prevent the farming of wild resources at the expense of other components of the ecosystem; increasing the understanding of the value of NTFP production and its contribution to economy and livelihoods; and strengthening the decision-making system for differential pricing and incentives for NTFP and AFS production across the landscape.

176. Secondly, the project will promote market access for sustainable NTFP and AFS products (Outcome 2), seeking to improve returns from NTFP and AFS and providing the incentive for adoption at scale thereby increasing conservation dividends. This includes: improving information on production levels in order to access different markets, and hence increase the stability of returns; improving quality thus increasing returns; developing commercialization channels; and improving access to financing for production at scale. The aim is to increase the returns to producers from sustainable utilization of wild resources in situ, so creating a utilitarian incentive to maintain natural habitat rather than convert land to

contra-conservation land uses. Equally, increasing cost efficiencies will ensure that the landholder retains a greater part of the margin and increase the relative price of wild harvests against unsustainable land uses. The knowledge generated will support the ongoing MMA, MDS and MDA programs aimed at the development of productive chains to increase production volume, improve quality of products and reduce costs as well as the MAPA´s PPGMBio policy for minimum prices. Similarly, the Conservation units and their buffer zones will benefit, as ICMBio will be able use the information to promote sustainable management of the protected areas.

177. In this manner, the project will remove current risks and uncertainties, leading to the upscaling of sustainable NTFP and AFS production while at the same time enhancing the rights and roles of communities in the sustainable management of BD and improving their livelihoods. Within this context, the Baseline Scenario identifies public and private initiatives operating in the three selected biomes that are relevant to the project's outcomes over the proposed 5-year life of the project (project boundary). The GEF Alternative consists of the Baseline in addition to the costs associated with the necessary incremental activities to achieve the project objective. The Incremental Cost is the difference between the costs of the GEF Alternative and the Baseline Scenario. The total cost of the project, including GEF funds and co-funding, amounts to US$33,254,545: GEF financing comprises 16% of the total or US$5,454,545. Co-financing constitutes 84% or US$27,800,000.

Expected global environmental benefits

178. Global environmental benefits to be delivered by the project include: (i) 1,092,896 ha of high value conservation forests in six CTs of the Amazon, Cerrado and Caatinga under direct sustainable management of NTFP and AFS; and (ii) 215,525 ha of high value conservation forests in six CTs of the three biomes under sustainable management of NTFP and AFS that can be potentially achieved through indirect effect of the project (replication).

179. By promoting the sustainable use of NTFPs standing forests will be more valued than deforested and degraded areas. The dissemination of AFS will also contribute to achieve a matrix of land uses that are more permeable for biodiversity and less harmful to ecosystem services than monocultures. Together, AFS and NTFP will increase connectivity between forest fragments, including conservation units, thus promoting ecosystem integrity and biodiversity conservation in order to achieve global environmental benefits. Moreover, increased protection of conservation units will come as the harvest of NTFPs will follow sustainable management principles, which will also promote long-term persistence of populations managed by agroextractivists, while AFS will promote more environment-friendly practices. Other benefits include an increased resilience at the landscape level, due to increased connectivity with conservation units and gene flow between populations; increasead maintenance of ecosystem services due to a more forested matrix; and reductions in the threats to conservation units originating from the landscapes that surround them, as these become increasingly BD-friendly. Collectively these will have positive impacts on a wide range of globally significant species (see Table 18 and Context section).

180. Further benefits to be accrued include optimization of existing public policies, institutional and stakeholder capacity building as well as the increased engagement of extension and technology development institutions in BD conservation beyond the project´s lifetime. In addition, the upscaling of best practices in strategic locations will enable the continuation of traditional practices by improving management; highlighting the importance of genetic resources for the economy; and disseminating new products and uses to facilitate BD conservation within protected areas and in areas where most biodiversity loss is occurring at a fast pace. In the long term, project results and lessons learned may be replicated throughout the remaining forest areas of the six selected CTs, which stretch across 14,959,566 ha.

181. The project will foster a paradigm shift from the current unsustainable practices to sustainable management as per the table below:

Table 20 - Current practices, alternatives to be pursued by project and environmental benefits to be achieved.

Current Practice	Alternative to be put in place by the project	Environmental benefits	
		Domestic benefits	**Global benefits**
Current NTFP harvesting does no observe harvesting limits and sustainable management practices	• Harvesting limits and best management practices for NTFP species • Training for sustainable management • Improved public policies and regulations with environmental safeguards	• Increase in area covered by sustainable NTFP and AFS management. • Maintenance of local services provided by forests (food, nutrient cycling, soil formation, water cycle, etc.) • Reduction of wildfires and logging in harvesting areas (productive landscape and conservation units) • Landscape and aesthetic beauty • Improved access to markets • Improved livelihoods for small farmers and traditional communities	• Multiple use of forested landscapes increase connectivity and permeability for biodiversity. • Reduction of pressure on native high value conservation forests. • Conservation of globally important and endangered species (e.g. jaguar (Panthera onca), puma (Puma concolor), Golden-bellied capuchin (Sapajus xanthosternos), Lear's macaw (Anodorhynchus leari), Red-handed howler monkey (Alouatta belzebul ululate), Grey-breasted parakeet (Pyrrhura griseipectus), West Indian manatee (Trichechus manatus) • Conservation of species with social, cultural and economic values (e.g. Brazil nut (Bertholletia excelsa), açaí (Euterpe oleracea), andiroba (Carapa guianensis), pequi (Caryocar brasiliense), araticum (Annona crassiflora), veludo (Tachigali subvelutina), maracujá do mato (Passiflora setacea e Passiflora cinccinata), coquinho azedo (Butia capitata), babaçu (Orbygnia phalerata), umbu (Spondias tuberosa), licuri (Syagrus coronata)
Land use change oriented to monocultures foster landscape degradation making it impermeable for Biodiversity	• Best practices for sustainable management of NTPF harvesting areas and AFS production in multiple use landscapes • Commercialization channels, platforms to connect suppliers and buyers, and financial instruments to increase market access for biodiversity products, incomes and value of forests		
Lack of environmental safeguards does not guarantee sustainability of NTFP and AFS production	• Environmental safeguards and technical guidelines • Training of extension services and agro-extractivists • Awareness raising of decision makers		
Current technologies do not promote sustainable use of biodiversity leading to land conversion and degradation	• Suite of technologies, methods and processes for family farmers and traditional peoples and communities • Mapping and quantifying of NTFP to increase reliability, quality and diversity of supply of NTFP and AFS products		

Country Ownership: Country Eligibility and Country Drivenness

182. Brazil ratified the Convention on Biological Diversity (CBD) in 1994. The project will focus on supporting the sustainable management of biodiversity in Brazil, in conformity with the Federal Constitution of 1988. The project is in line with the National Biodiversity Strategy and Action Plan (NBSAP) and with the CBD National Targets for 2020, in particular those directed towards sustainable use (1), local development and poverty reduction (2), pressures on biodiversity (3 and 4), habitat loss (5), sustainable agriculture (7), terrestrial areas conservation (11), minimization of genetic variability loss (13), environmental services provision (14), traditional knowledge and practices (18), and improvement of technology basis (19).

183. The project will support the achievement of the 2012-2015 UNDAF Axis 2 - Green Economy and Decent Work in the Context of Sustainable Development and Poverty Eradication, and particularly its outcomes i) *National policies to promote the green economy (with expansion and improvement of formal employment and new businesses, new technology development and qualification of productive actors) expanded and strengthened*; and ii) *New research methodologies and ownership of the impact of culture in the creative economy, addressing modes of life, habits, traditional knowledge related to nature, as well as the relationship between creativity and innovation, all necessary for the development of a green economy*.

184. The project will contribute to the improvement of several national priority plans and programs promoting the sustainable use of BD products, namely the *Policy of Guaranteed Minimum Prices* (PGPMBIO), the *National Policy for Organic and Agroecological Production* (PNAPO), the *National Policy for Technical Assistance and Rural Extension* (PNATER), the *National School Food Program* (PNAE), the *Food Acquisition Program* (PAA), and the *National Program for Strengthening Family Agriculture* (PRONAF). The project will support PGPMBio, PAA and PNAE by providing information on estimates of real production costs, seasonal variation in production, real production capacity, by establishing sustainable management criteria, improving the quality of products, adding value to the products, and building stakeholder capacities taking into account regional specificities. The PNAPO and PNATER will benefit from the identification and removal of financing and credit barriers, improvement of the quality of products, added value, and stakeholder capacity building, including the availability of adequate training materials aligned with the reality of rural populations. The PRONAF will benefit from economic studies aimed a generating information on the contribution of AFS and NTFP to family production and livelihood, from the availability of technological solutions aimed at improving the quality and quantity of production, and added value to NTFP and AFS production.

185. The project will also contribute to the *National Programs for Conservation and Sustainable Use of the Biomes (Cerrado, Caatinga and Amazon)* and the *Action Plans for the Prevention and Control of Deforestation and Burning of the Legal Amazon, the Cerrado and Caatinga Biomes* (the latter under preparation) which aim at conservation and sustainable use of those biomes, and the *National Policy for Sustainable Development of Traditional Peoples and Communities*. Likewise, by reducing pressures on protected areas, the project will help to strengthen the *National System of Nature Conservation Units*. The availability of a set of technologies and products, capacity development material on AFS and NTFP production based on sustainable management principles targeting family farmers and traditional communities will significantly contribute to sustainable production and biodiversity conservation within, and outside, the sustainable use conservation units.

Sustainability

186. The project has been designed to remove the identified barriers that currently hamper the adoption of sustainable management of NTFP and AFS in order to create an enabling environment for sustainable use and conservation of biodiversity and ecosystem services in areas of high biodiversity importance in the

Cerrado, Caatinga and Amazon biomes. To achieve this, a set of technologies, knowledge and capacities will be developed and mainstreamed in the existing public policies or in the development of new ones, thereby ensuring that biodiversity is sustainably used and works as a driver for conservation instead of a driver for its loss. Project design takes into account the social, environmental, institutional and financial sustainability of results.

187. Social sustainability: The project will build the capacities of rural extension technicians and community and farmer leaders working in the frontline of biodiversity use. These stakeholders have close ties with the ultimate resources managers (e.g. agro-extractivists) and therefore will have a prominent role in raising awareness, training disseminating and upscaling successful initiatives. By adding value to biodiversity products through the development and adoption of technologies, improving capacity for production and business management, and creating commercialization channels, the project will contribute to social and economic sustainability. The increased capacities of stakeholders and their organizations will help to influence and pressure public agencies for improvement of public policies. Increased social and economic capacities of stakeholders and better public policies will contribute to improve livelihoods and thereby the social sustainability of the project´s results.

188. Environmental sustainability: By strengthening and updating the existing policy and regulatory framework, the project will generate a much more cohesive and well-funded governance framework better prepared to efficiently and effectively conserve globally significant biodiversity. The policy and regulatory framework based on sound socio-environmental information and knowledge will help improve the biodiversity conservation efforts while taking into account family farmers and traditional people´s needs and livelihoods. The development and adoption of sustainable management practices and technologies, credit and market mechanisms and capacity development within the territories of intervention and their dissemination to other territories will contribute to conservation and sustainable use in areas of high importance for biodiversity, removing the current environmentally-unfriendly uses that predominate in these areas. The outcome will be the the valorization of intact and lowly disturbed areas as an alternative to their transformation for monocultures, thereby ensuring multiple uses for the landscape with positive effects for biodiversity conservation and long-lasting environmental benefits.

189. Institutional sustainability: The project will build upon the existing policy and regulatory frameworks, filling in gaps and resolving overlaps and inconsistencies that currently represent constraints to proper implementation of these policies in order to effectively and successfully promote the sustainable use of biodiversity. Incorporation of environmentally oriented knowledge generated by the project, in the policy and regulatory frameworks will warrant institutional sustainability. A set of proper policies and regulations will be a powerful mechanism to change the current scenario and guarantee sustainability beyond the project´s lifetime and the project´s areas of intervention. Together, the set of technologies to add value to biodiversity products, availability of financing and credit instruments for sustainable production, capacities developed to deal with management of NTFP and AFS, and the set of improved public policies and regulations will ensure the sustainability of project results beyond the project´s lifetime and areas of intervention reaching larger portions of the Amazon, Cerrado and Caatinga biomes.

190. Financial sustainability: the project will develop valuation studies to help understand the role of NTFP and AFS in livelihoods and economic activities. This information will help to develop and improve the policy and regulatory framework (e.g. the PAA, PGPMBio and PNAE) aiming at the economically feasible use of biodiversity. Within the framework of the production chains the project will forge partnerships with the public purchasing programs, private sector and financial institutions to improve market access. Partnerships with the private sector and the public purchasing programs will enable the establishment of commercialization channels for biodiversity products based on sustainable management practices, thus securing markets and consequently incomes for producers. The project will work with financial institutions to improve credit lines aimed at sustainable production and enable producers to access such funding, hence securing financing for production, processing and value adding.

Replicability

191. To support replication, the project strategy includes efforts to address the identified barriers at the systemic level (policies, financing, institutions, capacities) that hinder management of NTFPs and AFS from realizing their full potential as contributors to biodiversity conservation. By strengthening this enabling environment the project will lay the ground for upscaling of project results.

192. The project intervention areas were selected based on biodiversity importance, social organization, size of production by family farmers, scales of NTFP production and commercialization, presence of GoB initiatives in sustainable use and conservation of biodiversity as well as presence of Embrapa. This will help in generating different experiences that can be replicated to similar scenarios in other areas of the target biomes as well as identifying lessons learned for each one of them, hence increasing the potential for replication of the project first within the CTs, the biomes, and then to other areas of the country with high biodiversity.

193. The project will strengthen and update the policy and regulatory frameworks for sustainable use and conservation of biodiversity, thus providing the adequate conditions for replication at all levels: national, regional and local. Successful experiences can have a nationwide reach as the public policies can create the conditions for the replication of NTFP sustainable management and SAFs in other areas of high importance for biodiversity conservation. The strengthened institutional capacities of public agencies, NGOs and community-based organizations will create conditions for uptaking of best practices, dissemination of funding opportunities and commercialization channels at regional and local level.

194. Mainstreaming of best practices and lessons learned into the technical assistance programs of the key public and private stakeholders that work in the landscape will ensure up-scaling and replication throughout the territory reaching a greater number of producers and their organizations (ie. cooperatives). The socially inclusive model of forest and landscape conservation and sustainable production to improve the livelihoods of small farmers to be developed by the project will be replicable to the numerous small farmer settlements throughout the three biomes, with special attention to the agro-extractivist settlements. This will be possible because the six selected CTs will continue being reference areas to develop the capacities of stakeholders from other territories. The project will leave well-structured social and productive organizations, infrastructure, commercialization channels (private and public), a set of best practices and technologies for sustainable use and conservation of biodiversity, and lessons learned, thereby facilitating replication to other areas within the same biomes and eventually other biomes

195. Collaboration and sharing of experiences with government institutions, as well as engaging the private sector and NGOs will facilitate widespread dissemination of project results. The training and outreach strategy to be implemented by the project will facilitate replication. Actions such as field days, an experience widely used by EMBRAPA, will maximize the exposure of agroextractivists to the most successful and innovative aspects of the project. Actions such as technical exchanges, technical visits and seminars, both locally and regionally, will also facilitate the expansion of project benefits. Systematization of experiences and lessons learned will serve as guidance for replication, and will be disseminated through booklets, video, documentaries, homepage, and radio and TV programs.

Cost-Effectiveness

196. The choice of project approach is based on the opportunity to work on the productive landscape with a mosaic of multiple uses of the natural resources. Within the productive landscape, different use components take part, including private permanent preserved areas, legal reserves, production areas, conservation units, traditional and indigenous communities' lands. Considering most of the forested areas are not under protected areas, it is of paramount importance to ensure the sustainable management of biodiversity and ecosystem services in the landscape. This can be achieved by promoting more friendly

uses and connectivity among landscape units through promoting NFTP and AFS. Most collectors are also farmers, as NTFP production is markedly seasonal. Besides food crops, part of the mix of activities practiced by these "agroextractivists" could also be expanded to include AFS. From the viewpoint of biodiversity conservation, there is ample scientific evidence indicating that AFS has a potential contribution to offer alternative and more environmentally friendly forms of land use, especially with regard to wildlife. As part of a mosaic of landscape use, AFS can offer refuge or serve as stepping-stones for wildlife to move between forest fragments or corridors, especially in landscapes where more intensive types of agriculture, such as monocultures or pastures, are the norm. Beyond strictly technical definitions, AFS offers the possibility of providing a conceptual framework in which to examine the possibilities of fulfilling both productive and ecological functions in different social and environmental contexts, as part of a broader program of dynamic and sustainable natural resource management. This is achieved both through the integration of trees on farms, in reference to the commonly used definition for agroforestry, but also, and foremost, in situations and arrangements where agricultural production occurs sequentially and/or adjacent to forested landscapes.

197. The large size of the country and the nature of the project require a lead national institution with institutional presence throughout the intervention areas and in other areas to ensure the desired upscaling of experiences and lessons learned. EMBRAPA is therefore considered as the most suitable institution in the country to produce, adapt and transfer knowledge on sustainable management in forested productive landscape with the participation of local communities. It has produced more than 9,000 technologies for the Brazilian rural landscape and reduced production costs while conserving natural resources and the environment. The agency´s headquarters are located in Brasília, and are responsible for planning, supervising, coordinating and monitoring activities related to the implementation of agricultural research and the formulation of agricultural policies. It covers the whole national territory and has 47 decentralized units distributed throughout the country. Thirteen EMBRAPA units will be involved in project implementation involving a wide scope of installed capacities. These units are based near the intervention territories where they are already developing actions or are thematic units with cross-cutting responsibilites. These units comprise infrastructure, are fully equipped, and have well prepared technical staff, with capacity and experience in the subjects covered by the project, especially agroforestry, NTFP management, product development and capacity development.

198. In this context, the proposed project aims to address the primary goal of securing the long-term viability of ecosystems and globally significant biodiversity in the Amazon, Cerrado and Caatinga.To achieve these objectives, the project identified two main types of interventions. One is the strengthening of the governance and capacity building framework for up-scaling best practices for BD sustainable management and production; and the other is developing the market and financial frameworks for up-scaling NTFP and AFS production in high-conservation value forest landscapes.

199. Cost-effectiveness is reflected in this design as the two interventions are collectively attending barriers to addressing primary drivers of deforestation and degradation of high value conservation forests within the three selected biomes in a least-cost approach. The project will build upon the existing baseline activities and national, regional and local capacities, as well as available infrastructure to resolve issues undermining the conservation and sustainable use of biodiversity, as expressed in the GoB´s development priorities and objectives. The interventions are also designed to capitalize on existing efforts and capacities, and adding value by enlarging and catalyzing efforts already underway.

