



# PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

## PART I: PROJECT IDENTIFICATION

Project Title:	Mainstreaming Biodiversity Conservation and Sustainable Use into NTFP and AFS production practices in Multiple-Use Forest Landscapes of High Conservation Value		
Country:	Brazil	GEF Project ID:	5091
GEF Agency:	United Nations Development Programme	GEF Agency Project ID:	4659
Other Executing Partner:	EMBRAPA (Brazilian Agricultural Research Agency)	Submission Date:	January 10, 2013
		Resubmission date:	
GEF Focal Area:	Biodiversity	Project Duration (Months)	60 months
Name of parent programme:	NA	Agency Fee (US\$):	520,548

### A. FOCAL AREA STRATEGY FRAMEWORK:

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Indicative grant Amount GEF (\$)	Indicative Co-financing (\$)
BD2—Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes, Seascapes and Sectors	Outcome 2.1: Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation	Output 2.1. Policies and regulatory frameworks (3) for production sectors.	GEFTF	5,219,712	26,300,000
Sub-total				5,219,712	26,300,000
Project management cost			GEFTF	259,740	1,500,000
<b>Total project costs</b>				<b>5,479,452</b>	<b>27,800,000</b>

### B. PROJECT FRAMEWORK

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) <sup>1</sup> and agro-forestry systems (AFS) <sup>2</sup>					
Project Component	Grant Type	Expected Outcomes	Expected Outputs	GEF Financing (\$)	Co-financing (\$)
Governance and capacity building framework for up-scaling best practices for BD sustainable management and production	TA	Improved governance and capacity building framework for sustainable management of NTFP and AFS in forest landscapes allows for sustainable production of BD products in 500,000 hectares and uptake of best practices across an additional 2,500,000 hectares in strategic locations of multiple use landscapes (Amazon, Cerrado and Caatinga Biomes)  Reduced threats over	1.1. <u>Environmental safeguards</u> optimize inputs of NTFP and AFS production to BD conservation in multiple use landscapes. This will include: <ul style="list-style-type: none"> <li>Sustainable harvesting limits defined for at least 12 BD species in different land use scenarios and proximities to forest patches of high BD value (based on yield studies, regeneration surveys, harvest assessments and harvest adjustments)</li> <li>Definition of regulations for sustainable harvesting based on the results of the previous studies and harvesting limits established</li> <li>Improved monitoring of NTFP and AFS production;</li> </ul>	3,170,037	16,100,000

<sup>1</sup> Non timber forest products, for example: *acai*, brazil nut, *copaifera*, *andiroba*, rubber, *uxi*, *cipotitica*, cat's claw, *piassava*, *bacuri*, *jatoba*, *pequia*, *buriti*, *pataua*, *bacaba*, *tucumã*, *pupunha* in the Amazon; *umbu*, *janaguba*, *faveira*, *amburana*, *mangaba*, *angico*, *babaçu*, *pequi*, *caroá*, *tucum*, *macaúba*, and *carnauba* in the Caatinga; *araticum*, *araçá*, *baru*, *buriti*, *cagaita*, *cajus-do-cerrado*, *coquinho-azedo*, *jatobá*, *mangaba*, *murici*, *cerrado-passion-fruits*, *pera-do-cerrado*, *macaúba*, *babassu*, *pequi*, *barbatimão* and *faveira* in the Cerrado.

<sup>2</sup> Agroforestry systems that includes systems created, modified or validated by farmers according to local conditions of soil, climate, markets and other socioeconomic/cultural considerations (i.e. In Tomé-açu, Pará farmers grow black pepper combined with annual crops between rows, interspersed with perennial species such as cacao, acai, cupuaçu and others. After a few years, black pepper succumbs to *Fusarium* wilt, and is substituted by passion fruit, which continues until it is shaded out by the perennial tree crops, which come into production at a later moment in the cycle. In Juruena, MatoGrosso farmers have developed a system in which annual crops are interspersed with peach palm, cacao or coffee and timber species).