200. In order to promote the sustainable production of NTFP and AFS the following strategies and methodologies have been selected for project implementation: i) Fostering a production chain approach that links production to markets will allow obtaining better prices and improve family incomes, hence reducing pressures over areas of high value for biodiversity; ii) Capacity development will improve inter-institutional and intersectoral coordination between key institutions (MMA, MDS, MDA, MAPA-CONAB), which in turn will avoid duplication of efforts and reduce project implementation costs; iii)

Within the framework of the Citizenship Territories, decision-making mechanisms and project activities will be aligned with regional and local development priorities, and other ongoing initiatives. Stakeholder participation is key for these purposes; iv) Best practices and technologies developed will serve to raise awareness on the best multiple uses of areas of high value for biodiversity in the three biomes; v) Training and awareness-raising of individual producers, communities and their organizations will be supported to achieve a shift in attitude that favors the sustainable management of multiple use forest areas and implementation of appropriate technologies; vi) Promotion of credit lines to stimulate the adoption of sustainable production and management practices that also conserve forest areas, and will support the long-term financing of activities initiated by the Project; vii) Systematization of experiences and lessons learned will contribute to a cost-effective replication of project results throughout the selected CTs, biomes and in the long term other areas of the country.

2.5. Linkages with other GEF and non-GEF interventions

Name of Project	Objective, intervention area	Coordination
PAA and PGPMBio programmes	PGPMBio ensures a minimum price for BD products, previously established by the GoB. The PAA purchases the products of family farmers, stores and freely distributes them where social vulnerability is higher. Both policies are important outlets for NTFP and AFS production. They cover the whole Brazilian territory.	Coordination began during the PPG phase to select the priority areas, species and results demanded by CONAB, which is the institution charged with implementation of the PAA and PGPMBio. By working with CONAB´s PPA team, the GEF project will be able to drive the acquisition of BD products from selected territories. Information and training materials may be used by CONAB to disseminate sustainable management practices to other areas and to promote the strengthening of agro-extractive organizations. The Project will provide data on BD species production and production costs to contribute to improve PGPMBio minimum prices and to promote the inclusion of new products. A workshop will be held in year 1 with PPA and PGPMBio to formulate a common working agenda. An annual meeting will be held to assess progress and impact, and make adjustments where necessary.
MDA - National Program for Strengthening Family Agriculture (PRONAF)	Promotes family agriculture at national level, including agroextractivism and AFS production, with funding and technical assistance to multiple productive activities and capacity development.	Coordination began during the PPG to select the priority areas, species and results demanded by MDA to implement the PRONAF. The GEF project will provide the necessary data to improve PRONAF´s actions aimed at promoting BD production. Technologies can add value to NTFP and AFS production increasing the feasibility of PRONAF. Technical indexes and safeguards can also be adopted by PRONAF. The MDA will have a seat in the Project Board facilitating easier the adaptation of project activities to PRONAF needs. A common agenda will be formulated in project year 1 and will be assessed on a yearly basis.
National School Food Program (PNAE)	Implemented by municipalities, it aims at partially meeting the nutritional needs of school students through providing at least one meal a day in all public schools	The GEF project will negotiate with municipalities to promote the purchase of BD food products in the targeted Territories. The project will raise awareness of municipalities

Name of Project	Objective, intervention area	Coordination
	registered in the school census. PNAE acts as an outlet for NTFP and AFS production. It has a national scope.	and schools on the advantages of BD food products for human health, biodiversity conservation and local economy. A common agenda will be formulated with municipalities of the intervention areas through individual negotiations to be undertaken with each one; and results will be evaluated every year and experiences exchanged within and between territories.
Bolsa Verde Program (Green Grants)	*Bolsa Verde* provides cash transfers to families in extreme poverty living in priority areas for conservation in the national territory. This program seeks to link the increase in income to ecosystem conservation and sustainable use of natural resources in extractive reserves (Resex), national forests, federal Sustainable Development Reserves (RDS) and Environmentally Differentiated Settlements of the Agrarian Reform.	Coordination began during the PPG to select the priority areas, species and results demanded by MMA and MDA to implement the program. The GEF project will provide the information and data to improve the Bolsa Verde actions aimed at BD production to promote social inclusion of the beneficiary families. Moreover, the project, MMA and MDS will work together to improve the qualification and training of technical staff to disseminate sustainable management practices to *Bolsa Verde* beneficiaries. Yearly meetings will be held to review progress.
Ecofort Program	Aims to promote food production at national level by investing in networks, cooperatives and production groups that work with agroecological and organic production, and NTFP harvesting.	The GEF project will work together with MDA, MAPA, MMA, MDS and Fundação Banco do Brasil to improve the qualification and training of technical staff to disseminate sustainable management practices for Ecofort beneficiaries. Annual meetings will be held to review progress.
UNDP/GEF *Small Grants Programme*	Implemented by ISPN with the primary objective is to ensure conservation of the Cerrado and Caatinga biomes of Brazil through community initiatives on sustainable resource use, and actions that maintain or enhance carbon stocks and increase areas under sustainable land management.	The project will build on the experience of the GEF *Small Grants Program* (GEF SGP) to identify practices and stakeholders. GEF SGP grants can be driven to the areas targeted by this project as a mechanism to promote the production using proper management practices. Project results can then be used to provide feedback for the selection of grant awarding to harvesters and contribute to monitor results. EMBRAPA and ISPN already have a collaborative initiative to produce and disseminate to agroextractivists booklets on best management practices on NTFP harvesting, which are already available for 8 species. Common capacity development activities (subjects, beneficiaries, and areas) will be implemented jointly to ensure cost-effectiveness. A joint work plan will be formulated in project year 1. Annual meetings will be held to review progress and make adjustments, if needed.
FAO/GEF Project "Reversing Desertification Process in Susceptible Areas of Brazil: Agroforestry	The project´s main objective is to arrest and reverse environmental degradation in areas susceptible to desertification in the Caatinga and Cerrado Biomes, secure the flow of ecosystem services, and promote integrated natural resources management, contributing to poverty	The project will work with the MMA team in charge of project #5324 to jointly develop a work plan for those outputs that can be jointly implemented to ensure synergies and catalyze results. The development, replication and dissemination of best practices, technologies, processes and methods for the Caatinga and

Name of Project	Objective, intervention area	Coordination
Practices and Biodiversity Conservation" (ID #5324)	reduction and generating environmental benefits. Intervention areas are in the Caatinga and Cerrado biomes.	Cerrado can be jointly implemented. A common work plan will be formulated in project year 1. Impact of this initiative will be evaluated through annual meetings, and if necessary adjustments will be made.
IADB/GEF Project "Consolidation of National System of Conservation Units (SNUC) and Enhanced Flora and Fauna Protection – GEF TER" (ID #4859)	This project seeks to improve the effective conservation of globally significant ecosystems and endangered flora and fauna species, as well as restore degraded landscapes and enhance carbon stocks in priority areas of the Caatinga, Pampa and Pantanal biomes, through expanding and consolidating the National System of Protected Areas (SNUC) and promoting sustainable management of adjacent forest and non-forest lands.	The project will coordinate and work with ICMBio and MMA to develop and disseminate best practices for sustainable management of forest areas in the Caatinga. MMA and ICMBio will benefit from mainstreaming of project results in public policies related with best practices for the production of biodiversity products, biodiversity conservation strategies and mechanisms within and outside of protected areas. A common work plan will be prepared in project year 1. The impact of this initiative evaluated through annual meetings, and if necessary adjustments will be made.

PART III: MANAGEMENT ARRANGEMENTS

201. The project will be implemented over a five-year period. The Government of Brazil has requested UNDP's assistance for the design and implementation of this Project based on UNDP's comparative advantages, which include vast experience in supporting the Government in project implementation in Brazil, but also considering its role as the Global Environmental Facility (GEF) Implementing Agency (IA).

202. As the GEF IA, UNDP is ultimately accountable and responsible for the delivery of results. In its GEF IA oversight role UNDP shall provide project cycle management (PCM) services defined by the GEF Council including the following:

- Providing financial and audit services to the project
- Overseeing financial expenditures against project budgets,
- Ensuring that activities including procurement and financial services are carried out in strict compliance with UNDP/GEF procedures,
- Ensuring that the reporting to GEF is undertaken in line with the GEF requirements and procedures,
- Facilitate project learning, exchange and outreach within the GEF family,
- Contract the project mid-term and final evaluations and trigger additional reviews and/or evaluations as necessary and in consultation with the project counterparts.

Implementation Modality

203. The project will be implemented under UNDP's Direct Execution modality (DEX). In line with UNDP Internal Control Framework (ICF) there will be a clear division between UNDP oversight function as GEF IA and its role as executing agency. The management arrangements, described below and summarized in Figure 1, constitute the Project Board; Project Management Unit, an Advisory Committee and local committees one in each of the project 6 pilot Citizen Territories. EMBRAPA will be UNDP's lead government partner and will have responsibility in technical oversight and management through its role in the Project Board; in the Project Management Unit; in the chairing of the Advisory Committee; in

coordination of Local committees and in designating a wide range of staff for the delivery of different project activities.

Project Board (PB)

204. The Project Board (PB) will provide the overall managerial guidance for project execution. It will: (i) Analyze and discuss the development of the Project activities and recommend changes as required based on project monitoring and evaluation processes and products and in line with GEF and UNDP policies; (ii) Discuss and approve the Annual Work Plan ensuring that required resources are committed; (iii) Discuss and approve the Progress Reports and Final Report of the Project; (iv) Analyze Project achievements and assure these used for performance improvement, accountability and learning; and (v) Settle controversies arbitrating on any conflicts within the project or negotiating a solution to any problems with external bodies. In order to ensure UNDP's ultimate accountability for the project results, PB decisions will be made in accordance to standards that shall ensure management for development results, fairness and integrity.

205. The PB will be composed by the UNDP, the Brazilian Agency for Cooperation (ABC) and EMBRAPA and their respective alternate members. The Board can be expanded upon mutual agreement between the Parties. UNDP as the Executive will represent the project ownership, chairing the PB and organizing its meetings at least once a year or upon request of either of the Parties. The ABC as the Senior Beneficiary will represent the interests of those who will ultimately benefit from the project; and the EMBRAPA as the Senior Supplier will represent the parties that will provide funding for cost-sharing and will lead the technical expertise and guidance to the project. For this EMBRAPA will appoint a National Project Technical Director (NPTD) who will be a senior staff member and will be responsible at the highest level for providing guidance on technical feasibility of the project ensuring its implementation leads to the achievement of project's results. He/she will represent EMBRAPA on the PB and represent the Project at annual tripartite meetings; will chair the Project Advisory Committee (PAC); will keep EMBRAPA updated on Project advances and challenges as needed and will represent the Project at high-level national and international meetings. This is a part-time position continuing for the duration of the Project, and within the context of the project will report directly to the PAC.

206. The Project Board's role in project management will be complemented by inputs and recommendations from a Project Advisory Committee (PAC) - see below. In addition the PB it will approve the appointment and responsibilities of a Project Manager who will be responsible for the daily project execution. UNDP also will provide Project Assurance support to the Project Board Executive by carrying out objective and independent project oversight and monitoring functions related to UNDP project cycle management services as GEF IA. UNDP will appoint a representative for the Project Board; another for Project Assurance support and another for the approval of transactions. In addition the Project Manager and Project Assurance role will not be the same person.

Project Management Unit (PMU)

207. A Project Management Unit (PMU) will be responsible for overseeing the day-to-day execution of Project activities. The PMU will have responsibility for, among others: (i) operational planning, managing and executing the project including the direct supervision of project activities sub-contracted to specialists and other institutions, as well as those that are to be implemented through the EMBRAPA, if applicable; (ii) coordinating the management of financial resources and procurement; (iii) reporting on the application of resources and results achieved; (iv) preparing management reports for the EMBRAPA, PAC, the GEF, and UNDP including annual reports (PIR) and any proposals for the adaptive management of the Project if required and based on inputs from the Project M&E plan; (v) promoting inter-institutional linkages; and (vi) disseminating project results.

208. The PMU will consist of a full-time Project Manager, one Technical and Monitoring Consultant and one Administrative Assistant hired with GEF resources and a Project National Technical Coordinator (PNTC) assigned by the Project National Technical Director. The PNTC will be an EMBRAPA staff member and will collaborate with the PMU in project implementation channeling EMBRAPA's technical inputs and guidance into the planning and execution of project activities. The PTNC will hold internal meetings in EMBRAPA as needed to integrate EMBRAPA specialist`s guidance from the following areas: Technology (NTFP and AFS), Public Policies, Socio-Economy and Training. This is a part-time position continuing for the duration of the Project, reporting directly to the PTND.

209. The PMU will be led by the Project Manager and will be responsible for the overall management and implementation of the project's activities and requesting disbursement of Projects resources for their execution. Upon request of the GoB (see Annex 9) implementation will be through the DEX modality with UNDP providing direct project services such as procurement and hiring of consultants following best value for money, transparency and effective competition. These will follow current UNDP policies and procedures including those for cost recovery (see para 244). Under the PM's lead and guidance the PMU team will prepare Annual Operational Plans (AOP) for the effective and efficient implementation of the project activities to achieve stated objectives; will be responsible for all substantive reports from the Project; will prepare and/or oversee the development of Terms of Reference for consultants, subcontractors and partnerships hired for specific technical assignments and their close monitoring, ensure consistency between the various project elements and activities provided or funded by other donors; and develop reports on project progress on the project for PAC and technical meetings, and other appropriate forums. This is a full-time position continuing for the duration of the Project, reporting directly to the Executive of the PB.

Project Advisory Committee (PAC)

210. EMBRAPA through its NPRD in the PB; and the NNTC in the PMU will lead technical responsibilities during the executing of the project and ensure alignment with relevant national policies and programmes. In this role EMBRAPA will closely coordinate with the Ministry of Environment (MMA), the Ministry of Rural Development (MDA), the Ministry of Social Development (MDS), and the Ministry of Agriculture, Livestock and Supply (MAPA) and key stakeholders of the Civil Society Organizations (CSO). The vehicle for this coordination will be a Project Advisory Committee (PAC) to be constituted at Project inception as the highest level for providing technical coordination for the project. It will consist of EMBRAPA as chair and MMA, MDA, MDS, MAPA, CSO, and UNDP. The PAC will play a critical role in facilitating inter-ministerial coordination and ensuring complementarity of actions among different stakeholders and co-financiers. The main responsibility of the PAC is to see that the project's activities lead to the required outcomes as defined in the Project Document.

211. The PAC will meet twice per year to review progress and obstacles and to advice on strategic and critical Project issues. Matters of institutional concern (i.e. going beyond the Project's scope and contents) will be addressed at the appropriate levels of dialogue between UNDP and the Government of Brazil. It will provide recommendations to the PB on progress and on any changes that may be required for improving efficiency and effectiveness. The NTDC will instruct the NTC to provide detailed project information to the PAC as needed, to convene meetings and to prepare PAC minutes. He/ she will assisted by the Project Manager in these. Extraordinary PAC meetings can be held if deemed necessary by one of the PAC members. If appropriate, the PAC can invite external consultants to assist in the monitoring process.

Local Committees

212. A Local Committee (LC) will be established at each of the six priority areas, with the main function of optimizing links between the project objective and local plans (both institutional and sectoral) as well

as ongoing or planned interventions or investments by the local partners and/or beneficiaries. This will allow LCs to identify supporting requirements of the project as well as opportunities to strengthen the scope of the project. The LCs will also help to coordinate the participation of institutions in the implementation of project activities in each priority area. In fact, its members will be direct executors or beneficiaries of their activities. LCs, if necessary, might summon experts from public and private sectors and civil society organizations to discuss and/or participate in key issues for the project implementation. LCs will be coordinated by the EMBRAPA Units in the field and will be integrated with representatives of the State Environment and Agriculture Secretariats, CONAB, MDS, MDA, EMATER, Territorial Committees, ICMBio and Beneficiaries.

CT	**Coordinating EMBRAPA Field Unit**
Marajó	Eastern Amazon
Alto Acre e Capixaba	Acre
Médio Mearim	Cocais
Sobral	Goats & Sheep
Sertao do São Francisco	Semiarid
Alto Rio Pardo	Cerrado, Genetic Resources and Biotechnology (Cenargen)

213. A Coordinator, who will be a staff of the lead EMBRAPA Unit in each CT, will head each LC. EMBRAPA will appoint these coordinators at the beginning of the implementation of the Project. He/she will work closely with the PMU to ensure that the planned activities are properly implemented in each CT. The LCs, supported by the PMU, will prepare annual work plans for each CT and will report progress of implementation to the PMU. Eventual changes or setbacks will also be reported and discussed with the PMU. To ensure continuous communication, reporting and monitoring between LCs and PMU, several communication means will be used, including telecommunications (telephone lines and wireless signals), computers as well as corporate software, middleware, storage, and audio-visual systems, which will enable users to access, store, transmit, and manage information. EMBRAPA´s telecom facility, which can connect all its units spread out over the country will be used during project implementation to connect the PMU in Brasília, with one or more LCs to discuss progress and adjustments. The IDEARE platform (EMBRAPA Programs Management System)[20] will be used to store information and monitor progresses at each CT and for each outcome/output. Each LC will feed the information and report progress into IDEARE, which will be accessed by the PMU. A project website will also be developed; it will display information on the territories, activities, personnel and partners involved in the project, connect people participating in the project, and serve as a mechanism to disseminate project results for the non-EMBRAPA public. The PMU, Technical Committee and LC coordinators will hold periodic meetings to discuss progresses, difficulties, changes and exchange experiences.

Participating EMBRAPA Units in the selected CTs

214. A focal point for the project will be appointed in each EMBRAPA unit located in the CT and in the relevant national level unit. There will be 13 EMBRAPA units and at least 96 staff directly involved in project implementation. These units are listed below along with their main area of expertise. Additionally, there will be other staff from EMBRAPA HQs and Unit Directorates who will be involved in the negotiations with governmental bodies, CSOs and private companies during project implementation, as well as other staff involved in the daily operation of each unit (e.g. information technologies, maintenance, communication, human resources, etc.)

215. Amazon biome: Three units will develop activities in the CTs of Alto Acre/Capixaba and Marajó:

[20] The IDEARE software was developed by EMBRAPA to store, monitor and report all projects execution, and its use is mandatory for all EMBRAPA units.

- **EMBRAPA Acre -** Conducts research in the areas of forestry and sustainable livestock production, integrated systems and degraded areas, orcharding and agroindustrial native plants in western Amazon.
- **EMBRAPA Eastern Amazon -** Engaged in promoting research solutions, development and innovation for sustainable agriculture, livestock and forest to contribute to the conservation of natural capital of Eastern Amazonia to benefit society.
- **EMBRAPA Amapá –** Eco-regional research unit located in Northern Amazonia. Engaged in the generation of technologies compatible with the characteristics of ecosystems in the region and the people who live there, including riparian, extractive, small family farmers and agrarian reform settlers.

216. Cerrado biome: Five units will develop activities in the CTs of Alto Rio Pardo and Médio Mearim:

- **EMBRAPA Genetic Resources & Biotechnology -** Research unit which contributes to the development of sustainable and environmentally balanced agriculture in the country, integrating genetic resources, biotechnology, control and biosecurity activities.
- **EMBRAPA Cerrados –** Eco-regional research unit aimed at generating knowledge to ensure sustainable environmental quality of the Cerrado, and technologies appropriate to different production systems, validated and made available for dissemination to small, medium and large farmers.
- **EMBRAPA Cocais – E**co-regional research unit which amongst other duties assists in the training of agents for technical assistance and rural extension working in Cocais and Flood Plains biomes as well as promoting interaction with the society.
- **EMBRAPA Mid-North –** Eco-regional research unit, which promotes agribusiness development through the provision of technologies that streamline the production and productivity in Piauí and Maranhão States of the Mid-North region.