		<p>2,500,000 hectares of forest fragments in the landscape (reduced levels of deforestation; habitat loss and habitat degradation from unsustainable utilization of components of ecosystems) and increased connectivity between protected areas and forested legal reserves in the production landscape</p> <p>Key species with conservation security enhanced through stable or increased populations (to be determined during project preparation)</p> <p>Improved institutional capacities of EMBRAPA and key stakeholders to effectively plan, implement, monitor and mainstream NTFP and AFS into production practices at the landscape level as measured by an increase in the capacity scorecard (to be developed in the PPG)</p> <p>Best practices, safeguards and their regulations, differential price and tax policies mainstreamed into Government instruments promoting sustainable use, production and commercialization of BD products (e.g. National Plan for Promotion of Chains of Sociobiodiversity Products, and Food Acquisition Programme, regulations for legal reserves and sustainable use reserves)</p>	<ul style="list-style-type: none"> <li>• Technical information available for the establishment of differential policies for products derived from areas in or near high conservation areas, e.g. extractive reserves or key connecting site in the landscapes</li> <li>• Differential policies such as differential prices, tax reductions and favorable policies for NTFP collection in lands owned by third parties</li> </ul> <p>1.2. <u>Improved decision-making support and strategies</u> for policy makers at federal, state and local levels for mainstreaming and managing AFS and NTFP in production landscapes:</p> <ul style="list-style-type: none"> <li>• Trade off scenarios and reliable information on NTFP and AFS contributions to BD conservation and ecosystem services. E.g., productive capacity and production costs; contribution to rural family income; and economic feasibility; economic valuation of ecosystem goods and services of AFS and NTFP; externalities of deforestation; building the business case</li> <li>• Strategies developed for informing decision makers and information dissemination at all levels (including links to data system in 1.5)</li> <li>• Training material and dissemination for decision makers on mainstreaming NTFP and AFS into land use planning; on technologies, processes and methods to ensure access of harvesters to resources</li> </ul> <p>1.3 <u>Extension services</u> deliver capacity building to small rural farmers on best practices, safeguards, and market access for NTFP and AFS: This includes developing training materials for target audiences such as technicians from rural extension agencies, EMBRAPA technicians; technical staff from research institutions; universities and agricultural technical schools; community leaders – this latter in conjunction with the GEF SGP producer exchange programmes</p> <p>1.4 <u>Land use planning</u> incorporates new safeguards and guidance for mainstreaming AFS and NTFP: This includes capacity building for ICMBIO; State environmental agencies; Municipal land use planning staff; and law enforcement bodies</p> <p>1.5 <u>Data system for information and networking</u> consolidates and replicates best practices on NTFP and AFS. This includes:</p> <ul style="list-style-type: none"> <li>• Databases and networks on successful initiatives and best practices</li> <li>• Research programmes and grants tailored to the needs of producers</li> </ul>		
Market and financial frameworks for up-scaling for NTFP and AFS production in high-conservation value forest landscapes	TA	Enhanced market access for BD increase production viability of at least 12 BD products as conservation compatible land use in priority areas of multiple use forested landscapes (500,000 hectares) in the Amazon, Cerrado and Caatinga biomes and increase cost efficiencies	<p>2.1. <u>Improved reliability, quality and diversity of NTFP supply and AFS production</u> increase market value and access in 6 high biodiversity forest landscapes. This includes:</p> <ul style="list-style-type: none"> <li>• NTFP production quantified and mapped for 12 species of Amazon, Cerrado and Caatinga (volume, quality, seasonality, costs, regions and niches and assessment of productivity of harvested resources)</li> <li>• Best practices for high quality production</li> </ul>	2,049,675	10,200,000

	for 2,000 producers and allow upscaling to an additional 2,500,000 hectares and 2,500 producers (specific indicators on production, commercialization and livelihoods to be developed during project preparation)	<p>consolidated and assessed for AFS and NTFP under different socio-economic conditions; forest biomes; land use and locations within the target landscapes</p> <ul style="list-style-type: none"> <li>• Development of up to 30 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 forested multiple use landscapes. Elements related to development of value-added products per se will be covered by co-financing.</li> </ul> <p>2.2 <u>Market access improved for BD products:</u></p> <ul style="list-style-type: none"> <li>• Platforms set up that a) connect producers to buyers enabling economies of scale and income predictability and b) provide a forum for different members of supply chain and governance to discuss views and regulations; provide transparency and build trust thus increasing biodiversity socio-economic benefits from up-scaling sustainable NTFP production at a country level</li> <li>• Commercialization channels with private and public companies for 6 products within the 6 high biodiversity forest and production landscapes</li> <li>• New markets assessed and developed for new species and products</li> <li>• Advertisement and stimuli promoted for BD products (product advertising per se will be covered by co-funding).</li> </ul> <p>2.3. <u>Credit and financing mechanisms</u> increased for AFS and for NTFP management:</p> <ul style="list-style-type: none"> <li>• Development of favorable bank credit terms and technical assistance for BD products with the Bank of Brazil, Banco do Nordeste, and Banco da Amazonia</li> <li>• Increased funds in public funded programmes for AFS and NTFP mixes, that are favorable to landscape conservation</li> </ul>		
SubTotal			5,219,712	26,300,000
Project management Cost			259,740	1,500,000
<b>Total project costs</b>			<b>5,479,452</b>	<b>27,800,000</b>