217. Caatinga biome: Three units will develop activities in the Sertão do São Francisco and Sobral CTs. One is located in Brasilia (EMBRAPA Genetic Resources and Biotechnology) and the other two units (listed below) have long experience in the region:

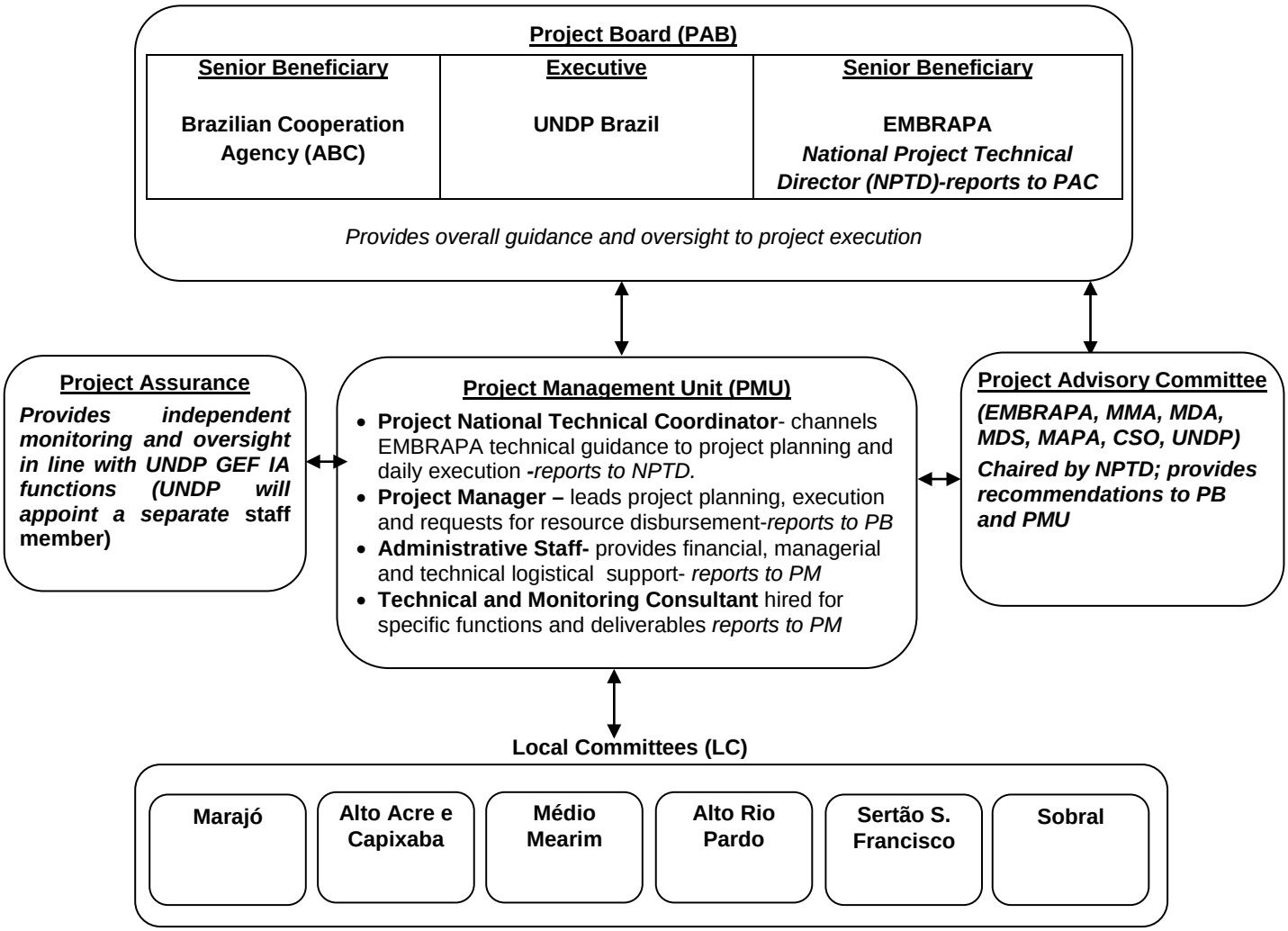
- **EMBRAPA Semi-Arid -** Ecoregional research unit, responsible for generating technologies to transform the driest area of Brazil for production, targeting small farming and irrigated farming.
- **EMBRAPA Goats & Sheep -** Products research unit that deals with goat and sheep production, including, for instance, increasing the quality of milk, meat and meat products, improvements in the organization of production systems for regular supply of products and enabling participation in new markets.

218. Additionally, four units will develop cross cutting activities targeting solutions to add value to biodiversity products, monitoring, and producing and making available capacity building materials for the six CTs:

- **EMBRAPA Tropical Agroindustry -** Research unit dedicated to plant production and protection; plant biology, food safety, environmental management, post-harvest and agroindustrial processes.
- **EMBRAPA Food Technology -** Research unit that conducts projects focusing on quality and food safety, and adding value to raw materials and co-products of agribusiness, from assessing post-harvest technologies to food processing.
- **EMBRAPA Satellite Monitoring -** Rsearch unit, focusing on research and geospatial innovations for agriculture. Stands out as an important center for research and technological development of the country, considering that major advances in agriculture occur with the use of geoinformation and geotechnology.

- **EMBRAPA Technological Information -** Service unit, which has the mission of bringing scientific knowledge to society and technologies produced by EMBRAPA. It has a modern infrastructure, consisting of a printing press, radio and TV studios, e-commerce system, large collections, databases and files.

Figure 1 Project Organization Structure



Acknowledgement of UNDP and GEF property rights and security

219. In order to accord proper acknowledgement to GEF for providing funding, a GEF logo should appear on all relevant GEF project publications, including among others, project hardware and vehicles purchased with GEF funds. Any citation of publications regarding projects funded by GEF should also accord proper acknowledgement to the GEF. Any material for promotional and/or dissemination purposes must be submitted to UNDP CO for revision and approval prior to publication. Since UN visibility is important for security purposes, the UNDP logo should possibly appear more prominently - and separated - from the GEF logo on hardware items (in particular on vehicles).

Audit arrangements

220. Auditing will be performed by an independent audit firm or individuals, hired by the project or by the UNDP Evaluation, Auditing and Investigation Office, as provided for in the UNDP rules applicable to the projects executed by the direct execution modality. When the Regional Bureau authorizes the execution of the projects by this modality, the UNDP Office in Brazil becomes in charge of fully enforcing the UNDP rules and procedures during the project implementation, monitoring and evaluation,

as well as guaranteeing that the costs will be recovered within the scope of this project. The office will also provide and keep records about the project on the corporate databases.

Compilation of learning experiences

221. During implementation, the Project team is expected to identify processes, sub-processes, outputs and approaches that may be useful for monitoring purposes and for sharing of knowledge with stakeholders in Brazil and the region.

PART IV: MONITORING AND EVALUATION PLAN

222. Project M&E will be conducted in accordance with the established UNDP and GEF procedures and will be provided by the project team and the UNDP-CO with support from the UNDP/GEF RCU in Panama City. The Project Results Framework in Section II provides performance and impact indicators for project implementation along with their corresponding means of verification. The M&E plan includes an inception report, project implementation reviews, quarterly and annual review reports, and mid-term and final evaluations. The following sections outline the principle components of the M&E plan and indicative cost estimates related to M&E activities. The M&E budget is provided in the table below. The project's M&E plan will be presented and finalized in the Project Inception Report following a collective fine-tuning of indicators, means of verification, and the full definition of project staff M&E responsibilities.

Project Inception Phase

223. A **Project Inception Workshop** (IW) will be held within the first three (3) months of project start-up with the participation of the full project team, relevant GoB counterparts, co-financing partners, the UNDP-CO and representation from the UNDP-GEF RCU, as well as UNDP-GEF headquarters (HQ) as appropriate. A fundamental objective of the IW will be to help the project team to understand and take ownership of the project's goal and objectives, as well as finalize preparation of the project's first annual work plan on the basis of the project results framework and the GEF Tracking Tool. This will include reviewing the results framework (indicators, means of verification, and assumptions), imparting additional detail as needed, and on the basis of this exercise, finalizing the Annual Workplan (AWP) with precise and measurable performance indicators, and in a manner consistent with the expected outcomes for the project.

224. Additionally, the purpose and objective of the IW will be to: a) introduce project staff to the UNDP-GEF team that will support the project during its implementation, namely the CO and responsible RCU staff; b) detail the roles, support services, and complementary responsibilities of UNDP-CO and RCU staff in relation to the project team; c) provide a detailed overview of UNDP-GEF reporting and M&E requirements, with particular emphasis on the Annual Project Implementation Reviews (PIRs) and related documentation, the Annual Project Report (APR), mid-term review and final evaluation. Equally, the IW will provide an opportunity to inform the project team on UNDP project-related budgetary planning, budget reviews including arrangements for annual audit, and mandatory budget re-phasings.

225. The IW will also provide an opportunity for all parties to understand their roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines and conflict resolution mechanisms. The Terms of Reference (ToRs) for project staff and decision-making structures will be discussed again, as needed, in order to clarify each party's responsibilities during the project's implementation phase. The IW will also be used to plan and schedule the Tripartite Committee Reviews. A report on the Inception Workshop is a key reference document and must be

prepared and shared with participants to formalize various agreements and plans decided during the meeting (see details below).

Monitoring Responsibilities and Events

226. A detailed schedule of project review meetings will be developed by the project management in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report. Such a schedule will include: a) tentative timeframes for Project Advisory Committee (PAC) and Advisory Board (PB) Reviews (or relevant advisory and/or coordination mechanisms); and b) project-related M&E activities.

227. **Day-to-day monitoring** of implementation progress will be the responsibility of the Project Manager based on the project's AWP and its indicators. The Project Manager will inform the UNDP-CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion. The Project Manager will fine-tune the progress and performance/impact indicators of the project in consultation with the full project team at the IW with support from UNDP-CO and assisted by the UNDP-GEF RCU. Specific targets for the first-year implementation progress indicators together with their means of verification will be developed at this workshop. These will be used to assess whether implementation is proceeding at the intended pace and in the right direction and will form part of the AWP. Targets and indicators for subsequent years will be defined annually as part of the internal evaluation and planning processes undertaken by the project team. Measurement of impact indicators related to global benefits will occur according to the schedules defined through specific studies that are to form part of the project's activities.

228. **Periodic monitoring** of implementation progress will be undertaken by the UNDP CO through quarterly meetings with the project implementation team, or more frequently as deemed necessary. This will allow parties to take stock of and to troubleshoot any problems pertaining to the project in a timely fashion to ensure the timely implementation of project activities. The UNDP CO and UNDP-GEF RCU, as appropriate, will conduct yearly visits to the project's field sites, or more often based on an agreed upon schedule to be detailed in the project's Inception Report/AWP to assess first-hand project progress. Any other member of the Project Board/Steering Committee can also take part in these trips, as decided by the Project Board/Steering Committee. A Field Visit Report will be prepared by the UNDP CO and circulated no less than one month after the visit to the project team, all Project Board members, and UNDP-GEF.

229. **Annual monitoring** will occur through the PB meetings. This is the highest policy-level meeting of the parties directly involved in the implementation of a project. The project will be subject to Project Board review at least once every year. The first such meeting will be held within the first twelve (12) months of the start of full implementation. The project proponent will prepare an Annual Project Report (APR) and submit it to UNDP CO and the UNDP-GEF regional office at least two weeks prior to the PB for review and comments.

230. The APR will be used as one of the basic documents for discussions in the PB. The Project National Technical Coordinator will present the APR to the PB, highlighting policy issues and recommendations for the decision of the PB participants. The Project National Technical Coordinator will also inform the participants of any agreement reached by stakeholders during the APR preparation on how to resolve operational issues. Separate reviews of each project component may also be conducted if necessary. The PB has the authority to suspend disbursement if project performance benchmarks are not met. Benchmarks will be developed at the IW, based on delivery rates and qualitative assessments of achievements of outputs.

231. The **Terminal PB Review** is held in the last month of project operations. The Project Manager is responsible for preparing the Terminal Report and submitting it to UNDP-CO and to UNDP-GEF RCU. It

shall be prepared in draft at least two months in advance of the PB meeting in order to allow review, and will serve as the basis for discussions in the PB meeting. The terminal PB review considers the implementation of the project as a whole, paying particular attention to whether the project has achieved its stated objectives and contributed to the broader environmental objective. It decides whether any actions are still necessary, particularly in relation to sustainability of project results, and acts as a vehicle through which lessons learned can be captured to feed into other projects being implemented.

Project Monitoring Reporting

232. The Project Manager, in conjunction with the UNDP-GEF extended team, will be responsible for the preparation and submission of the following reports that form part of the monitoring process and that are mandatory.

233. A **Project Inception Report** (IR) will be prepared immediately following the IW. It will include a detailed First Year/AWP divided in quarterly timeframes detailing the activities and progress indicators that will guide implementation during the first year of the project. This work plan will include the dates of specific field visits, support missions from the UNDP CO or the RCU or consultants, as well as timeframes for meetings of the project's decision-making structures. The IR will also include the detailed project budget for the first full year of implementation, prepared on the basis of the AWP, and including any M&E requirements to effectively measure project performance during the targeted 12-month timeframe. The IR will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions, and feedback mechanisms of project-related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. When finalized, the IR will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries. Prior to the IR's circulation, the UNDP CO and UNDP-GEF's RCU will review the document.

234. In light of the similarities of both APR and PIR, UNDP-GEF has prepared a harmonized format for use in fulfilling the following two requirements:

- The **Annual Project Report** (APR) is a UNDP requirement and part of UNDP CO central oversight, monitoring, and project management. It is a self-assessment report by the project management to the CO and provides input to the country office reporting process and the Results-Oriented Annual Report (ROAR), as well as forming a key input to the PB Review. An APR will be prepared on an annual basis prior to the PB Review, to reflect progress achieved in meeting the project's AWP and assess performance of the project in contributing to intended outcomes through outputs and partnership work. The format of the APR is flexible but should include the following sections: a) project risks, issues, and adaptive management; b) project progress against pre-defined indicators and targets, c) outcome performance; and d) lessons learned/best practices.
- The **Project Implementation Review** (PIR) is an annual monitoring process mandated by the GEF. It has become an essential management and monitoring tool for project managers and offers the main vehicle for extracting lessons from on-going projects. Once the project has been under implementation for one year, a PIR must be completed by the CO together with the project management. The PIR can be prepared any time during the year and ideally prior to the PB review. The PIR should then be discussed in the PB meeting so that the result would be a PIR that has been agreed upon by the project, the Implementing Partner, UNDP CO, and the RCU in Panama. The individual PIRs are collected, reviewed, and analyzed by the RCU prior to sending them to the focal area clusters at the UNDP-GEF headquarters.
- **Quarterly Progress Reports** outlining main updates in project progress will be provided quarterly to the local UNDP CO and the UNDP-GEF RCU by the project team. Progress made shall be

monitored in the UNDP Enhanced Results Based Management Platform and the risk log should be regularly updated in ATLAS based on the initial risk analysis.

235. **Specific Thematic Reports** focusing on specific issues or areas of activity will be prepared by the project team when requested by UNDP, UNDP-GEF, or the Implementing Partner. The request for a Thematic Report will be provided to the project team in written form by UNDP and will clearly state the issue or activities that need to be reported on. These reports can be used as a form of lessons learned exercise, specific oversight in key areas, or as troubleshooting exercises to evaluate and overcome obstacles and difficulties encountered. UNDP is requested to minimize its requests for Thematic Reports, and when such are necessary will allow reasonable timeframes for their preparation by the project team.

236. A **Project Terminal Report** will be prepared by the project team during the last three (3) months of the project. This comprehensive report will summarize all activities, achievements, and outputs of the project; lessons learned; objectives met or not achieved; structures and systems implemented, etc.; and will be the definitive statement of the project's activities during its lifetime. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's activities.

237. **Technical Reports** are detailed documents covering specific areas of analysis or scientific specializations within the overall project. As part of the Inception Report, the project team will prepare a draft Reports List detailing the technical reports that are expected to be prepared on key areas of activity during the course of the project, and tentative due dates. Where necessary, this Reports List will be revised and updated, and included in subsequent APRs. Technical Reports may also be prepared by external consultants and should be comprehensive and specialized analyses of clearly defined areas of research within the framework of the project and its sites. These technical reports will represent, as appropriate, the project's substantive contribution to specific areas, and will be used in efforts to disseminate relevant information and best practices at local, national, and international levels.

238. **Project Publications** will form a key method of crystallizing and disseminating the results and achievements of the project. These publications may be scientific or informational texts on the activities and achievements of the project in the form of journal articles or multimedia publications. These publications can be based on Technical Reports, depending upon the relevance and scientific worth of these reports, or may be summaries or compilations of a series of Technical Reports and other research. The project team will determine if any of the Technical Reports merit formal publication, and (in consultation with UNDP, the GoB, and other relevant stakeholder groups) will also plan and produce these publications in a consistent and recognizable format. Project resources will need to be defined and allocated for these activities as appropriate and in a manner commensurate with the project's budget.

Independent External Evaluations

239. The project will be subjected to at least two reviews/evaluations as follows:

240. A **Mid-Term Review** will be undertaken at the mid-point of the project lifetime. The Mid-Term Review will determine progress being made towards the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency, and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation, and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, ToRs, and timing of the mid-term review will be decided after consultation between the parties to the project document. The ToRs for this Mid-Term Review will be prepared by the UNDP-CO based on guidance from the UNDP-GEF RCU. The management response of the review will be uploaded

to the UNDP corporate systems, in particular the UNDP Evaluation Office Evaluation Resource Centre (ERC). The GEF Tracking Tool for the project will also be completed during the mid-term review cycle.

241. A **Final Evaluation** will take place three months prior to the terminal Project Board meeting, and will focus on the same issues as the Mid-Term Review. The Evaluation will also look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Evaluation should also provide recommendations for follow-up activities and requires a management response that should be uploaded to PIMS and to the UNDP Evaluation Office Evaluation Resource Centre (ERC). The ToRs for this evaluation will be prepared by the UNDP-CO based on guidance from the UNDP-GEF RCU. The GEF Tracking Tool will also be completed during the final evaluation.

Audit Clause

242. The GoB will provide the Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the established procedures set out in the Programming and Finance rules and regulations. The audit will be conducted according to UNDP's financial regulations, rules, and audit policies by the legally recognized auditor by the GoB, or by a commercial auditor engaged by the GoB.

Learning and Knowledge Sharing

243. Results from the project will be disseminated within and beyond the project intervention zone through a number of existing information sharing networks and forums. In addition, the project will participate, as relevant and appropriate, in UNDP-GEF sponsored networks, organized for Senior Personnel working on projects that share common characteristics. UNDP-GEF RCU has established an electronic platform for sharing lessons between the project managers. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Identifying and analyzing lessons learned is an on-going process, and the need to communicate such lessons as one of the project's central contributions is a requirement to be delivered not less frequently than once every twelve (12) months. UNDP-GEF shall provide a format and assist the project team in categorizing, documenting, and reporting on lessons learned. Specifically, the project will ensure coordination in terms of avoiding overlap, sharing best practices, and generating knowledge products of best practices in the area of IAS management.

M&E Workplan

Type of M&E activity	Responsible Parties	Budget US$ *Excluding project team staff time*	Time frame
Inception Workshop and Report	▪ Project Manager ▪ UNDP CO, UNDP GEF	Indicative cost: US$ 15,000	Within first two months of project start up
Measurement of Means of Verification of project results.	▪ UNDP GEF RTA/Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members.	To be finalized in Inception Phase and Workshop.	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on *output and*	▪ Oversight by Project Manager ▪ Project team	To be determined as part of the Annual Work Plan's preparation.	Annually prior to ARR/PIR and to the definition of annual work plans

Type of M&E activity	Responsible Parties	Budget US$ *Excluding project team staff time*	Time frame
implementation			
ARR/PIR	▪ Project manager and team ▪ UNDP CO ▪ UNDP RTA ▪ UNDP EEG	None	Annually
Project Board Meetings	▪ Project Manager ▪ UNDP-CO ▪ GoB representatives	US$ 25,000	Annually
Periodic status/ progress reports	▪ Project manager and team	None	Quarterly
Mid-term Review	▪ Project manager and team ▪ UNDP CO ▪ UNDP RCU ▪ Evaluation team	Indicative cost: $30,000	At the mid-point of project implementation.
Final Evaluation	▪ Project manager and team, ▪ UNDP CO ▪ UNDP RCU ▪ Evaluation team	Indicative cost: $40,000	At least three months before the end of project implementation
Lessons Learned	▪ Project manager and team ▪ UNDP CO	Indicative cost: $30,000	Yearly
Project Terminal Report	▪ Project manager and team ▪ UNDP CO	Indicative cost: $15,000	At least three months before the end of the project
Audit	▪ UNDP CO ▪ Project manager and team	Cost per year approx. US$ 5,000 per year (total US$ 25,000)	Yearly
Visits to field sites	▪ UNDP CO ▪ UNDP RCU (as appropriate) ▪ Government representatives	For GEF supported projects, paid from IA fees and operational budget	Yearly
TOTAL INDICATIVE COST *Excluding project team staff time & UNDP staff and travel expenses*		US$ 180,000	

PART V: LEGAL CONTEXT

244. This Project Document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement between the Government of Brazil and the United Nations Development Programme, signed on December 29, 1964. The host country implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government co-operating agency described in that Agreement.

245. The UNDP Resident Representative in Brazil is authorized to effect in writing the following types of revision to this Project Document, provided that he/she has verified the agreement thereto by the UNDP-GEF Unit and is assured that the other signatories to the Project Document have no objection to the proposed changes:

a) Revision of, or addition to, any of the annexes to the Project Document;

b) Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation;

c) Mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and

d) Inclusion of additional annexes and attachments only as set out here in this Project Document

Cost Recovery Policy

246. As per Determination and Decision of the UNDP's Executive Board on the *Policy on Cost Recovery from* Regular *and Other Resources*, UNDP shall recover costs for the provision of project related general management services (GMS) and direct project services (DPS). In GEF funded projects, GMS costs are incurred by UNDP in undertaking its Project Cycle Management Services as a GEF IA and are not included in the project budget as they are covered by GEF fees and provided to the UNDP Country Office through UNDP internal distribution. DPS costs are those incurred by UNDP for the provision of services requested by a host Government and that are execution driven and can be traced in full to the delivery of project inputs. They relate to operational and administrative support activities carried out by UNDP offices on behalf of the Direct Execution Modality (DEX) of Country Office support to National Execution Modality (NEX) and include the provision of the following estimated services:

- Payments, disbursements and other financial transactions.
- Recruitment of staff, project personnel, and consultants.
- Procurement of services and equipment, including disposal.
- Organization of training activities, conferences, and workshops, including fellowships.
- Travel authorization, visa requests, ticketing, and travel arrangements.
- Shipment, custom clearance, vehicle registration, and accreditation.

247. These execution-related costs are separate and distinct from the GMS costs. In accordance with UNDP policy on cost recovery (2010) and the BOM and UNDP GEF guidance on Direct Project Costs (2012) the costs incurred by UNDP for the provision of direct project services needs to be recovered on the basis of estimated actual costs expected to be incurred or on a per-transaction basis using the Universal price list or Local Price List costing template and should be charged directly to project budgets. The estimated costs are included in the project budget 74500 – UNDP cost recovery chrgs–Bills and are funded within the total project management Costs (PMC) allocation provided by GEF to the implementation Parties and cannot exceed the total PMC allocation. Once incurred after each of the above services is provided by UNDP, upon request of EMBRAPA these shall be charged against budget code line 74599.

SECTION II: STRATEGIC RESULTS FRAMEWORK (SRF) AND GEF INCREMENT

This project will contribute to achieving the following Country Programme Outcome as defined in CPAP or CPD: Outcome #2: Capacities for integrating sustainable development and productive inclusion for poverty reduction.
Country Programme Outcome Indicators: 2.ii: Technical advice for the institutionalization of participatory mechanisms for indigenous peoples and traditional populations in programmes oriented to achieve environmental sustainability and poverty reduction
Primary applicable Key Environment and Sustainable Development Key Result Area (same as that on the cover page, circle one): Mainstreaming environment and energy
Applicable GEF Strategic Objective and Program: BD-SO2: Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes, Seascapes and Sectors,
Applicable GEF Expected Outcomes: BD Outcome 2.1 Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation
Applicable GEF Outcome Indicators: BD Indicator 2.1: Landscapes and seascapes certified by internationally or nationally recognized environmental standards that incorporate biodiversity considerations (e.g. FSC, MSC) measured in hectares and recorded by GEF tracking tool

Intervention Logic	Objectively Verifiable Indicators	Baseline	Targets (End of Project)	Means of Verification	Risks and Assumptions
Project Objective: The biodiversity of Brazilian multiple-use forest landscapes of high conservation value is conserved through a strengthened sustainable use management framework for non-timber forest products (NTFP) and agro-forestry systems (AFS)	Surface area (ha) of forests in multiple use landscapes-MUL- of the Amazon, Cerrado and Caatinga biomes with sustainable production of BD products through **direct** effect of the project	<u>Amazon</u> a) A. Acre: 20 ha b) Marajó: 42,389 ha <u>Cerrado</u> a) A.R. Pardo: 0 ha b) Medio Mearim: 1,495 ha <u>Caatinga</u>: a) S. Francisco: 0 ha b) Sobral: 60 ha Total: 43,964 ha	<u>Amazon</u> a) A. Acre: 931.172 ha b) Marajó: 103,519 ha <u>Cerrado</u> a) A.R. Pardo: 38,419 ha b) Medio Mearim: 12,786 ha <u>Caatinga:</u> a) S. Francisco: 2,000 ha b) Sobral: 5,000 ha Total: 1,092,896 ha	• Surveys • EMBRAPA and partner reports • External evaluation reports	Government will to maintain and improve its policies for conservation and sustainable management and use of biodiversity
	Surface area (ha) of forests in MUL of the Amazon, Cerrado and Caatinga with sustainable production of BD products that can be potentially achieved through **indirect** effects of the project in: 1) Conservation Units (CUs) and surrounding areas-*CU is the name in Brazil for PA in the national protected area system* ; and 2) forested areas of 6	0 ha	1) In CUs and surrounding areas: <u>Amazon</u> a) A. Acre: 0 ha b) Marajó: 194,867 ha <u>Cerrado</u> a) A.R. Pardo: 600 ha b) Medio Mearim:	• Surveys • EMBRAPA and partner reports • External evaluation reports	

Intervention Logic	Objectively Verifiable Indicators	Baseline	Targets (End of Project)	Means of Verification	Risks and Assumptions
	selected CTs (long term)		12,980ha <u>Caatinga:</u> a) S. Francisco: 278 ha b) Sobral: 5,000 ha Total: 215,525 ha 2) Forested areas of 6 selected CTs (long term): 14,959,566 ha		
	Number of heat foci as a proxy indicator for the use of fire as a management technique and hence driver of deforestation[21]	<u>Amazon</u> a) A. Acre: 250 inside Resex Chico Mendes; 214 in the 10 km buffer zone b) Marajó: 9 inside Resex Mapua; 20 in the 10 km buffer zone <u>Cerrado</u> a) A.R. Pardo: 12 inside RDS Nascente Geraizeira; 69 in the 10 km buffer zone b) Medio Mearim: to be detemined in PY1 <u>Caatinga:</u> a) S. Francisco: to be detemined in PY1 b) Sobral: to be	10% reduction in each CT	• Reports from database of INPE (National Institute of Space Research) • External evaluation reports	

[21] Monitoring will be undertaken through satellite data provided by the National Institute for Space Research (INPE) http://queimadas.inpe.br which carries out operational monitoring of fire outbreaks and forest fires through remote sensing, and predicting the risk of fire and vegetation. The site "SIG Focos Geral" displays heat foci on a GIS with several options: periods, regions of interest, satellites, maps (e.g. deforestation, hydrography, roads, etc.) and may export data in several formats (.txt, html, shp kmz). The project will monitor heat foci in the intervention areas using this database. See more details in Annex 5 Biological Monitoring Plan

Intervention Logic	Objectively Verifiable Indicators	Baseline	Targets (End of Project)	Means of Verification	Risks and Assumptions
		detemined in PY1			
	Conservation and production security of 5 key species enhanced through maintaining population growth rates stable or increasing measured through a population asymmetry index and size class distribution fit to the J reverse distribution model [Brazil nut, acai (Amazon), pequi, araticum (Cerrado) and umbu (Caatinga)]	To be determined in PY1-2 through sample plots to be established in each CT	Index > 0 (Inferred from population structure distribution models and the impact of anthropic variables *see Biological Monitoring Plan in Annex 5 for details)*	• Population structure studies and reports • External evaluation reports	
Outcome 1: Governance and capacity building framework for up-scaling best practices for BD sustainable management and production	Improved institutional capacities of EMBRAPA to effectively influence the planning, implementation, monitoring and mainstreaming of NTFP and AFS into production practices at the landscape level as measured by a % of increase in the capacity scorecard (see Annex 6)	0%	20 % increase	• Capacity scorecard • Project reports	Effective inter-institutional coordination for promotion of conservation and sustainable management and use policies
	Number of NTFP species that have differentiated minimum prices (PGPMBio) in each biome[22]	To be determined in PY1	At least one species per biome	• Official bulletins • Project reports	Producers´ interest in adopting technologies and best practices
	Percentage of target population that makes use of the technical management guidelines prepared by the project	0	At mid term: Technical guidelines for at least 5 species At end of project: 15% of direct beneficiaries (2,980 producers)	• Official bulletins • Project reports	Effective coordination of civil society organizations (cooperatives, associations, workers unions, NGOs) facilitates adoption of best practices
	Number of Citizenship Territories and/or CUs that adopt AFS for restoration of degraded lands as a	0	At least 1 in each biome	• MDA and ICMBio reports • Agreements	

[22] This will be measured through a sample of municipalities in each CT. Baseline will be estimated in PY1 since not all municipalities have the information organized. The sample will comprise those municipalities that have well-organized information

Intervention Logic	Objectively Verifiable Indicators	Baseline	Targets (End of Project)	Means of Verification	Risks and Assumptions
	strategy for planning and implementation of the Forest Code[23]			within the Territorial Joint Committees of the Citizenship Territories • Project reports	
	Number of producers that adopt sustainable production of NTFP and AFS through: c) Direct effect of the project d) Indirect effect of the project (replication)	a) 0 b) 0	Amazon a) Direct effect: A. Acre: 226 (AFS), 300 (NTFP) Marajó: 350 (AFS), 400 (NTFP) b) Indirect effect: A. Acre: 400 (AFS), 600 (NTFP) Marajó: 600 (AFS), 800 (NTFP) Cerrado a) Direct effect: A.R. Pardo:200 (AFS), 300 (NTFP) Mearim: 674 (AFS), 200 (NTFP) b) Indirect effect: A.R. Pardo: 300(AFS), 500 (NTFP) M. Mearim: 547 (AFS), 400 (NTFP) Caatinga: a) Direct effect: S. Francisco:30 (AFS), 60 (NTFP)	• Surveys • EMBRAPA and partner reports • Project reports	

[23] The new Forest Code now allows the use of AFS to restore APPs (Permanent Protection Areas). APPs comprise the margins of rivers, which must be preserved. The size of APPs varies according to the width of the river.

Intervention Logic	Objectively Verifiable Indicators	Baseline	Targets (End of Project)	Means of Verification	Risks and Assumptions
			Sobral: 240 (AFS) b) Indirect effect: S. Francisco: 278 (AFS), 400 (NTFP) Sobral: 500 (AFS) Total direct effect: 1,720 (AFS) 1,260 (NTFP) Total indirect effect: 2,625 (AFS) 2,800 (NTFP)		
	Increased know-how of extensionists on NTFP and ASF as measured by the number that obtain at least 70% score in evaluations of project training on NTFP/AFS	0	At least 540 obtain over 70%	• Training program • Lists of participants • Training evaluations	
Output 1.1: Environmental safeguards optimize inputs of NTFP and AFS production to BD conservation in multiple use landscapes					
Output 1.2: Improved decision–making support and strategies for policy makers at federal, state and local levels for mainstreaming and managing AFS and NTFP in production landscapes					
Output 1.3: Extension services deliver capacity building to small rural farmers on best practices, safeguards, and market access for NFTP and AFS					
Output 1.4: Resource use agreements incorporate new safeguards and guidance for mainstreaming NTF					
Output 1.5: Data system for information and networking consolidates and replicates best practices on NTFP and AFS					
Outcome 2: Market and financial frameworks for up-scaling for NTFP and AFS production in high-conservation value forest landscapes	Degree of improvement in production chains of 5 species for increased market value and access	Value chains for Brazil nut and acai exist but are not adequately structured	• Brazil nut: sanitary quality of nut production • Açai: sanitary quality of pulp production • Umbu: quality of processed pulp • Pequi: oil production cost • Babaçu: productivity in nut extraction	• EMBRAPA and partner reports • Project reports	Public purchase mechanisms favor sustainable BD products Private sector favors purchases of sustainable products Financial and credit Institutions interested in adopting environmental
	Percentage of public purchases of BD	0	At least 20%	• CONAB reports	

Intervention Logic	Objectively Verifiable Indicators	Baseline	Targets (End of Project)	Means of Verification	Risks and Assumptions
	products by key government programmes (PAA, PNAE and PGPMBio[24]) based on NTFP and AFS best practices			• SIAFI reports • Cooperatives´ reports • Project reports	sustainability criteria
	Number of associations/cooperatives that maintain contracts for supply of products with the same buyer(s) (public and/or private) over a period of time[25]	To be determined in PY1	At least 5 associations/ cooperatives (1-2 per biome) for at least 3 years	• Contracts • Project reports	
	Increase in percentage of producers that access financing (e.g. credits, grants) for NTFP and AFS production and management subject to environmental criteria	0	20%	• MDA reports • Project reports	
	Percentage of increase in the share of BD products in family incomes	Existing data in literature are not reliable and/or do not correspond to intervention areas. Baseline to be determined in PY1	15% (average for different CTs and production systems)	• Surveys • EMBRAPA and partner reports • Project reports	
Output 2.1: Improved reliability, quality and diversity of NTFP supply and AFS production increase market value and access in 6 high biodiversity forest landscapes					
Output 2.2: Market access improved for BD products					
Output 2.3: Credit and financing mechanisms increased for AFS and for NTFP management					

[24] PAA: Food Acquisition Program. PNAE: National School Lunch Program. PGPMBio: General Policy on Minimum Prices for Socio-biodiversity Products

[25] This indicator will measure the change in the trend of supply of products before and at the end of the Project. By end of Project suppliers should have greater constancy of supply to a same buyer. Baseline will be estimated in PY1 by analyzing the supply records of selected associations/cooperatives for at least 5 years previous to Project inception.

SECTION III: TOTAL BUDGET AND WORKPLAN

Award ID:	00083645	**Project ID(s):** 00092021	PIMS: 4569; GEF: 5091
Award Title:	Mainstreaming Biodiversity Conservation and Sustainable Use into NTFP and AFS production practices in Multiple-Use Forest Landscapes of High Conservation Value		
Business Unit:	Brazil		
Project Title:	Mainstreaming Biodiversity Conservation and Sustainable Use into NTFP and AFS production practices in Multiple-Use Forest Landscapes of High Conservation Value		
Implementing Partner (Executing Agency)	UNDP		

GEF Outcome/ Atlas Activity	Responsible party	Source of funds	ERP/ATLAS Budget Description/ Input	Atlas Code	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Budget Note
Outcome 1: Governance and capacity building framework for up-scaling best practices for BD sustainable management and production		GEF	Local Consultants	71300	33,000	161,000	118,000	93,000	51,000	456,000	(1)
			Contractual Services - Individual	71400	40,000	40,000	40,000	40,000	40,000	200,000	(2)
			Travel	71600	33,000	77,000	82,800	68,800	56,800	318,400	(3)
			Contractual services - companies	72100	50,000	25,000	87,200	20,000	20,000	202,200	(4)
			Materials and Goods	72300	70,000	103,000	114,200	97,000	72,000	456,200	(5)
			Supplies	72500	44,000	83,000	80,000	72,000	72,000	351,000	(6)
			Rental & Maintenance - Premises	73100	0	5,000	5,000	5,000	5,000	20,000	(7)
			Professional Services	74100	2,400	2,400	2,400	2,400	2,400	12,000	(8)
			Audio Visual & Print Prod Costs	74200	0	50,000	50,000	50,000	50,000	200,000	(9)
			Miscellaneous	74500	7,330	11,000	11,000	10,000	10,000	49,330	(10)
			Training	75700	158,000	180,000	197,000	178,000	179,000	892,000	(11)
	GEF Subtotal Outcome 1				**437,730**	**737,400**	**787,600**	**636,200**	**558,200**	**3,157,130**	
Outcome 2: Market and financial frameworks for up-scaling for NTFP and AFS production in high-conservation value forest landscapes		GEF	International Consultants	71200	40,000	10,000	40,000	10,000	40,000	140,000	(12)
			Local Consultants	71300	15,000	50,000	40,000	0	0	105,000	(13)
			Contractual Services - Individual	71400	138,000	138,000	118,000	118,000	118,000	630,000	(14)
			Travel	71600	39,000	49,000	43,000	23,000	16,000	170,000	(15)
			Contractual services - companies	72100	0	32,315	32,315	32,315	32,315	129,260	(16)
			Materials and Goods	72300	45,000	40,000	40,000	40,000	20,000	185,000	(17)
			Supplies	72500	38,000	27,415	27,000	12,000	2,000	106,415	(18)
			Equipment	72800	180,000	30,000	10,000	10,000	0	230,000	(19)
			Professional Services	74100	2,400	2,400	3,307	2,400	2,400	12,907	(20)
			Audio Visual & Print Prod Costs	74200	0	25,000	25,000	25,000	25,000	100,000	(21)
			Training	75700	35,000	63,000	63,000	48,000	45,000	254,000	(22)
	GEF Subtotal Outcome 2				**532,400**	**467,130**	**441,622**	**320,715**	**300,715**	**2,062,582**	

GEF Outcome/ Atlas Activity	Responsible party	Source of funds	ERP/ATLAS Budget Description/ Input	Atlas Code	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Budget Note
Project Management		GEF	Contractual Services - Individual	71400	30,000	30,000	30,000	30,000	30,000	150,000	(23)
			Travel	71600	6,000	6,000	6,000	6,000	6,000	30,000	(24)
			Materials and Goods	72300	1,500	1,500	1,500	1,500	1,500	7,500	(25)
			Supplies	72500	2,570	2,540	2,500	2,500	2,500	12,610	(26)
			Audio Visual & Print Prod Costs	74200	1,500	-	1,500	-	1,500	4,500	(27)
			UNDP Cost Recovery Charges	74599	19,378	11,404	9,094	10,873	4,381	55,130	(28)
	Total project management				**60,948**	**51,444**	**50,594**	**50,873**	**45,881**	**259,740**	
Totals					**1,031,078**	**1,255,974**	**1,279,816**	**1,007,788**	**904,796**	**5,479,452**	

Summary Budget: GEF and CoFin Resources per Year

Project Components	Year 1		Year 2		Year 3		Year 4		Year 5		Total	
	GEF	CoFin	GEF	CoFin	GEF	CoFin	GEF	CoFin	GEF	CoFin	GEF	CoFin
Outcome 1: Governance and capacity building framework for up-scaling best practices for BD sustainable management and production	437,730	2,300,000	737,400	3,500,000	787,600	3,300,000	636,200	3,500,000	558,200	3,500,000	3,157,130	16,100,000
Outcome 2: Market and financial frameworks for up-scaling for NTFP and AFS production in high-conservation value forest landscapes	532,400	1,850,000	467,130	2,000,000	441,622	2,350,000	320,715	2,500,000	300,715	1,500,000	2,062,582	10,200,000
Project Management	60,948	300,000	51,444	300,000	50,594	300,000	50,873	300,000	45,881	300,000	259,740	1,500,000
Total Project Costs	**1,031,078**	4,450,000	**1,255,974**	5,800,000	**1,279,816**	5,950,000	**1,007,788**	6,300,000	**904,796**	5,300,000	**5,479,452**	27,800,000

Budget Notes for Total Project Budget

No.	Budget notes
Outcome 1: Governance and capacity building framework for up-scaling best practices for BD sustainable management and production	
(1)	71300 Local Consultants US$ 456,000 • Expert in Forestry, Biology or related area to collaborate on the definition of harvesting limits including the consideration of contributions from local knowledge. US$ 91,000 (7 experts @ 12,000/year for 1 year) (Output 1.1).