### C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, (\$)

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
National Government	EMBRAPA	Grant	15,000,000
National Government	EMBRAPA	In kind	2,000,000
National Government	Federal Research Institutions through EMBRAPA	Grant	1,000,000
National Government	MAPA	Grant	4,000,000
National Government	MDA/PRONAF	Grant	1,500,000
National Government	MMA	Grant	1,000,000
National Government	MMA	In kind	1,000,000
Local Government	State Foundations through EMBRAPA	Grant	1,000,000
Private Sector	Private companies through EMBRAPA	Grant	1,000,000
GEF Agency	UNDP	Grant	300,000
<b>Total Co-financing</b>			<b>27,800,000</b>

### D. GEF/LDCF/SCCF RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY

GEF Agency	Type of Trust Fund	Focal area	Country	Project amount (a)	Agency Fee (b)	Total c=a+b
UNDP	GEFTF	Biodiversity	Brazil	5,479,452	520,548	6,000,000
<b>Total Grant Resources</b>				<b>5,479,452</b>	<b>520,548</b>	<b>6,000,000</b>

## **PART II: PROJECT JUSTIFICATION**

### **A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:**

#### **A.1. THE GEF FOCAL AREA STRATEGIES:**

1. The project will conserve biodiversity in key forest landscapes in Brazil, namely the Amazon, Caatinga and Cerrado—all renowned for their outstanding global biodiversity significance (see section B1) 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, poor fire and water management and insufficient soil coverage. This is causing increased encroachment on forest habitats both in areas under conservation in the National Conservation Units System, and in locations strategic for connectivity across the landscape with the result of gradual loss of the global environmental values in these areas.

2. The project will seek to facilitate a shift from these unsustainable agricultural practices to an approach that conserves the biodiversity (BD) of multiple-use forest landscapes of high conservation value while meeting important social priorities and development goals. To achieve this, the project will focus on the development of a strengthened sustainable use management framework for sustainable non-timber forest products (NTFP) and agro-forestry systems (AFS). NTFP and AFS have been shown to produce conservation benefits, but need to be upscaled to provide significant impacts at the landscape level.

3. The project will build on ongoing policies and programmes (see sections A1 and B1) that have been established to increase NTFP production, but which fall short due to a number of governance and market constraints. It will overcome these by taking a dual approach. On the one hand, 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 BD. This will include setting harvesting limits (to prevent the intensification of wild resource use beyond sustainability thresholds); developing capacities for extension and 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.

4. As regulation alone is not enough to ensure upscaling, 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 includes: improving information on production levels in order to access different markets (and hence increase stability of returns); improving quality (hence increasing returns); developing markets (hence increasing options for new products); 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.

5. 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. 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).

## A.2. NATIONAL STRATEGIES AND PLANS

6. The project will focus on supporting the sustainable management of BD 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). It will contribute to several national priority plans and programmes promoting the sustainable use of BD products, especially the *National Plan for Promotion of Chains of Socio-biodiversity Products*, the *Food Acquisition Programme* and the *National School Food Programme*. These programmes foster the commercialization of BD products by guaranteeing a minimum price, promoting production chains and the inclusion of BD products into the *National School Food Programme*. Hence project results will contribute to improve these programmes by estimating real production costs, seasonal variation in production, real production capacity, by establishing sustainable management criteria, improving the quality of products and building stakeholder capacities taking into account regional specificities.

7. 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 system recognizes two groups of conservation units, a first group entirely for protection purposes and another for sustainable use, including Extractivist Reserves (Resex), Sustainable Development Reserves (RDS) and National Forests (Flona).

## B. PROJECT OVERVIEW

### B.1. DESCRIBE THE BASELINE PROJECT AND THE PROBLEM THAT IT SEEKS TO ADDRESS:

8. **Global Significance:** Brazil is the largest country in South America and one of the world's richest megadiverse countries; it tops the list for flowering plants with 55,000 species (22% of world total) and primates with 55 species (24% of world total); ranks second in birds (1,622 species), third in palms (387 species), and fourth in reptiles (467 species), and 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. The Amazon and Cerrado are both listed in WWF's Global 200 Ecoregions. The Amazon is the world's largest rain forest covering 423 million hectares or 49,8% of the country's surface; it hosts 12,354 plant species, 311 mammal species, 1,300 bird species, 550 reptile species, 250 amphibian species and 1,800 freshwater fish species. The Cerrado on its part is the world's species-richest and most endangered savannah within the borders of a single country, with 205 million hectares (24,1% of Brazil's surface) and is the home of 12,070 plant species, 195 mammal species, 837 bird species, 180 reptile species, 150 amphibian and 1,000 freshwater fish species. The Caatinga is an exclusively Brazilian ecosystem covering 82 million hectares or 9, 7% of the country's surface and hosting 4,440 plant species, 148 mammals species, 510 bird species, 107 reptile species, 49 amphibian and 185 freshwater fish species. The Government of Brazil (GoB) has made important efforts to address BD conservation and has established the *National System of Nature Conservation Units*, which covers 18,5% (17,3% terrestrial and 1,52% coastal) of the country's territory and of which 13,8% is comprised by reserves 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. 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.

9. **Threats:** This biological richness however is threatened by biodiversity loss driven by habitat destruction and fragmentation that has resulted in significant loss of forest cover and ensuing BD losses. For example, the Amazon has lost more than 15% of its cover with 1.8 million hectares cleared annually; the Caatinga has lost 47% of its cover and

the Cerrado more than 48% with an annual rate of deforestation of 1.4 million hectares. The drivers are deforestation, invasive species, over-exploitation and pollution. Specifically, widespread agricultural expansion (including forestry and conversion to pastures), road construction, and mining have been particularly important in population decline and species disappearance. Furthermore, chemical pollution, oil exploration, hydroelectric projects, and unsustainable tourism are locally significant factors. In addition, small-scale agriculture, hunting, overexploitation of timber and fuel wood, and illegal trading of plants and animals are a significant threat to biodiversity. Given the important number of farmers in Brazil (see paragraph 11 below), 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 due to selective extraction and overharvesting of a number of species by small farmers and local communities for subsistence and income generation.

10. **Socio-economic:** Family agriculture is the principal supplier of food for Brazil's population, and average gross value of production on a hectare basis is almost double that of industrial agriculture. Most of these 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 officially recognized 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. Fire is used directly on the harvesting areas or in adjacent areas and due to inadequate management may escape and burn BD harvesting sites, increasing BD mortality, reducing BD production, promoting land degradation, and increasing the appearance of undesired species. Monoculture on its part increases the use of pesticides, reduces BD and associated ecosystem services such as pollination and pest control.

11. **NTFP and AFS in BD conservation:** In Brazil, 31.3 million farmers live throughout Brazil's rural areas and family agriculture employs almost 75% of all agricultural labor (2006 Agricultural Census). Most of the rural properties (58%) are smaller than 25 hectares; with 84 million hectares occupied by rural settlements or 24% of the total area under agriculture. 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. Perennial tree crops are significant in Brazil's economy, chiefly coffee in the Southeast (also including *C. robusta* in Amazonia) and cacao, 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 *piçava* 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 (*Bertholletia excelsa*; US\$ 29.8 million). In 2009, these six products together constituted 89.1% of the total of the non-timber forest production evaluated in Brazil (IBGE, 2009).

12. NTFP offer a potential for sustainable economic growth of small-scale farming and communities. For instance, the price for oil extracted from *copaiba* (*Copaifera* sp.) 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 USD 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. This is not only restricted to the Amazon forest—in the Caatinga biome, *umbu* fruits (*Spondias tuberosa*) prices range from US\$219-750/ton, the *mangaba* fruits (*Hancornia speciosa*) 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* (*Caryocar brasiliense*) was estimated at US\$261-1,588/ton and alone represents 10% of the gross domestic product of some municipalities (IBGE, 2009). This contribution is thought to be underestimated and in reality during the harvesting of *pequi*, men and women from all ages harvest the fruits to sell them directly to the middlemen, earning a daily income that exceeds fourfold a daily wage in a farm. Also in this biome, the well-known *baru* (*Dipteryx odorata*) nuts generate incomes ranging from US\$1875-14,680/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.