No.	Budget notes
	• Forest Expert to collaborate in the monitoring of NTFP and AFS production needed for setting up environmental safeguards such as harvesting levels and practices of target species (Output 1.1). US$ 140,000 (7 experts @ 20,000/year for 1yr) • Policy expert to develop study on tax and legal norms related to production, transport, processing and commercialization of NTFP and AFS. US$ 40,000 (2 experts @ 20,000/year for a 1 year). (Output 1.1). • Policy expert to support the design and preparation of material for decision makers (Output 1.2). US$ 24,000 (1 expert @6,000/year for 4 yrs.) (Output 1.2) • Policy expert to develop resource use agreements US$ 36,000 (3 experts @ 12,000 per year, - 1 per biome) (Output 1.4)
(2)	71400 Service Contract US$200,000 for: • Expert in Biology, Forestry or related field for overall technical management and implementation of the project's activities in all project territories, maintaining continuous contact with territory teams, and ensuring activities in territories are coordinated with PMU. US$ 125,000 (for 5 years). Approximately 38% of this corresponds to managerial tasks ensuring project is executed in an efficient manner. • Expert in monitoring and management planning throughout the Project lifetime at US$ 75,000 (for 5 years)
(3)	71600 Travel US$318,400 – for consultants and technical counterparts key in execution of Outputs and activities to achieve Outcome 1 which require a very high volume of work (field work and monitoring) in the CTs covering large areas all located far away from Embrapa field units. Cofunding resources will cover a proportion of the costs.
(4)	72100 Contractual Services US$ 202,200 for: • Transportation and supplies for rural workers demarcating sampling plots and establishing and maintaining demonstration units for setting up environmental safeguards such as harvesting levels and practices (Output 1.1) US$ 25,000 (5 contracts@5,000/year). • Developing and designing information material for improving decision–making support and strategies (Output 1.2). US$ 75,000. • Legal services to help with the legal aspects of resource use agreement preparation and implementation. US$ 22,000 (Output 1.4) • ICT services to develop data bank system (US$ 60,000) and project website (US$ 20,000). US$ 80,000 (Output 1.5)
(5)	72300 Material and Goods: US$ 456,200 Materials and transport expenses (fuel, tolls) of trips to intervention areas, and materials to implement activities and for technical supervision of all activities related to achievement of Outcome 1. All Territories are located far away from Embrapa units and can only be reached by boat and vehicle, with high consumption of fuel, demanding also intense traveling inside Territories. They are also the areas of lowest HDI of Brazil with public transport limitations and high levels of poverty. In addition, the project is working with agroextractivists, the poorest groups of the society, generally dispersed in the territory (mainly in the Amazon). Any action with these peoples and these Territories will demand a lot of time in the field. (See Budget Note 14)
(6)	72500 Supplies: US$351,000 Consumable items for implementation of studies and experiments and their maintenance in the field in all activities related to achievement of Outcome 1. This includes general supplies (e.g. plant, fences, tools, general supplies, building material) to establish demonstration units of AFS and reference populations for NTFP.
(7)	73100 Rental & Maintenance Premises: US$20,000 for rental of auditorium and facilities for training of farmers and rural technicians (Output 1.3)
(8)	Professional services (US$12,000): Corresponds to project audits and other professional services required for the achievement of project outputs under Outcome 1.
(9)	74200 Audiovisual & Printing: US$200,000 for preparation and reproduction of materials and documents related to the project results: booklets, manuals, leaflets, posters, videos, and radio and TV programs for rural and technical extension (Output 1.2).
(10)	74500 Miscellaneous: US$49,330 for unforeseen general expenses related to all activities under Outcome 1 and for contingency related to currency fluctuations
(11)	75700 Training US$892,000 for capacity development of leaderships, extension technicians, and farmers related to all activities under Outcome 1. Training to be executed within the Territories, involving travel of people from distant and dispersed locations, feeding, and housing. Training is an important part of the project strategy aimed to immediately improve quality and quantity of production based on sustainable practices in the territories and also to disseminate to the larger number of farmers.
Outcome 2: Market and financial frameworks for4up-scaling for NTFP and AFS production in high-conservation value forest landscapes	
(12)	71200 International Consultants US$110,000 for: • Technical specialist to advise on AFS.US$ 40,000 (1 expert@ 10,000/year, for 4 yrs.). (Output 2.1) • Independant Midterm Review and Project final evaluation. US$ 70,000.

No.	Budget notes
	• Expert to provide advice on setting up platforms to connect producers to buyers enabling economies of scale and income predictability and provide a forum for different members of supply chain and governance to discuss views and regulations; provide transparency and build trust. U$ 30,000. (Output 2.2)
(13)	71300 Local Consultants: $105,000 for: • Trade Expert to provide advice on the development of commercialization channels with private and public companies, in for each biome. US$ 75,000 (3 experts @25,000/ea; 1 per biome, 3 biomes) (Output 2.2). • Finance expert to provide advice on approaches to over credit and technical assistance bottlenecks with banks. US$ 30,000 (1 expert @ 30,000) (Output 2.3).
(14)	71400 Service Contract US$630,000 for: • Experts in Forestry, Biology, Agronomy or related field to assist implementation in target territories (CT) and based in project field offices to guarantee permanent presence of project in the intervention areas. Experts will support all activities related to project execution on the ground particularly of Ouput 2.1 (eg. farmers and technicians´ training, mobilization, workshops, dialogues with local organizations and local government). Experts will also be involved in field activities of other Outputs. US$490,000 (7 experts @10,000/year for 5 yrs.). • Expert in project monitoring to design a monitoring plan and train a person of the PMU to continuously monitor project performance. US$ 40,000 (1 expert @ 40,000). Ouptut 2.1). • Expert in Forestry, Biology, Agronomy or related field to continuously monitor production in all territories and ensure access to market for products, including the prospection of potential buyers and new markets. US$ 100,000. (1 expert @ 20,000/year for 5 yrs). (Output 2.1)
(15)	71600 Travel US$170,000 for: • Quantify and map production. US$ 20,000 (Output 2.1) • Development and evaluation of best practices use with partners from other institution and Project Local Committees. US$ 62,000 (Output 2.1) • Travel to define production approaches and testing equipment for NTFP and AFS to be developed by project. US$ 30,000. (Output 2.1) • Special travel of specialists to discuss and develop contract with producers companies (commercialization channels. US$ 24,000 (Output 2.2) • Travel of specialists to cooperatives processing NTFP and AFS to collect information on bottlenecks and deliver technical assistance on value added opportunities for NTFP. US$ 10,000 (Output 2.2) • Meetings to collect information with banks and to develop papers on bottlenecks and opportunities for financing NTFP and AFS. US$ 24,000 (Output 2.3)
(16)	72100 Contractual Services US$ 129,260 to manufacture prototypes of equipment developed by project team for testing in the field to improve production to increase market value and access (Output 2.1)
(17)	72300 Materials and Goods US$185,000: Materials and transport expenses (fuel, tolls) for trips to intervention areas to implement and for technical supervision of all activities in the Territories related to achievement of Outcome 2. All Territories are located far away from Embrapa units that can only be reached by boats and vehicles to be provided almost exclusively by co-funding but with high consumption of fuel. Given the size of CT, travel within the areas will also be significant to mobilize and ensure project activities access to remote areas.
(18)	72500 Supplies US$106,415: Acquisition of parts, components, materials for the development/adaptation of equipment and chemicals for development/adaptation of products to aggregate value to NTFP and AFS and mapping of production Output 2.1.
(19)	72800 Equipment US$ 230,000 for: • Kits of computer, printer, scanner, data show for project offices within Territories for all project activities in the 6 territories. US$ 80,000. (Output 2.1) • Vehicle 4x4 for field work US$ 70,000 (Output 2.1). The vehicle will be assigned to the PMU and for all activities in the CT Alto Rio Pardo, which is located 1,000 km from Brasilia and is the only means of transportation to reach and effectively circulate in the CT, given that the territory does not have nearby airports. Embrapa units will be providing many vehicles and boats to be used to reach Territories and execute project. However the Territory of Alto Rio Pardo is the farthest from Embrapa units, and the vehicle of the team working in this region is old and not reliable for use. • Equipment to be purchased for adaptation by Embrapa teams to improve NTFP harvesting of fruits (US$ 15,000); extraction of seeds, powder and charcoal production, (US$ 40,000) and oil extraction (US$ 25,000). Total US$ 80,000 (Output 2.1).

No.	Budget notes
(20)	Professional services: (US$12,907) Corresponds to project audits and other relevant professional services required for the achievement of the Outputs under this Outcome.
(21)	74200 Audiovisual & Printing US$100,000 for: • Publication of materials and documents related to the results of project: booklets, manuals, leaflets, posters, videos, and radio and TV programs for rural and technical extension (Output 2.1).
(22)	75700 Training US$254,000 for: • Dissemination of best practices. US$ 84,000 (Output 2.1), • Participation of members in the platform connecting producers and buyers; US$ 140,000 along 5 years (Output 2.2) • Technical tours aimed to credit and finance institution manager to project sites to know about successful experiences. US$ 30,000 (Output 2.3).
Project Management	
(23)	71400 Contract Services US$150,000: Project Manager responsible for the managerial and planning requirements of the project, including those related to project management and funding. (Corresponding to approximately 38% of the consultant's time, this excludes cost of provision of technical expertise for component 1). Expert responsible for administrative and financial management of the Project. US$ 75,000 (US$15,000/year for 5 years)
(24)	71600 Travel US$30,000 for Participation of members of Board of Directors annual meeting; Inception workshop; Monitoring visits to the territories; Audits; Lessons learned; and Project terminal report
(25)	72300 Materials and Goods US$ 7,500 Materials and transport expenses (fuel, tolls) for trips related to technical supervision of all activities related to project
(26)	72500 Supplies US$12,610 general expenses of small value for PMU office.
(27)	74200 Audiovisual & Printing USSS$4,500. Publication of materials and documents related to the project (folder and leaflets)
(28)	74599 Direct Project Costs US$ 55,130

SECTION IV: ADDITIONAL INFORMATION

PART I: Other agreements. Please refer to separate file

The Letters of Cofinancing are attached as separate files.

PART II: Terms of References for key project staff (Project Management Unit)

i. Project Manager

The Project Manager will act as the head of the Project Management Unit (PMU) and will be responsible for overall project implementation and the general guidance and supervision of the PMU staff. The Project Manager will work under the supervision of the National Project Technical Coordinator designated by EMBRAPA, and will coordinate with other concerned stakeholders to ensure adequate project implementation. He/she will report to the Project Board.

The Project Manager shall run the Project on a day-to-day basis on and his/her prime responsibility shall be to ensure that the project produces the result specified in the project document, to the required standards of quality and within the specified constraints of time and cost. S(he) will be a person with significant experience related to the scope of the project in addition to strong management skills. S(he) will provide overall managerial direction and leadership for the project, working closely with Institutions represented in the Project Advisory Committee (PAC), the Technical Committee and key stakeholders. In addition on a part time basis the incumbent will be chief technical advisor providing technical oversight and direction to key outcomes.

Main duties and responsibilities:

- To provide overall project coordination and M&E for the achievement of the Project outcomes and objectives, based on RBM.
- To manage day-to-day implementation of the project, coordinating project activities in accordance with the rules and procedures of UNDP and based on the general guidance provided by the PB;
- To establish the PMU´s internal working procedures and coordination mechanisms with UNDP, Project Advisory Committee, the Technical Committee and other key stakeholders.
- To ensure adequate inter-institutional coordination and stakeholder participation mechanisms during project implementation.
- To prepare the annual workplans and budgets and submit them for approval of the PAC.
- To supervise the activities of the PMU staff and EMBRAPA staff assigned to the project, including analysis and approval of workplans and activity reports.
- Ensure adequate compliance of project implementation with UNDP-GEF procedures.
- To prepare six-monthly Project Progress Reports (PPR) and assist UNDP in preparing annual Project Implementation Reports (PIR).
- Supervise drafting of TORs for project activities, analyze and approve technical reports.
- Carry out visits to the project stakeholders as part of the overall supervision of project implementation and prepare visit reports.
- To work closely with the UNDP offices in the region and EMBRAPA units in organizing and providing technical and logistic support and coordination to all missions and assignments by international and national consultants.

Profile: At least 15 years of experience in project management and implementation, as well as significant direct experience related to the scope of the project; experience in environmental governance and capacity building issues is highly desirable; leadership as well as strong management and interpersonal skills; computer skills; high flexibility and capacity to work under pressure.

ii. M&E Specialist (part-time)

The M&E Specialist will be responsible for design, coordination and implementation of the project´s M&E plan. The specialist will work under the supervision of the Project Manager and will coordinate with EMBRAPA as well as other concerned stakeholders to ensure adequate implementation of the M&E plan.

Main duties and responsibilities:

- Design the project's internal M&E system, taking into account the M&E instruments (results framework, workplan and timetable) and implement the M&E Plan.
- Supervise the collection of M&E information by EMBRAPA units and other relevant stakeholders.
- Undertake field visits to the intervention areas to support EMBRAPA units and other relevant stakeholders in M&E.
- Comply with PMU internal working procedures and agreed coordination mechanisms, ensuring adequate compliance of project implementation with UNDP/GEF procedures.
- Hold regular coordination meetings with the Project Manager and participate in meetings with EMBRAPA units as well as those of the Project Advisory Committee.
- Provide support to the Project Manager and EMBRAPA for preparation of the annual workplans and budgets.
- Provide support to the Project Manager and UNDP for preparation of project progress reports as required by UNDP/GEF (six-monthly Project Progress Reports and annual Project Implementation Review)
- Provide support to Mid-Term and Final External Evaluations.
- Provide support to systematization and dissemination of project results and lessons learned.

Profile: At least 2 years of working experience with significant direct experience related to M&E; experience in project cycle management is highly desirable; computer skills; initiative and responsibility; teamwork ability, high flexibility and capacity to work under pressure.

iii. Project Administrative/Finance Assistant

The administrative/finance assistant will be stationed in the PMU and will provide support to the Project Manager (PM) in management and administration of the project. S(he) will be responsible for project administrative and financial management. In addition on a part time basis the incumbent will provide logical support to delivery of technical components of the project. The AFA will work under the supervision of the PC and will coordinate with UNDP and EMBRAPA to ensure adequate project management.

Main duties and responsibilities:

- Ensure adequate administrative and financial management in accordance with UNDP procedures.
- Hold regular meetings with the PM regarding management issues and maintain regular contact with UNDP and EMBRAPA on administrative and financial issues.
- Draft correspondence related to administrative and financial issues.
- Provide assistance in preparing annual workplans and budgets.
- Monthly accounts and financial reports, and bookkeeping.
- Prepare disbursement requests and keep track of project disbursements.
- Procurement of goods and services, including preparation of bidding documents, specifications and contracts.
- Management of administrative, accounting and financial files
- Provide support to project audits and external evaluations.

Profile: At least 5 years of experience in accounting and financial matters; experience in project administrative and financial management; acquaintance with UNDP procedures is highly desirable; computer skills; initiative and responsibility; teamwork ability, high flexibility and capacity to work under pressure.

PART III: Stakeholder Involvement Plan

The purpose of the stakeholders' involvement plan is to establish adequate channels for information, communication and consultation, based on a dynamic interaction between formal spaces established through the project including the Project Board, Project Management Unit, Technical Committee and Local Committees, and the public in general.

Stakeholders include, but are not limited to MMA (Ministry of Environment), MDA (Ministry of Rural Development), MDS (Ministry of Social Development), MAPA (Ministry of Agriculture, Livestock and Supply), CONAB (National Company of Food Supply), ICMBio (Chico Mendes Institute for Biodiversity Conservation), SFB (Brazilian Forest Service), OEMAS (Environmental State Organizations), ANATER (National Agency for Technical Support and Extension), NGOs (non-governmental organizations, Rural workers Cooperatives, and rural workers union and associations).

Stakeholder participation during project implementation

The project management structure will ensure participation of key stakeholders during project planning, implementation and M&E. The Project Advisory Committee is made up of the political and technical representatives of the executing and implementing agencies and representatives of CSOs and will provide overall guidance for project implementation. Other stakeholders may be invited to participate in the Project Advisory Committee meetings where deliberation, negotiation, elaboration of strategic guidelines and approval of work plans will take place.

EMBRAPA, as lead institution, will be responsible to coordinate the development of the outcomes and outputs ensuring participation and collaboration of other stakeholders involved, including leading the participatory planning of the Annual Work Plan (AWP); convening meetings of the stakeholders to plan and implement the foreseen activities; negotiating agreements between stakeholders; reporting of project progress to the Technical Committee and the Project Board. The PMU and the Technical Committee will oversee and support EMBRAPA and the Local Committees in preparing the AWP. The PMU will consolidate these operational plans into the project's general AWP, which will be analyzed, validated and approved by the Project Board, and later socialized to the public in general.