13. Harvesting, storing, transport 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 1,300% than 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<sup>345</sup>.

14. 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.<sup>6</sup>

15. Whilst 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 policies promoting the commercialization and value chains (see section A2) 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

<sup>3</sup> Pimentel, N. M. 2008. Processo produtivo para o aproveitamento de produtos florestais não-madeireiros do baru (*Dipteryx alata* Vog.). Dissertation. UnB. 107 p.

<sup>4</sup> Babulo, B., Muys, B., Nega, F., Tollens, E., Nyssen, J., Deckers, J. & Mathijs, E. 2009. The economic contribution of forest resource use to rural livelihoods in Tigray, Northern Ethiopia. *Forest Policy and Economics* 11:109-117.

<sup>5</sup> Davidar, P., Arjunan, M. & Puyravaud, J. P. 2008. Why do local households harvest forest products? A case study from the southern Western Ghats, India. *Biological Conservation* 141:1876-1884.

<sup>6</sup> Schroth, G.; da Fonseca, G. A. B.; Harvey, C. A.; Gascon, C.; Vasconcelos, H. L. & Izac, A. M. N. 2004. *Agroforestry and Biodiversity Conservation in Tropical Landscapes*. Island Press, Washington. 525p.

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.

16. **Project Baseline:** 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. The Government of Brazil 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. There are a number of ongoing programmes and projects that constitute a strong baseline over the next 5 years.

17. EMBRAPA expects to invest US\$25.5 million on programmes to promote environment-friendly land uses (e.g. forest management, restoration, land zoning), development of new products from Brazilian species, socio-economy and production chains, fisheries, economic and ecological zoning, and transfer of technology, among others. These resources will be invested in research, development and making the solutions available for farmers (through technology transfer) and decision makers in the three selected biomes. Although these programmes include NTFP and AFS, they are not guided by an overall framework that maximizes BD conservation.

18. The Ministry of Environment (MMA) implements the Programmes *Promotion of Conservation and Use of Agro-biodiversity* and *Socio-biodiversity Productive Chains and Subprojects for Sustainable Development of Traditional Peoples and Communities and Family Farmers* with an expected budget of US\$6 million. These initiatives are aimed to develop actions for the promotion and strengthening of the socio-biodiversity products chains and to promote conservation and sustainable use of biodiversity and alternative income generation for rural communities. Both programmes target the selected biomes.

19. The Ministry of Rural Development (MDA) expects to fund credit lines to family farmers for investments in AFS, sustainable agro-extractive activities, forestry management plans, recovery and maintenance of permanent preserved areas, legal reserves and degraded areas for an estimated amount of US\$327 million; 67% of this amount will target the three biomes: (i) Amazon: 20% or US\$65 million, (ii) Cerrado: 12% or US\$39 million, and (iii) Caatinga: 35% or US\$114 million. These baseline investments to small farmers present an opportunity for up-scaling NTFP and ASF if the governance and market frameworks proposed through this PIF are established. The estimated amount of these baseline funds that may be channeled to the landscape in which the GEF project will be working on the ground (rather than at the systemic level) will be further detailed as part of the PPG.

20. In 2010, the Ministry of Agriculture, Livestock and Supply (MAPA) launched a program entitled *Low Carbon Agriculture (2010-2020)*, with funds on the order of US\$1.25 billion to support the adoption of agricultural technologies that reduce carbon emissions. The programme provides loans and technical assistance to farmers to promote technological processes (e.g no-till agriculture) aimed to curb the effects of greenhouse gas (GHG) emissions in the rural areas. One goal of the programme is to increase the use of AFS in 4 million hectares to recover soils, increase incomes and create jobs. The programme operates at national level and most of the indicative amount (US\$1.25 billion) is expected to target large-scale farmers. The amount to be destined to small farmers is currently unknown and the areas and locations to be restored through the programme will depend on the farmers' demand. Project results will contribute with information and knowledge to mainstream the selected BD products, best practices and technologies into the agro-forestry systems to be promoted by this programme, therefore contributing to upscaling of BD conservation.

21. Site specific baseline figures where relevant will be provided at CEO Endorsement once the target landscapes have been identified and selected.