The Local Committees will ensure adequate planning and implementation of activities in line with the project objectives and local development and stakeholder priorities, as well as complementarity with ongoing and planned programs and projects. The Project Advisory Committee, Technical Committee, Project Management Unit and Local Committees will be closely linked, ensuring in this manner that stakeholder concerns are up-streamed into higher project management levels and likewise project management decisions and their impacts on the region are down-streamed to keep stakeholders duly informed.

The project will implement several approaches to stakeholder buy-in and involvement in project implementation:

- The Local Committees will include a representative from the Territorial Joint Committees of each CT[26]. This will provide the opportunity for keeping the Territorial Committees informed of project strategic

[26] The Territorial Joint Committees are made up of government and civil society representatives in each CT, and act as a space for discussion, planning and execution of actions for the territory's development.

directions and advances that are of specific relevance to stakeholders and at the same time identify demands and opportunities for joint actions.

- Coordination with ongoing and planned programs and projects for replication and upscaling of experiences and lessons learned.
- The project´s training and outreach programs (Output 1.3) will make use of both bottom-up and top-down approaches, integrating the different points of view of the local stakeholders and beneficiaries as well as those of the institutions, authorities and decision makers.
- On the ground interventions selected by the project will serve the purpose of demonstrating that the alternative sustainable management practices to be promoted are feasible, cost-effective, and will deliver greater benefits with their adoption compared to the conventional practices.
- The project will follow a bottom-up approach to community involvement (farmers and traditional peoples and their organizations) by building on community and farm level lessons learning. More specifically, community involvement will be key to implementation of activities under Outputs 1.1 (environmental safeguards) and 2.1 (improved NTFP supply and AFS production) where communities will contribute to the project´s ground work by working alongside technicians to quantify and map production and production areas, identify and select the most promising products, determine sustainable harvesting limits, identify current practices and technologies and developing best practices and more appropriate technologies to ensure sustainable management succeeds. Communities will also be involved in providing information to construct the data system under Output 1.5, which will consolidate information produced by the project, and will serve to design research and technical assistance programmes best suited to producers´ needs and replicate the project´s lessons. Achievement of these outputs will in turn allow for better informed policies and decision making, as well as mainstreaming BD related issues into the existing Government instruments (Minimum Price Policy, Food Acquisition and School Food Programmes), hence ensuring that community concerns and inputs are duly considered.
- The project will establish platforms (Output 2.2 – market access) to connect buyers and sellers and improving market access and provide a forum through which stakeholders can provide inputs to best practices and policies.
- Project M&E through several mechanisms provided for by the project such as: (i) follow-up meetings of platforms; (ii) Project Board reviews; (iii) national workshops for verification of indicators, with the participation of local and national stakeholders, as well as representatives from the project's direct beneficiaries. The AWP will be the main M&E instrument, which implementation shall be assessed with stakeholder participation. Progress towards meeting objectives shall be evaluated including products, quality and timing using adequate participatory tools that provide pertinent inputs to adjust project implementation strategy.

PART IV: Annexes

Annex 1: Risk Log Matrix

Annex 2: Description of the selected Citizenship Territories

Annex 3: Maps of the selected Citizenship Territories (See separate file)

Annex 4: Problem analysis of 12 selected NTFP species

Annex 5: Biological Monitoring Plan

Annex 6: Capacity Scorecard

Annex 7: GEF Tracking Tools (See separate file)

Annex 8: Safeguards (See separate file)

Annex 1: Risk Log Matrix

OFFLINE RISK LOG

Project Title: *Mainstreaming Biodiversity Conservation and Sustainable Use into NTFP and AFS production practices in Multiple-Use Forest Landscapes of High Conservation Value*	**Award ID: 00083645** **Project ID: 00092021**	**Date: September 2014**

#	Description	Da	Type	Im	Countermeasures / Mngt response	Owner	Sub	Last	St
1	Governmental policies and programmes do not mainstream project results and lessons learned	04/2014	Political	3 Medium	Key Ministries will be Project Board Members. Federal and state governmental institutions will be involved as project partners. Participation of federal and state government institutions and CSOs in the Local Committees. Platforms will help convene and coordinate public and private sectors. Capacity building and awareness raising.	Rosenely Diegues	Rosenely Diegues	04/2014	
2	Governmental priorities change drastically reducing the support for use of biodiversity products.	04/2014	Political	4 Low	The project will fill in information and knowledge gaps to better understand the value of biodiversity. Will develop technology and mechanisms to increase sustainable flows of socio-economic benefits that will contribute to livelihoods, thus enhancing the level of awareness at different levels of society, and helping to reinforce public policies.	Rosenely Diegues	Rosenely Diegues	04/2014	
3	The Ministries (MMA, MDS, MDA and MAPA) and public agencies (ICMBio and CONAB) do not allocate sufficient budgets to implement their commitments.	04/2014	Institutional	5 Medium	The project will negotiate and advocate for timely planning and management of institutional budgets. The Ministries will participate in the Project Board. Constant contact with managerial staff of the ministries and related institutions will contribute to ensure a timely allocation of funds.	Rosenely Diegues	Rosenely Diegues	04/2014	
4	Difficulties to coordinate Project implementation within EMBRAPA due to different perceptions and priorities in different EMBRAPA units.	04/2014	Institutional	2 Medium	EMBRAPA units participated in project design; their missions, roles and work in the intervention areas have been taken into account in defining their participation. Involvement of EMBRAPA Headquarters in the Project Board and units in Local Committees will help minimize conflicts.	Rosenely Diegues	Rosenely Diegues	04/2014	

#	Description	Da	Type	Im	Countermeasures / Mngt response	Owner	Sub	Last	St
5	Lack of interest of small farmers and traditional peoples and communities to adopt sustainable management practices	04/2014	Institutional	2 Medium	Organizations will participate in the Local Committees and Platforms. Participatory approaches will be used to promote engagement in activities (e.g. use of local knowledge, identifying best practices, developing technologies, field demonstrations, training, policy discussions, and market access).	Rosenely Diegues	Rosenely Diegues	04/2014	
6	Staff turnover due to changes in the high directions of ministries and their institutions	04/2014	Institutional	2 Low	Staff of key institutions participated in meetings during project preparation. In the event of significant changes, the project will inform new staff and raise awareness on the project	Rosenely Diegues	Rosenely Diegues	04/2014	
7	Climate change does not affect biodiversity in reserves, communal, private and rural settlement areas.	04/2014	Institutional	2 Low	Development and dissemination of sustainable management practices and technology that will reduce pressure on forests as well as increase connectivity and effectiveness of protected areas within the landscape, thus contributing to increase forest resilience in the long run.	Rosenely Diegues	Rosenely Diegues	04/2014	
8	Lack of interest of credit and financial institutions on NTFP and AFS production	04/2014	Financial	4 High	Awareness raising on the value of biodiversity. Undertake financial assessments to demonstrate the feasibility of adjusting credit instruments. Technologies developed will help increase investment returns and generate interest.	Rosenely Diegues	Rosenely Diegues	04/2014	
9	Lack of interest of potential buyers in buying NTFP and AFS products from the Territories targeted by the project.	04/2014	Market	4 Low	The project will set up platforms that connect suppliers to buyers. It will work with the public and private sector to improve the commercialization channels increasing sustainable purchases by public programmes (PAA, PNAE, PGPMBio) and securing contracts with private buyers.	Rosenely Diegues	Rosenely Diegues	04/2014	

Annex 2: Problem analysis for the 12 selected species

Species	**Problems** (high, medium, low) high = long way to solve the problem / low = no major problems											
	Environmental Safeguards			Reliability, quality and diversity of NTFP supply and AFS production						Market access	Credit and financing	Capacities
	Species ecology	*Pre-harvest*	*Harvest*	*Transportation*	*Processing*	*Reliability of production*	*Quality of production*	*Productivity*	*Commercial products*			
Pequi	Low	Medium	Medium	Medium	Medium	High	Medium	No	Medium	Medium	High	High
	Reasonably known ecology *Harvesting limit unknown*	*Use of fire during the dry period when the plant produces young flowers and fruits resulting in total loss of production in affected areas*	*Where there is much competition for harvesting, non-traditional harvesters collect the fruits from the tree causing injuring and breaking branches, and collecting unripe fruits, which do not have the same quality as the fallen fruits collected from the ground*	*Lack of appropriate packaging for transportation from the field to the processing units*	*Processing facilities do not meet sanitary requirements* *Inadequate equipment for extraction of oil* *Use of inadequate utensils (PET bottles) to store pulp for selling at the roadsides*	*Local natural variations that can be minimized due to availability of production at regional and national level*	*Sanitary issues as a result of inadequate processing units in communities (see processing)*	*Density and productivity of plants vary naturally among populations* *Land use intensifies variation since older (and more productive) trees are left in the pastures*	*Pulp and seed oil (only used in rural communities)* *Natural and preserved fruits (most commonly offered products)*	*Middlemen (less income but secure commercialization)* *Dispersed and unorganized producers lack Market access* *Variation in production limits commercial commitments by buyers* *Production capacity at regional or community level is unknown (lack of mapping)* *Incipient dissemination and marketing of products*	*Non-existent for NTFPs* *Activity is marginal within farmers´ incomes* *Limited and uncertain access to harvesting areas; harvesting usually done in own lands (small), third party lands (with or without permission) or community lands* *Needs technology to add value* *Lack of technical indices to analyze economic*	*Lack of adequate training material for technical assistance* *Low capacity of technicians* *Inadequate academic training of extension technicians*

Species	**Problems** (high, medium, low) high = long way to solve the problem / low = no major problems											
	Environmental Safeguards			Reliability, quality and diversity of NTFP supply and AFS production						Market access	Credit and financing	Capacities
	Species ecology	*Pre-harvest*	*Harvest*	*Transportation*	*Processing*	*Reliability of production*	*Quality of production*	*Productivity*	*Commercial products*			
										Quality is affected by harvesting and transportation issues (see processing and transportation)	*feasibility*	
Araticum	Medium	Low	Low	Low	Medium	High	Medium	No	Medium	Medium	High	High
	Reasonably known ecology *Harvesting limit unknown*					*Local natural variations that can be minimized due to availability of production at regional and national level*	*Fruit attacked by pests and diseases that reduce production*	*Density and productivity vary naturally between populations*	*Fruit (main product)* *Pulp and jelly*	*Middlemen (less income but secure commercialization* *Dispersed and unorganized producers lack market access* *Lack of adequate equipment to enable processing in properties and add value* *Variation in*	*Non-existent for NTFPs* *Activity is marginal within farmers´ incomes* *Limited and uncertain access to harvesting areas; harvesting usually done in own lands (small), third party lands (with or without permission) or community lands*	*Lack of adequate training material for technical assistance* *Low capacity of technicians* *Inadequate academic training of extension technicians*

Species	**Problems** (high, medium, low) high = long way to solve the problem / low = no major problems											
	Environmental Safeguards			Reliability, quality and diversity of NTFP supply and AFS production						Market access	Credit and financing	Capacities
	Species ecology	*Pre-harvest*	*Harvest*	*Transportation*	*Processing*	*Reliability of production*	*Quality of production*	*Productivity*	*Commercial products*			
										production limits commercial commitments by buyers *Production capacity at regional or community level is unknown (lack of mapping)* *Incipient dissemination and marketing of products*	*Needs technology to add value* *Lack of technical indices to analyse economic feasibility*	
Coquinho Azedo	Medium	High	High	High	High	High	Medium	No	Low	Medium	High	High
	Reasonably known ecology *Harvesting limit unknown*	*Cattle eat flowers, leaves and Young fruits during the dry season reducing productivity*	*Bunches must be harvested at exact maturation point to reduce losses (need dissemination of best practices)* *Inadequate post-harvest storage (needs improvement*	*Inadequate techniques and packaging to pile fruits* *Occasional and irregular runoff of production reduces quality due to disperse production and perishability*	*Processing facilities do not meet sanitary requirements* *Little access to appropriate equipment for extraction of pulp (high cost and lack of knowledge)*	*Local natural variations that can be minimized due to availability of production at regional level*	*Sanitary problems due to inadequacy of processing units in communities (see processing)* *Perishable fruits*	*Density and productivity vary naturally between populations*	*Pulp*	*Middlemen (less income but secured commercialization* *Dispersed and unorganized producers lack Market access* *Variation in production limits*	*Non-existent for NTFPs* *Activity is marginal within farmers´ incomes* *Limited and uncertain access to harvesting areas; harvesting usually done*	*Lack of adequate training material for technical assistance* *Low capacity of technicians* *Inadequate academic training of extension technicians*

Species	**Problems** (high, medium, low) high = long way to solve the problem / low = no major problems											
	Environmental Safeguards			Reliability, quality and diversity of NTFP supply and AFS production						Market access	Credit and financing	Capacities
	Species ecology	*Pre-harvest*	*Harvest*	*Transportation*	*Processing*	*Reliability of production*	*Quality of production*	*Productivity*	*Commercial products*			
			and best practices to obtain complete maturation of bunches)	*of fruits (see harvest)*						*commercial commitments by buyers* *Production capacity at regional or community level is unknown (lack of mapping)* *Incipient dissemination and marketing of products* *Quality is affected by harvesting and transportation issues (see processing and transportation)*	*in own lands (small), third party lands (with or without permission) or community lands* *Needs technology to add value* *Lack of technical indices to analyze economic feasibility*	
Maracujá do mato – 2 species	Low	High	Medium	Medium	Medium	High	Medium	No	High	High	High	High
	Little known ecology / little ongoing research	*Cattle eat plants and damage production* *Use of fire compromises fruit production*	*Maturation of fruits is not uniform* *Populations occur in small patches with*	*Packaging*	*Facilities, equipment*	*Natural variations*	*Perishable fruits*	*Studies needed to determine production*	*Pulp* *Jelly*	*Informal and irregular*	*Non-existent*	*Lack of adequate training material for technical assistance* *Low*

Species	**Problems** (high, medium, low) high = long way to solve the problem / low = no major problems											
	Environmental Safeguards			Reliability, quality and diversity of NTFP supply and AFS production						Market access	Credit and financing	Capacities
	Species ecology	*Pre-harvest*	*Harvest*	*Transportation*	*Processing*	*Reliability of production*	*Quality of production*	*Productivity*	*Commercial products*			
			few plants									*capacity of technicians* *Inadequate academic training of extension technicians*
Veludo	Medium	Low	Low	Low	Low	High	Low	No	Low	low	High	High
	Unknown ecology *Harvesting limit unknown* *In over-exploited areas management of resprouts is necessary*					*Most populations depleted due to overharvesting and still recovering*		*Density and productivity vary naturally between populations*	*Trunks used for rural constructions*	*Dispersed and unorganized producers lack Market access* *Production capacity at regional or community level is unknown (lack of mapping)*	*Non-existent* *Activity is marginal within farmers´ incomes* *Needs management and scientific knowledge to add value* *Lack of technical indices to analyse economic feasibility*	
Babaçu	Medium	Medium	High	High	High	Medium	Medium	No	High	High	High	High
	Reasonably known ecology. No conclusive studies on factors affecting	*Use off ire in agriculture hinders or delays production*	*Access to resources varies. The Free Babaçu Act allows free access but the law is*	*Disperse production and large volume difficult transportation from the*	*Many coconut breaking devices have been developed unsuccessfully because they did not take into*	*Natural variations throughout the year; but should not be a limiting factor due to*	*Products could be being contaminated by agro-chemicals in pasture areas (that use chemical*	*Productivity of palm trees varies between populations and ecological*	*Potential is little used:* *- Kernels: raw material for oil* *- Mesocarp flour*	*Kernels are traditionally marketed through middlemen*	*Non-existent for extractive products. Income is significant for more vulnerable*	*Training of local technicians is implemented but there is a lack of job*

Species	**Problems** (high, medium, low) high = long way to solve the problem / low = no major problems											
	Environmental Safeguards			Reliability, quality and diversity of NTFP supply and AFS production						Market access	Credit and financing	Capacities
	Species ecology	*Pre-harvest*	*Harvest*	*Transportation*	*Processing*	*Reliability of production*	*Quality of production*	*Productivity*	*Commercial products*			
	productivity of coconuts *Further studies needed on conditions to reach second climax (in secondary forest) and associated ecosystem services* *Management practices need to be studied to maintain more productive populations and ensure reposition of palm trees* *Considered as an invasive species by other types of land users*	*Empirical observations indicate that production is lower when palm density is high*	*not fulfilled in most places* *In private areas with restricted access the bunches are often cut whole, damaging the volume / quantity harvested*	*field.* *Privatization of harvesting areas and fences difficult the entry of donkeys traditionally used to transport fruits. Coconuts are transported by the harvesters themselves* *Need to develop prototypes of trailers for motorcycles to improve performance of transportation from the field to processing units* .	*account the features desired by the harvesters* *Large variations in products (coconuts) and high density of the endocarp difficult mechanization* *Manual splitting of coconut is hard and associated with health problems; however is a relevant identity issue of female harvesters* *Due to the high use value of products, mechanization must take into account local and industrial uses* *Equipment must have a low maintenance cost and easy replacement of parts* *Small scale oil*	*abundance of production, as long as a storage strategy is developed* *Impact of large industries that buy whole coconuts should be studied*	*control of weeds)* *A differentiated process is needed for the mesocarp, from harvesting to storage and processing; therefore availability of quality mesocarps for human consumption is low* *Machines for mechanical splitting produce highly fragmented kernels and a low quality mesocarp flower for human consumption* *Coconut splitting generally has a high level of impurities that damages the processed yield*	*conditions; determining factors are little known* *Productivity per area has even larger variations since it depends on density of palm trees and management practices (use of fire, cutting of leaves, etc.)* *Lack of productivity indices for densities and specific consortiums, to assess economic viability* *Inconsistent data on productivity in literature.*	*for food, medicinal and cosmetic use.* *- Oil for food (home production)* *- babaçu milk for food (home production)* *- Oil (industry) for cosmetics, soaps, food* *- Cake (sub-product of oil extraction) for animal feed* *- Leftovers from oil extraction for fertilizer* *- Charcoal from the endocarp, used as fuel for cooking in rural homes* *- Fibers for handcrafts* *- Leaves and stems for roofs and constructions* *- Rotting stems as fertilizer*	*Only one Cooperative (COPPALJ) processes and exports certified organic oil* *Producers are relatively well organized* *Oil is loosing markets to other competing products* *High quality renewable charcoal, but little used by industries*	*families, although Bolsa Familia is also providing incomes* *PGPMBio is recognized as an adequate instrument, but still has a limited scope and operational problems (delays in payments)*	*opportunities and they migrate to other areas or cities* *Lack of stimuli and training materials to complete high school* *Historically very little interaction with research institutions* *Lack of interest of youths in working with babaçu, often associated with the only option of who does not have other choices*