22. Despite the commitment of the GoB and the strong baseline that seeks to promote the production and commercialization of BD products, the programmes do not provide the grounds for ensuring sustainable BD products 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 programmes 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.

23. **The long-term solution:** 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 programmes 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.

#### 24. **Barriers to achieving the long-term solution**

**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.

##### 1. *Regulatory issues*

- Current policies and regulations 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).
  - Fiscal regulations 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 impact of taxes needs to be reviewed and alternative proposals developed to address this issue at federal and state levels.
2. 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.
3. Land use issues (planning and tenure)
- Producers harvest resources in their own lands, of third parties or community areas. Access to the resources may be influenced by these land tenure issues: in third party areas especially at times when prices of certain products are favorable and landowners may not allow harvesting in their lands; and in community lands where harvesting levels become unsustainable (tragedy of the commons). 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. Specific regulations and policies can then be proposed to improve BD conservation in the high BD areas.
  - Insufficient technical support to farmers. Current training of technicians, extension officers and producers focus mainly on agribusiness and export commodities, which do not always include BD friendly practices. Consequently, most rural communities do not receive adequate information and technical support to sustainably manage BD.

**Barrier #2:** Market and financial barriers hinder opportunities for up-scaling NTFP and AFS production in high-conservation value forest landscapes

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<sup>7</sup>.

1. Stable high quality production (supply) (public and private markets)
  - **Reliability issues:** 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 it is hard to carry out multi-annual planning of production, securing volumes that will ensure stable contracts with buyers and adequate prices.
  - **Quality issues:** Lack of specific equipment and tools, and 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.
  - **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.
2. Stable high quality markets (demand)
  - **Supply chains (private markets):** 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.
  - **Producers** are not fully aware of the existing public programmes that guarantee markets and minimum prices, and therefore do not take advantage of them (public markets).
  - **Buyers and sellers**, especially at small scale, lack the knowledge and capacities to establish contacts and negotiate terms for supply of BD products (private markets).
3. Finance for high quality production (public and private markets)
  - Although funding for small-scale farmers is available (e.g. Banco do Brasil, MDA), there is limited access to credit 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). 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.

## **B.2. INCREMENTAL COST REASONING AND ASSOCIATED GLOBAL ENVIRONMENTAL BENEFITS**

25. The project will deliver global benefits by putting in place a framework for upscaling NTFP and ASF in high conservation value forest landscapes that provides habitat integrity in the Amazon, Cerrado and Caatinga biomes and helps maintain landscape level ecosystem functions and resilience. This approach demonstrated by the project is expected to serve as a new platform to be used by the government and civil society for managing forest areas in agricultural landscapes and ensuring an optimal balance of land uses that maximize environmental, economic and social benefits to the society.

26. To achieve its objective, the project approach assumes that (i) sustainable harvesting of NTFP and sustainable AFS processes in the productive landscape may significantly contribute to the reduction of deforestation rates, especially by small holders; (ii) an increase in NTFP and AFS production in the forested multiple use landscape will depend on the availability of incentives and capacities to make production feasible; (iii) priority areas for conservation will be the major beneficiaries of putting in place BD-friendly practices in multiple use landscapes and around conservation units; and (iv) forest remnants of different sizes may contribute to scaling up conservation of BD through the adoption of sustainable management practices.

27. The intervention areas within the three forest biomes will be selected according to the following criteria: (i) high biodiversity value for conservation and sustainable use (as per the PROBIO priority areas); (ii) intensity of NTFP harvesting; (iii) social capital (existing cooperatives and harvesters associations); and (iv) presence of conservation units or demand from communities to create one.

28. A dual approach will be adopted that involves a trade-based approach to ensure taking the product to market to upscale production over larger areas; and a regulatory approach that will put in place governance and capacities to provide safeguards to upscaled production and to maximize conservation benefits to high value biodiversity in production landscapes. This will be achieved through two components as follows:

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<sup>7</sup> 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.

29. ***Component 1: Governance and capacity building framework for up-scaling best practices for BD sustainable management and production***

30. This component 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, MAPA and EMBRAPA will work in close coordination to implement this component and ensure mainstreaming of results into public policies.