Species	**Problems** (high, medium, low) high = long way to solve the problem / low = no major problems											
	Environmental Safeguards			Reliability, quality and diversity of NTFP supply and AFS production						Market access	Credit and financing	Capacities
	Species ecology	*Pre-harvest*	*Harvest*	*Transportation*	*Processing*	*Reliability of production*	*Quality of production*	*Productivity*	*Commercial products*			
					extraction machinery is non existent *Sanitary requirements for processing of mesocarp flour are cumbersome for Family based initiatives*							
Brazil nut	Medium	Low	High	High	High	High	High	Yes	Medium	Medium	High	High
	Reasonably known ecology. Harvesting limit unknown	-	*Security* *Contamination by fungi*	*Contamination by fungi*	*Facilities, equipment*	*Natural variations*	*Contamination by fungi*			*Oligopoly*		
Andiroba	Medium	Medium	Medium	Medium	High	High	High	No	Medium	High	High	High
	Reasonably known ecology *Harvesting limit unknown*	*Census needed to plan harvesting* *Management of forest with açai*	*Seeds that fall to the ground are eaten or diseased by fungi (method is needed)* *Presence of snakes in wetland environments (individual protection equipment needed)*	*Inadequate methods and packaging for oil* *Occasional and irregular runoff of production reduces quality due to disperse production (see harvest)*	*Inadequate facilities for oil extraction* *Extraction methods need improvement* *Inadequate equipment (press and utensils for use at community level may be adapted)*	*Local natural variations that can be minimized due to availability of production at regional level*	*Sanitary problems due to inadequate processing in communities (see processing)* *Quality of oil is variable depending on extraction method* *Adulterations (mixing with soy oil to increase volume)* *Quality assurance through community certification*		*- Oil for industrial medicines and cosmetics* *- Oil for small scale manufacturing of soaps, medicines and insect repellents*	*Market restricted to few companies* *Production commercialized through middlemen* *Producers are disperse and unorganized to access markets (lack of or incipient leadership)*	*Non-existent for NTFPs* *Activity is marginal within farmers´ incomes* *Limited and uncertain access to harvesting areas; harvesting usually done in own lands (small), third party lands*	*No technical assistance present in regions of production* *Lack of training material* *Low level of training of technicians* *Inadequate academic*

Species	**Problems** (high, medium, low) high = long way to solve the problem / low = no major problems											
	Environmental Safeguards			Reliability, quality and diversity of NTFP supply and AFS production						Market access	Credit and financing	Capacities
	Species ecology	*Pre-harvest*	*Harvest*	*Transportation*	*Processing*	*Reliability of production*	*Quality of production*	*Productivity*	*Commercial products*			
										Variation in production limits commercial contracts *Unknown production capacity at region or community level (lack of mapping of production)*	*(with or without permission) or community lands* *Needs technology to add value* *Lack of technical indices to analyze economic feasibility*	*training of extension technicians*
Açai	Low	Medium	High	High	High	High	High	Yes	Medium	Medium	High	High
		Inadequate technology for sustainable management *Needs management of forests as a whole*	*Security: needs use of protection equipment against snakes and for climbing trees* *Requires ability to climb trees (Young and Strong people), needs development of equipment for harvesting and*	*Perishability* *Inadequate stocking (difficult to stock in ships)* *Sanitary contamination (needs development of best practices in properties)*	*Inadequate facilities for production of pulp and palm heart* *Inadequate equipment (press and utensils for use at community level may be adapted)* *Manufacturing best practices: technology is available in cities but needs to be adopted*	*Local natural variations that can be minimized due to availability of production at regional level*	*Sanitary problems (need to define quality standards for domestic and international markets for pulp)* *Sanitary contamination (needs development of best practices in properties)*		*Pulp* *Heart palm*	*Depends on the distance to markets (perishable product and transportation increases costs)*	*Through BASA, albeit difficult to access due the absence in the region of agencies and technicians to prepare projects* *Technical indices exist but need to be improved*	*Technical assistance is non existent or incipient in production regions* *Lack of training material* *Low level of training of technicians* *Inadequate academic training of extension*

Species	**Problems** (high, medium, low) high = long way to solve the problem / low = no major problems											
	Environmental Safeguards			Reliability, quality and diversity of NTFP supply and AFS production						Market access	Credit and financing	Capacities
	Species ecology	*Pre-harvest*	*Harvest*	*Transportation*	*Processing*	*Reliability of production*	*Quality of production*	*Productivity*	*Commercial products*			
			threshing *Sanitary contamination (needs development of best practices in properties)*		*Sanitary contamination (needs development of best practices in properties)*							*technicians*
Umbu	Medium	High	High	High	High	High	Medium	Yes	Medium	High	High	High
	Reasonably known ecology *Harvesting limit unknown*	*Goats compromise regeneration* *Larval stage of beetle Amblycerus dispar destroys seed embryo impeding germination*	*Highly perishable fruits* *Breaking of branches, collection of unripe fruits* *Damaging of adult trees due to withdrawal of xilopods*	*Highly perishable fruits*	*Sanitary contamination (needs development of best practices in properties)*	*Production is concentrated in 2 months per year (typical of the species)*	*Sanitary problems (need to improve methods and define quality standards for domestic and international markets for pulp)*	*Density and productivity of plants vary naturally within and between populations* *Land use intensifies variation and only adult trees are left in cleared areas*	*Pulp* *Jelly* *Marmalades*	*Generally informal* *Cooperative model is being adopted to establish small scale factories with products accessing regional markets and exceptionally international*	*Non-existent*	*Lack of training material* *Low level of training of technicians* *Inadequate academic training of extension technicians*
Licuri	Medium	High	High	High	High	Medium	Low	No	Medium	High	High	High
	Reasonably known ecology *Harvesting limit unknown*	*Fire*		*Packaging* *Contamination*	*Facilities, equipment*	*Natural variations*	*Sanitary problems*		*Kernels* *Oil* *Hats*	*Informal and irregular*	*Non-existent*	

Annex 3: Description of Citizenship Territories (Project intervention areas)

1. Cerrado Biome

Citizenship Territory Alto Rio Pardo – Minas Gerais State: Alto Rio Pardo has a surface area of 16.502,30 km² and stretches across 15 municipalities: Berizal, Montezuma, Ninheira, Novorizonte, Rubelita, Salinas, São João do Paraíso, Taiobeiras, Vargem Grande do Rio Pardo, Curral de Dentro, Fruta de Leite, Indaiabira, Rio Pardo de Minas, Santa Cruz de Salinas e Santo Antônio do Retiro. The total population is 192,118 people of which 86,210 live in the rural area (44,87%). Of these, 16,097 are family farmers, 30 families settled by the Land Reform Program and there is one Quilombola community. The average HDI of the CT is 0,65.

The CT has been identified as an area of extremely high/very high importance for biodiversity conservation and sustainable use, hosting a number of plant species that deserve special attention for their conservation including endangered ones: *Stenandrium hatschbachii*; *Ditassa cordeiroana*; *Hemipogon furlanii*; *Lychnophora granmogolensis*; *Mikania neurocaula*; *Wunderlichia azulensis*; *Brasilicereus markgrafii*; and *Pilosocereus floccosu*. Vulnerable species include *Baccharis pseudo-alpestris* and in critical state: *Comanthera brasiliana*; *Pseudotrimezia concave*. Similarly, species of the fauna are either endangered (e.g. *Sporophila cinnamomea*); vulnerable (e.g *Saimiri vanzolinii*; *Sporophila cinnamomea*; *Hypocephalus armatus*; *Leopardus tigrinus*; *Leopardus wiedii*; *Leopardus colocolo*; *Panthera onca*; *Puma concolor capricornensis*; *Puma concolor greeni* and in critical state *Sapajus xanthosternos* and *Dasyophthalma vertebralis*. Conservation Units occupy a small percentage of the territory and belong to protection categories. These are Serra Nova State Park (12.658,29 ha) and Montezuma State Park (1.743,2 ha). The Nascentes dos Gerais Sustainable Development Reserve (38.219,51 ha) is planned to be established.

There is a well-organized and active network of social, civil, productive, research and educational organizations such as the Center of Alternative Agriculture (CAA-NM); Grande Sertão Cooperative (CSG), the Rural Workers Union of Alto Rio Pardo (STTRRPM), other smaller cooperatives and workers unions, and the Federal Institute of the North of Minas Gerais (IFNM – Salinas campus). The Federal University of Minas Gerais (Montes Claros campus) and the State University of Montes Claros (Unimontes) also work in this area. Two EMBRAPA units, the EMBRAPA Genetic Resources and Biotechnology (Cenargen) and EMBRAPA Cerrados are very active in this and adjacent territories, working with NTFP and AFS production, especially Pequi, Mangaba, Baru, Coquinho Azedo, wild passionflower, and macaúba among others. This territory is part of the Local Productive Chain Fruits of the Cerrado promoted by the MMA, which aims to structure the production chain of Cerrado fruits.

Citizenship Territory Médio Mearim – Maranhao State: The CT has a surface area of 8,765.30 km² covering 16 municipalities: Bernardo do Mearim, Capinzal do Norte, Lima Campos, Santo Antônio dos Lopes, Esperantinópolis, Igarapé Grande, Joselândia, Lago da Pedra, Lago do Junco, Lago dos Rodrigues, Pedreiras, Poção de Pedras, São Luís Gonzaga do Maranhão, São Raimundo do Doca Bezerra, São Roberto e Trizidela do Vale. The total population is 262,320 inhabitants, of which 10,335 or 42.06% live in rural areas. There are 17,602 family farmers; 3,257 families settled by the Land Reform Program and 23 Quilombola communities. The CT is part of one of the poorest Brazilian regions with an average HDI of 0,59.

The CT has been classified of very high importance for biodiversity conservation and sustainable use; hosting vulnerable plant species such as *Zeyheria tuberculosa*, *Peltogyne maranhensis*, *Cedrela odorata* and *Pilocarpus alatus*. The *Cebus kaapori* monkey is listed as critical, and mammal species such as *Chrysocyon brachyurus*; *Speothos venaticus*; *Leopardus tigrinus* and *Leopardus wiedii* and the bird *Penelope jacucaca* are classified as vulnerable.

In this territory there is a well-organized and active network of social, civil, productive, research and educational organizations such as the MIQCB (Interstate Movement of Babaçu Coconut Breakers) with a strong political agenda for sustainable development and provides a strong gender-oriented social, economic and cultural support for babaçu breakers. The COOPALJ (Cooperative of Agroextractivis of Lago do Junco) works in organization of farmers, mainly women, and promotes capacity development and production; it produces organic certified babaçu oil and pie. ASSEMA (Association of Settlement Areas in the State of Maranhão) is made up by rural workers and women harvesters of babaçu coconut and promotes family production, using and preserving babaçu forests. Two EMBRAPA units, the EMBRAPA Eastern Amazon works with AFS in the territory, and the newly established EMBRAPA Cocais, which will begin to work with AFS and NTFP within the framework of the GEF project. Additionally, EMBRAPA Mid-North, with expertise on babaçu management will also join efforts in this territory. Together with other areas, this territory is part of MMA´s Local Productive Chain of Babaçu, which aims to structure the production chain of babaçu products.

2. Caatinga Biome

Citizenship Territory Sertão do São Francisco – Bahia State*:* The CT has a surface area of 61,750.70 km² spanning 10 municipalities: Uauá, Campo Alegre de Lourdes, Canudos, Casa Nova, Curaçá, Juazeiro, Pilão Arcado, Remanso, Sento Sé e Sobradinho. The total population is 494,624 inhabitants, with 494,624 people living in rural areas (36,12%). There are 31,768 family farmers, 2,371 families settled by the Land Reform Program, one Quilombola community and indigenous land. Its average HDI is 0,64.

The CT has been identified as an area of extremely high/very high importance for biodiversity conservation and sustainable use, with 20% of the territory covered by Conservation Units: APA Lago de Sobradinho (1,238,775.09 ha) and APA Dunas e Veredas do Baixo Médio São Francisco (1,025,227.71 ha). The main indigenous peoples´ lands are Ilhas da Tapera and São Félix and Porto Apolônio Sales (10.294.50 ha); Truk (4,314.22 ha) and Tumbalal (44,974.90 ha). Endangered plant species in this CT include *Griffinia gardneriana*; *Handroanthus spongiosus*; *Janusia schwannioides*; *Microtea bahiensis*; and *Pilocarpus trachylophus*, while vulnerable species include *Apuleia leiocarpa* and *Microtea papilosa*. Vulnerable animal species include *Thalasseus maximus*; *Pyrrhura leucotis* and *Conopophaga lineata cearae*, while *Cotinga maculate* is listed as endangered. The Lear's Macaw *Anodorhynchus leari* is classified as critical. This species forages mainly on seeds of licuri palm (*Syagrus coronata*) and umbu (*Spondias tuberosa*), two plant species included in the GEF project.

In this territory EMBRAPA Semiarido works in the development of semiarid lands, developing research in management of Caatinga wild species. AGHENDA is a very active NGO, also present in this territory, with a focus on gender, promoting the organization and productive inclusion of women. COPERCUC (Family Agribusiness Cooperative of Canudos, Uauá and Curaçá) promotes de socioeconomic development of family farming, and today operates with 450 families, in 18 communities, involved in the production of creamy, tablet and light sweets, jams, preserves and pulps for wild fruits, mainly umbu. Currently, it serves the domestic and international markets, with a production capacity of 200 tons of sweets, with a consolidated commercial and productive structure, and adding to the flavor and quality of its products, the work and history of a people who work in tune with nature. Together with other areas, this territory is part of the MMA´s Local Productive Chain Fruits of Caatinga, which aims to structure the production chain of Caatinga fruits.

Citizenship Territory Sobral – Ceará State: This CT covers 8,396.70 km² and 17 municipalities: Alcântaras, Frecheirinha, Graça, Groaíras, Meruoca, Mucambo, Pacujá, Reriutaba, Santana do Acaraú, Cariré, Coreaú, Forquilha, Massapê, Moraújo, Senador Sá, Sobral e Varjota. The total population is 450,391 inhabitants, with 128.767 living in the rural area (28.59%). There are 21,484 family farmers, 1,000 families settled by the Land Reform Program and one Quilombola community. The average HDI is 0,65.

The CT has been classified as of extremely high importance for biodiversity conservation and sustainable use. Plant species such as *Cedrela odorata*; *Zeyheria tuberculosa*; and *Guzmania monostachia* are listed as vulnerable in the Red List. Vulnerable animal species listed by ICMBio include *Adelophryne baturitensis*; *Carduelis yarrellii*; *Leopardus tigrinus*; *Puma concolor greeni*; *Sclerurus scansor cearensis*; and *Xiphocolaptes falcirostris*; while *Adelophryne maranguapensis*; *Hemitriccus mirandae*; *Thamnophilus caerulescens cearensis* is endangered; and *Alouatta belzebul ululate* and *Pyrrhura griseipectus* are classified as critical. The main conservation units are the Sobral National Forest (661.01 ha); Ubajara National Park (6,271.2 ha); APA Serra da Meruoca (29,361.27 ha). The Quilombola Timbaúba covers 2,033,72 ha.

In this territory the network of social, civil, productive, research and educational include organizations such as ASA Ceará, a chapter of the regional level ASA (Articulação no Semi Árido), which leads the 1 Million Cistern Program and Cáritas Diocesana de Sobral. The Rural Workers Trade Union (Sindicato dos Trabalhadores e Trabalhadoras Rurais de Santana do Acaraú (STTR), and Instituto Caraúba are active in this territory. Present in this CT is the Federal University of Ceará, the State University Valley Acaraú (UVA) and the Federal Institute of Education, Science and Technology (IFC) has a campus in the city of Sobral. The EMBRAPA Semiarido supports R&D for agriculture and livestock in semiarid conditions, being present in this CT and the other two adjacent CTs.

3. Amazon Biome

Citizenship Territory Alto Acre e Capixaba – Acre State*:* The CT has a surface area of 15,347.50 km² and stretches across 5 municipalities: Assis Brasil, Brasiléia, Capixaba, Epitaciolândia e Xapuri. The total population is 67,465 inhabitants, with 24,643 living in the rural area (36,53%). There are 4,222 family farmers, 5,152 families settled by the Land Reform Program and 3 indigenous lands. The average HDI of the CT is 0,67.

The CT has been classified as of extremely high/high importance for biodiversity conservation. The main conservation units are Resex Chico Mendes (930,772.82 ha); Ecological Station Rio Acre (79,059.24 ha). Indigenous lands comprised within the CT are Mamoadate (312,831.38 ha), and Cabeceira do Rio Acre (79,048.22 ha). The territory hosts important species such as *Bertholletia excelsa* (targeted by the Project); *Swietenia macrophylla*; *Cedrela fissilis*; *Cedrela odorata*; *Virola surinamensis*; *Heteropsis flexuosa*; *Amburana acreana*; *Apuleia leiocarpa*; *Mezilaurus itauba*; and *Nectandra grisea* classified as vulnerable, and *Streblacanthus dubiosus*, which is endangered according to the Red List. Vulnerable fauna species include *Pteronura brasiliensis*; *Panthera onca*; *Leopardus tigrinus*; and *Leopardus wiedii*.

In this territory there is a well-organized and active network of social civil, productive, research and educational organizations. EMBRAPA Acre, an EMBRAPA unit with renown research and development in AFS and NTFP management, especially Brazil Nut, Açai, Andiroba and Copaiba. COOPERACRE (Central Cooperative of Extractivist Commercialization of Acre) processes Brazil Nut, Copaiba oil, rubber, and pulp from wild species.

Citizenship Territory Marajó – Pará State: The surface area is 104,606.90 km² and covers 16 municipalities: Santa Cruz do Arari, Afuá, Anajás, Bagre, Breves, Cachoeira do Arari, Chaves, Curralinho, Gurupá, Melgaço, Muaná, Ponta de Pedras, Portel, Salvaterra, São Sebastião da Boa Vista e Soure. The total population is 487,161 inhabitants of which 275,700 live in rural areas (56,59%). There are 423,034 family farmers, 14,618 families settled by the Land Reform Program; 18 Quilombola communitie.. Its average HDI is 0,63.

The CT has been classified as of extremely high/high importance for biodiversity conservation. It hosts *Jacqueshuberia quinquangulata*, an endemic species; while *Apuleia leiocarpa*; *Virola surinamensis*; *Hymenaea parvifolia* and *Cedrela fissilis* are listed as vulnerable in the Red List. *Chiropotes utahicki* is an endemic monkey, and *Guaruba guarouba*; *Amazona ochroce*phala; A. *xantholaema* and *Trichechus inunguis* are vulnerable fauna species, and *Trichechus manatus* is classified as in critical status. The main conservation units are Caxiuanã National Forest (317,735.30 ha); Resex RE Mapuá (94,462.94 ha); Resex RE Arióca Pruanã (83,775.12 ha); Resex RE Gurupá-Melgaço (145,572.11 ha); Resex RE Terra Grande Pracuúba (194,867.63 ha); RDS Itatupã-Baquiá (64,441.29 ha); and APA Arquipélago do Marajó (4,523,690.87 ha)

In this huge territory the main NGO is the National Council of Rubber Tappers (CNS) a national organization that represents forest workers organized in associations, cooperatives and trade unions of all the Amazon states. The council represents rubber tappers, and extractivists from the Amazon and AFS farmers. It is a strong, widespread organization in the Amazon, important voice defending traditional populations. Another important NGO is the Institute SEMEIA, which supports actions to safeguarding conservation units through sustainable development. SEMEIA sponsors business social responsibility projects; scholarships; research and development, development for decision making models. In this territory the MMA implements the Local Productive Chains for Açaí and Andiroba, which aim to structure the production chain of these species in the Amazon estuary. EMBRAPA Amapá is active in the western portion of this CT, while EMBRAPA Amazonia Oriental works with domestic animals in the eastern part of the CT.