31. The project will carry out yield studies for selected species, regeneration surveys, harvest assessments and harvest adjustments to determine harvesting limits for the selected BD species in different land use scenarios and proximities to forest patches of high BD value. Harvesting limits will allow for the development of environmental safeguards to optimize the positive impacts of NTFP and AFS production to BD conservation in multiple use landscapes. On the basis of the information produced as well as best practices developed under Component 1 the project will prepare regulations (e.g. safeguards, best practices) and will propose differential policies for products derived from areas in or near high value conservation areas (e.g. extractive reserves or key connecting sites in the landscapes), differential prices and tax reductions that will be mainstreamed into public policies for AFS and NTFP.

32. To aid policy makers at Federal, State and Local level in decision-making and developing strategies toward mainstreaming and managing AFS and NTFP in production landscapes, the project will elaborate trade off scenarios and reliable information on NTFP and AFS contributions to BD conservation and ecosystem services in different forest biomes and locations in multiple use landscapes (e.g. productive capacity and production costs; contribution to rural family income; economic feasibility; economic valuation of ecosystem goods and services of AFS and NTFP; and externalities of deforestation). The project will prepare communication strategies to raise awareness, inform decision makers and disseminate information at all levels (including links to the data system to be developed in 2.5), as well as training material, on mainstreaming NTFP and AFS into land use planning; as well as on technologies, processes and methods to ensure access of harvesters to the resources.

33. 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 NTFP and AFS. Capacity building will include developing training materials for target audiences including 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) as well as courses, long term training on the field, training and information materials, radio programs, videos, etc.). The project will also 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 and identify and replicate successful experiences. Producer exchange programmes will be implemented by the technicians trained through the previous activity and will comprise training courses, field days, study tours, sharing of experiences, and information materials.

34. Developing capacities of governmental extension services and community leaders will contribute to identify and replicate best practices on biodiversity management; help improve the governmental programmes supporting the exploration, use and commercialization of biodiversity products, as well as promoting innovative uses for BD. Capacity building will also be provided to the Brazilian Institute for Environment and Renewable Natural Resources (IBAMA), Chico Mendes Institute for Biodiversity Conservation (ICMBIO), 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 land use planning, 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.

35. A data system for information and networking to consolidate and replicate best practices on NTFP and AFS will be developed. This includes 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.

36. **Component 2: Market and financial frameworks for upscaling of NTFP and AFS production in high-conservation value forest landscapes.** The absence of marketing mechanisms and market chains for many products of NTFP and AFS in many rural areas or regions is a disincentive for wide spread adoption of AFS. In many situations collectors or farmers live in rural areas, with poor road access and no electricity, so that production is limited to those products that are not perishable (such as Brazil nuts) or that can be minimally processed (coffee and cacao). While such products will continue to be a mainstay of extractive and AFS production, rural incomes can be diversified if a greater range of products can be explored, through access to processing facilities or improvements in transport. This Component will work to overcome these barriers by improving current markets and developing new markets to match sustainable yields potentials for different products and production approaches.

37. The project will seek to improve the reliability, quality and diversity of supply of NTFP and AFS production for market access and their viability as an alternative land use in priority areas of multiple use forested landscapes. To this effect, the project will undertake the identification and mapping of 12<sup>8</sup> species of the Amazon, Cerrado and Caatinga in high biodiversity landscapes of forest ecosystems and production landscapes, in regard to volume, quality, seasonality, costs, regions and niches and assessment of productivity of harvested resources. On the basis of the information generated, the project will provide technical support to the ongoing programmes of the MMA and MDA to support the development of productive chains to increase production volume, improve quality of products and reduce costs as well as the MAPA PPGMBio policy for minimum prices. The project will also assess and develop best practices as well as new technological products, processes and methods to enable high quality AFS and NTFP production under different socio-economic conditions, forest biomes, land use and locations within 6 target landscapes (two in each ecosystem). Development of value-added products per se will be pursued by co-funding resources.

38. The improvement of market access for BD products will be another key output of Component 2<sup>9</sup>. The project will develop mechanisms to bring together different members of supply chain and governance to discuss views; better understand regulations; provide transparency; build trust and connect producers to buyers to enable economies of scale, predictability and increase biodiversity socio economic benefits from up scaling sustainable production at a country level. This approach will be further detailed in the PPG but will build on the National Commodity Platform concept developed through UNDP Green Commodities. Also in this output the project will identify and develop commercialization channels with private and public companies for 6 BD products; assess and develop new markets for new species and products<sup>10</sup>; and promote advertisement and stimuli for BD products that use the best practices established for the different products and regions. Product advertising per se will be covered by co-funding resources.