Annex 4: Maps

(See separate file)

Annex 5: Biological Monitoring Plan

Monitoring of biological variables will be conducted at two levels: (1) the landscape level, and (2) the plant population level. Both levels are complementary and measure different biological attributes.

Landscape level: monitoring at this level aims to estimate how practices based on sustainable management of AFS and NTFP are being incorporated into the rural properties in the areas embraced by the six Citizenship Territories (CT) targeted by the project. To achieve this the project will monitor two variables: (a) area increase sustainable managed for NTFP harvesting and AFS, and (b) Changes in the use of fire as management tool.

a) Change in NTFP harvest under sustainable management and AFS - The increment of surface areas with AFS and NTFP using sustainable practices can potentially be estimated using satellite imagery from remote sensing. The main setback to achieve the level of detail needed makes this approach very expensive and prohibitive for the project. The option is to use the self-declaration of farmers on the adoption and area managed with AFS and NTFP, using surveys. To obtain this information, the contribution of rural extension services, rural workers union, cooperatives, Technological Federal Institutes (IFT) and NGOs is fundamental. The project will develop a simple and intuitive form to be applied by technicians to gather information based on area managed, location, and management system adopted. Due to the large extension of the CTs, project will use sampling to represent the whole area. The data compiled will provide a good and reliable source of information to estimate the total area managed with AFS and NTFP in each municipality, CT and region within the CT. The information can then be plotted in satellite images or in the Google Maps to have the geographical location and distribution of these areas and their proximity to protected areas and areas of high importance for biodiversity displayed. This information will be made available for the public in general in the project home page and in the database (output 1.5).

b) Change in the use of fire – To estimate the influence of sustainable management practices adoption by farmers and NTFP harvesters, the project will monitor the use of fire, a management practice common in the tropics. The project will use heat foci as a proxy for fires. The project will use data available in the INPE (National Institute of Space Research) site from satellites that have optical sensors operating in the band thermal-average 4um. The INPE receives and processes the AVHRR Polar satellites NOAA-15, NOAA-16, NOAA-18 and NOAA-19, the MODIS images of polar satellites NASA TERRA and AQUA, images of geostationary satellites GOES -13 and MSG-2 and VIIRS satellite images of polar orbiting NPP (http://www.inpe.br/queimadas/). Occurrence of Fire on Vegetation is the theme of this portal. It includes operational monitoring of fire outbreaks and forest fires detected by satellite and calculating the risk of fire and vegetation prediction. In this site "SIG Focos Geral", displays focuses on a Geographical Information System, with options periods, regions of interest, satellites, information plans (eg deforestation, hydrography, roads), etc., in addition to export data in formats txt, html, and shp kmz. In the first year of project execution, in each CT the project will define an area to be monitored, gathering yearly data to compare changes in the number of fires.

Population level: monitoring at this level aims to estimate how populations being harvested for NTFP and other management practices are responding to the current and past management practices and land use (anthropogenic variables). To obtain this information, the project will sample large number of population submitted to different land uses and management practices.

The increasing changes in land use that forests ~~and savannas~~ are undergoing call for deeper understanding of the anthropic factors affecting plant persistence in the landscape. Knowledge of these factors is important in planning land management and conservation actions to preserve representative populations in strictly protected areas, but even more in multiple-use areas, which have been shown to significantly contribute to conservation (Nelson and Chomitz, 2011). Populations reduced in size by deforestation and habitat fragmentation and continuously exposed to anthropogenic threats, such as harvesting of plant parts, cattle grazing and vegetation thinning, common practices in the tropics, may face increased mortality and reduced recruitment (Ticktin, 2004). If effects last long enough, populations may not persist, leading to biodiversity erosion at landscape level (Tilman et al., 1994). The impact of these anthropogenic effects can be determined on population size class distribution, but persistence will also depend on ecological effects (Austin and Smith, 1989; Guisan and Zimmermann, 2000). Both ecological and anthropogenic variables will determine species population performance and persistence in landscapes under human pressure. Species performance can be evaluated across size classes and life stages by population size class distribution and recruitment rates (Peters, 1994; Lykke, 1998), which summarize recruitment, mortality and growth rate over time (Hutchings, 1997; Kelly et al., 2001). Species with high recruitment usually show a reverse-J shaped curve (Condit et al., 1998), defined by the negative exponential model. This J-shaped curve is recognized, traditionally, as belonging to populations with continuous recruitment. Uncertainties in the interpretation of the data distribution of classes and life stages of a population can be reduced through comparative analyses with a large number of populations (Souza, 2007), and may be particularly revealing for slow-growing and long-lived species, as the ones targeted by project.

In order to collect information on population size class distribution the project will establish permanent plots where it will measure plant sizes (diameter and height). These data will be organized to generate the size class distributions. Population asymmetry is then compared using the coefficient of skewness (g1), which refers to the asymmetry of the distribution (Legendre and Legendre, 1998). A g1 = 0 indicates symmetric distribution, g1 < 0 distribution skewness to left, with predominance of large individuals, and g1 > 0 skewness to right, with a predominance of smaller individuals. To compare the g1 values with the normal distribution the project can use the D'Agostino test (D'Agostino, 1970), with Bonferroni correction). To verify gaps in population size diameter class, project will test the fit of negative exponential distribution $y = ae^{-bx}$ across populations. In this equation, y represents the percentage of individuals in each class, x is the midpoint of the classes and the intercept b is the slope of the curve. The project can use multiple linear regression (MLR) to test the effect of anthropic disturbance (e.g. harvest, vegetation thinning, harvesting and cattle) on the population size class fit on negative exponential distribution (R^2). These explanatory variables will be collected during population field sampling, and from interviews with land owners, and satellite images.

Population size class distribution provides the present status of the population when long-term data are not available (Souza et al., 2010), but it does not highlight the factors determining life stage density. Understanding the ecological variables that are believed to cause population abundance of a species can be useful to infer the forces that are, together with anthropogenic factors, molding population structure and persistence in the landscape. Combining population size class distribution with analysis of the variables affecting populations' life stage classes can provide valuable information for decision-making in management and conservation strategies (eg. Peres et al., 2003; Gómez-Aparicio et al., 2005; Souza, 2007; Souza et al., 2010). This approach is particularly important in areas where plant species populations are under strong pressure from land use changes, as in the project intervention areas.

The density at each life stage, using the negative binomial distribution for seedlings, saplings, juveniles and adults will be analyzed with generalized linear models (GLM) with (Crawley, 2007). These analyses will detect which among the environmental (e.g. soil, climate, topography) and anthropogenic (e.g. harvesting, land use, fire) are the most important in molding the observed life stage population abundance.

Both approaches are complementary for the purpose of inferring past and present land use and management effects on population's health, and cannot be used separately. With the population size class analysis it is possible to identify in which populations recruitment bottlenecks are occurring. The generalized linear models (GLM) allows that the most important anthropogenic variables causing the observed recruitment bottlenecks be identified. Only by using both approaches it is possible to identify management practices and land uses that may compromise populations' persistence and define sustainable harvesting levels during project lifetime. Monitoring of biological variables at two levels (landscape and population) proposed are complementary and measure different biological attributes, in different spatial scales.

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Annex 6: EMBRAPA Capacity Scorecard

Indicator	Score Card Rating	Obs
Capacity Result 1: Capacities for engagement		
Indicator 1 Degree of legitimacy / weigh/mandate force of environmental organizations	1	EMBRAPA´s mandate is clearly identified, but it is not directly related to environmental management, although it develops environment-related knowledge
Indicator 2 Existence of operational management mechanisms	2	Some co-management mechanisms are established for the development of environmentally friend technologies.
Indicator 3 Existence of cooperation with groups and stakeholders	1	Stakeholders have incipient participation in EMBRAPA research programs, but traditional communities and populations are successfully increasing their demands.
Capacity Result 2: Capacity to generate, access and use information and knowledge		
Indicator 4 Degree of environmental awareness of stakeholders	3	Active participation in the search for local and global solutions.
Indicator 5 Access and exchange of environmental information among stakeholders	1	Knowledge management is still incipient
Indicator 6 Existence of environmental education program	1	Environmental programs executed in part of the actions addressing global environmental issues.
Indicator 7 Extend the environmental link between research / science and development policy	2	There is low environmental awareness at all levels of population groups and institutions.
Indicator 8 Widen inclusion / use of traditional knowledge in making environmental decisions	1	Traditional knowledge being investigated and eventually used, but it is not a mainstream action within EMBRAPA´s program.
Capacity Result 3: Capacities for strategy development, policy and legislation		
Indicator 9 Extend environmental planning and strategy development process	1	Suitable environmental plans are prepared, but only partially implemented due to constraints including financial and political
Indicator 10 Existence of an adequate environmental policy and regulatory frameworks	1	Environmental policy in increasingly being considered in the agency´s program.
Indicator 11 Adjustment of available environmental information for decision making	1	Some environmental information exists, but not always used due lack of knowledge of its existence, difficulties accessing it or lack of interest.

Indicator	Score Card Rating	Obs
Capacity Result 4: Capacities Management and implementation		
Indicator 12 Existence and mobilization of resources	2	Funds exist and are addressed, but are not enough to comply with all the environmental needs.
Indicator 13 Technical skills and technology transfer are required	2	The skills and technologies required are partially available but require resources strengthening.
Capacity Result 5: Capacities to monitor and evaluate		
Indicator 14 Adjustment process monitoring of project / program	2	Regular results monitoring is carried out, but needs to be strengthened. Information is used partially by the project / program team to improve actions. Participatory monitoring is not performed.
Indicator 15 Adjustment of assessment process project / program	2	Evaluations are carried out according to EMBRAPA´s own monitoring system, allowing progresses in this issue and providing feedback to the monitoring system.

Capacity Result 1: Capacities for engagement

Relevant individuals and organizations (resource users, owners, consumers, community and political leaders, private and public sector managers and experts) engage proactively and constructively with one another in managing a global environmental issue.

Indicator 1.1 – Degree of legitimacy/mandate of lead environmental organizations: this indicator measures if the lead organizations are identified, if their respective responsibilities are clearly defined and if the authority of these organizations is recognized.

Scorecard Rating:
0 Organizational responsibilities for environmental management are not clearly defined
1 Organizational responsibilities for environmental management are identified
2 Authority and legitimacy of all lead organizations responsible for environmental management are partially recognized by stakeholders
3 Authority and legitimacy of all lead organizations responsible for environmental management recognized by stakeholders

Indicator 1.2 – Existence of operational co-management mechanisms: this indicator measures the existence of public and private co-management mechanisms and if these mechanisms are functional.

Scorecard Rating:
0 No co-management mechanisms are in place
1 Some co-management mechanisms are in place and operational
2 Some co-management mechanisms are formally established through agreements, MOUs, etc.
3 Comprehensive co-management mechanisms are formally established and are operational/functional

Indicator 1.3 – Existence of cooperation among stakeholder groups: this indicator measures the involvement of stakeholders, their identification, the establishment of stakeholder consultation processes and the active contribution of these stakeholders to decision-making.

Scorecard Rating:

0 Identification of stakeholders and their participation/involvement in management decision-making is poor
1 Stakeholders are identified but their participation in management decision making is limited
2 Stakeholders are identified and regular consultations mechanisms are established
3 Stakeholders are identified and they actively contribute to established participative management decision-making processes

Capacity Result 2: Capacities to generate, access and use information and knowledge

Individuals and organizations have the skills and knowledge to research, acquire, communicate, educate and make use of pertinent information to be able to diagnose and understand global environmental problems and potential solutions.

Indicator 2.1 – Degree of environmental awareness of stakeholders: this indicator measures the level of awareness of stakeholders about global environmental issues and the solutions being implemented and their possibility to participate in the implementation of these solutions.

Scorecard Rating:
0 Stakeholders are not aware about global environmental issues and their related possible solutions (MEAs)
1 Stakeholders are aware about global environmental issues but not about the possible solutions (MEAs)
2 Stakeholders are aware about global environmental issues and the possible solutions but do not know how to participate.
3 Stakeholders are aware about global environmental issues and are actively participating in the implementation of related solutions

Indicator 2.2 – Access and sharing of environmental information by stakeholders: this indicator measures the information needs, if they are identified, the adequacy of the information management infrastructure in place and the sharing of this information.

Scorecard Rating:
0 The environmental information needs are not identified and the information management infrastructure is inadequate
1 The environmental information needs are identified but the information management infrastructure is inadequate
2 The environmental information is partially available and shared among stakeholders but is not covering all focal areas and/or the information management infrastructure to manage and give information access to the public is limited
3 Comprehensive environmental information is available and shared through an adequate information management infrastructure

Indicator 2.3 – Extent of inclusion/use of traditional knowledge in environmental decision-making: this indicator measures if the traditional knowledge is being explored, if the sources of traditional knowledge are identified, captured and shared among stakeholders for effective participative decision making processes.

Scorecard Rating:
0 Traditional knowledge is ignored and not taken into account into relevant participative decision-making processes
1 Traditional knowledge is identified and recognized as important but is not collected and used in relevant participative decision-making processes

2 Traditional knowledge is collected but is not used systematically into relevant participative decision-making processes
3 Traditional knowledge is collected, used and shared for effective participative decision-making processes

Indicator 2.4 – Existence of environmental education programmes: this indicator measures both the formal and informal environmental education programmes in place to address global environmental issues.

Scorecard Rating:
0 No environmental education programmes are in place
1 Environmental education programmes are partially developed and partially delivered
2 Environmental education programmes are fully developed but partially delivered
3 Comprehensive environmental education programmes exist and are being delivered

Indicator 2.5 – Extent of the linkage between environmental research/science and policy development: this indicator measures the linkage between environmental policy and research; including the identification of research needs and research strategies and programmes; and the relevance of the research available to policy development.

Scorecard Rating:
0 No linkage exist between environmental policy development and science/research strategies and programmes
1 Research needs for environmental policy development are identified but are not translated into relevant research strategies and programmes
2 Relevant research strategies and programmes for environmental policy development exist but the research information is not responding fully to the policy research needs
3 Relevant research results are available for environmental policy development

Capacity Result 3: Capacities for strategy, policy and legislation development

Individuals and organizations have the ability to plan and develop effective environmental policy and legislation, related strategies and plans – based on informed decision-making processes for global environmental management.

Indicator 3.1 – Extent of the environmental planning and strategy development process: this indicator measures the quality of the planning and strategy development process; if the planning and strategy development process produces adequate plans and strategies related to environmental management; and if the resources and coordination mechanisms are in place for the implementation of these plans, programmes and projects.

Scorecard Rating:
0 The environmental planning and strategy development process is not coordinated and does not produce adequate environmental plans and strategies
1 The environmental planning and strategy development process does produce adequate environmental plans and strategies but there are not implemented /used
2 Adequate environmental plans and strategies are produced but there are only partially implemented because of funding constraints and/or other problems
3 The environmental planning and strategy development process is well coordinated by the lead environmental organizations and produces the required environmental plans and strategies; which are being implemented

Indicator 3.2 – Existence of an adequate environmental policy and regulatory frameworks: this indicator measures the completeness of the policy and regulatory frameworks, the existence and the adoption of relevant policies and laws and if the mechanisms for enacting, complying and enforcing these policies and laws are established.

Scorecard Rating:

0 The environmental policy and regulatory frameworks for PFNM management and AFS are insufficient; they do not provide an enabling environment

1 Some relevant environmental policies and laws for PFNM management and AFS exist but few are implemented
and enforced

2 Adequate environmental policy and legislation frameworks for PFNM management and AFS exist but there are problems in implementing and enforcing them

3 Adequate policy and legislation frameworks for PFNM management and AFS are implemented and provide an adequate enabling environment; a compliance and enforcement mechanism is established and functions

Indicator 3.3 – Adequacy of the environmental information available for decision-making: this indicator measures the adequacy of the information available for decision-making; if the information is made available to decision-makers and if this information is updated and used by decision-makers.

Scorecard Rating:

0 The availability of environmental information for decision-making is lacking

1 Some environmental information exists but it is not sufficient to support environmental decision-making processes

2 Relevant environmental information is made available to environmental decision-makers but the process to update this information is not functioning properly

3 Political and administrative decision-makers obtain and use updated environmental information to make environmental decisions

Capacity Result 4: Capacities for management and implementation

Individuals and organizations have the plan-do-check-act skills and knowledge to enact environmental policies and/or regulation decisions, and to plan and execute relevant sustainable global environmental management actions/solutions.

Indicator 4.1 – Existence and mobilization of resources by the relevant organizations: this indicator measures the availability of resources within the relevant organizations, if the potential sources for resource funding are identified and if adequate resources are mobilized.

Scorecard Rating:

0 The environmental organizations don't have adequate resources for their programmes and projects and the requirements have not been assessed

1 The resource requirements are known but are not being addressed

2 The funding sources for these resource requirements are partially identified and the resource requirements are partially addressed

3 Adequate resources are mobilized and available for the functioning of the lead environmental organizations

Indicator 4.2 – Availability of required technical skills and technology transfer: this indicator measures the availability of skills and knowledge, if the technical needs and sources are identified and accessed by the

programme or project and if there is a basis for an ongoing national-based upgrading of the skills and knowledge.

Scorecard Rating:
0 The necessary required skills and technology are not available and the needs are not identified
1 The required skills and technologies needs are identified as well as their sources
2 The required skills and technologies are obtained but their access depend on foreign sources
3 The required skills and technologies are available and there is a national-based mechanism for updating the required skills and for upgrading the technologies

Capacity Result 5: Capacities to monitor and evaluate

Individuals and organizations have the capacity to effectively monitor and evaluate project and/or programme achievements against expected results and to provide feedback for learning, adaptive management and suggesting adjustments to the course of action if necessary to conserve and preserve the global environment.

Indicator 5.1 – Adequacy of the project/programme monitoring process: this indicator measures the existence of a monitoring framework, if the monitoring involves stakeholders and if the monitoring results inform the implementation process.

Scorecard Rating:
0 Irregular project monitoring is being done without an adequate monitoring framework detailing what and how to monitor the particular project or programme
1 An adequate resourced monitoring framework is in place but project monitoring is irregularly conducted
2 Regular participative monitoring of results is being conducted but this information is only partially used by the project/programme implementation team
3 Monitoring information is produced timely and accurately and is used by the implementation team to learn and possibly to change the course of action

Indicator 5.2 – Adequacy of the project/programme evaluation process: this indicator measures the existence of an evaluation framework, if the adequate resources and access to information is available and if the evaluation results inform the planning process.

Scorecard Rating:
0 None or ineffective evaluations are being conducted without an adequate evaluation plan; including the necessary resources
1 An adequate evaluation plan is in place but evaluation activities are irregularly conducted
2 Evaluations are being conducted as per an adequate evaluation plan but the evaluation results are only partially used by the project/programme implementation team and other staff designing the next generation of projects
3 Effective evaluations are conducted timely and accurately and are used by the implementation team to correct the course of action if needed and to learn lessons for further project planning activities.

Annex 7: GEF BD Tracking Tool

(See separate file)

Annex 8: Safeguards

(See separate file)

Annex 9: DEX Letter - GoB Request

(See separate file)

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Plant list

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