39. In the short-term the project will explore the existing programmes as incentives to initiate changes in ground-level management by local communities during the project life. Increasing volumes of natural products or products with low processing levels should aim at the public commercialization programmes: Food Acquisition Programme (PAA), Policy of Guaranteed Minimum Prices (PGPMBio) and the National School Food Programme (PNME). The PGPMBio guarantees a minimum price and even pays the farmer the difference between the value received from private companies and the minimum price previously defined. The PAA buys farm products, including from NTFP and AFS to donate to institutions such as schools, nurseries, orphanages, hospitals and shelters. The PNME determines

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<sup>8</sup> A list of possible species for selection include: For the Cerrado: pequi (*Caryocar brasiliense*), baru (*Dipteryx alata*), buriti palm (*Maurititia flexuosa*), araticum (*Annona crassiflora*), cagaita (*Eugenia dysenterica*), cerrado passion-fruit (*Passiflora spp*), cajus-do-cerrado (*Anacardium spp*), barbatimão (*Stryphnodendron adstringens*) and faveira (*Dimorphandra mollis*) For the Amazon: Brazil nut (*Bertholletia excelsa*), Açai (*Euterpe oleracea*), andiroba (*Carapa guianensis*), Copaíba (*Copaifera sp*) For the Caatinga: Umbu (*Spondia tuberosa*), mangaba (*Hancornia speciosa*), babaçu (*Attalea phalerata*), faveira (*Dimorphandra gardneriana*), pequi (*Caryocar coriaceum*), and caroá (*Neoglaziovia variegata*)

<sup>9</sup> Market access is defined as the conditions and measures agreed by sellers and buyers for the entry of specific goods into the market. Access to markets is complex and there are different types of markets for NTFP and AFS. The project will seek to develop public (ongoing baseline programmes e.g. Food Acquisition and School Food Programmes) and private markets (small scale markets) by adopting multiple strategies to overcome each market's specific barriers, hence facilitating commercialization of products.

<sup>10</sup> The project will draw on EMBRAPA's expertise to improve existing products and develop products that are promising in terms of BD conservation. For instance the PPG will select a limited number of species/products from the following: 1) New products to be explored from species already harvested include: (i) improving the quality of preserves of pulp from fruits such as mangaba; (ii) developing new products (powder, cereal bars, etc) from baru nuts; (iii) improving the sanitary quality of commercialized açai pulp; (iv) developing machines to extract baru nuts; (v) developing products (management methods) for species already being heavily harvested (brazil nut, umbu, baru, pequi, etc). 2) "New species" and products potential development include: (i) developing products (jelly, juices, pulp, etc) from cagaita fruits and cerrado passion-fruit; (ii) developing methods to transport fruits of cagaita.

that at least 30% of the food used for students feeding in schools must come from family farmers. In the longer term: Higher added value products can be channelized into private channels and premium prices obtained following sustainable management practices. Other issues to explore include incentives to promote BD production (e.g. differential prices, better financing and tailored technical support) in the public policies or specific negotiations with private companies exploring the environmental and social function (e.g. marketing, certification).

40. The project will develop credit and financing mechanisms for AFS and for NTFP management. Information on financial and credit limitations for BD production will arise from case studies and detailed analysis of current policies involving stakeholders (producers, private and public companies, banks and rural extension agencies) that will be conducted by EMBRAPA, MMA, MDA and MAPA. The project will work with key financial institutions (e.g. Banco do Brasil, Banco do Nordeste, Banco da Amazonia) to develop a framework for financial options to up-scale /replicate the work undertaken in the selected landscapes including promoting favorable bank credit terms combined with technical assistance. The project will also work to lever public funded programs to increase funds for ASF and NTFP mixes that are favorable to landscape conservation (i.e. recognizing specific location of individual farms in terms of connectivity value in the landscape). This would include working with MAPA and the National Supply Company (CONAB) to mainstream environmental goals into their social goals in purchasing agricultural products from high value conservation areas. Moreover the project will work in studying the feasibility and developing financial mechanisms such as rural insurance schemes and the recently established “green grant” to promote ASF and NTFP in sites within landscapes that are considered important for biodiversity conservation.

41. *Community involvement* will be a key aspect of project implementation. The project will follow a bottom-up approach to community involvement 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. Community representation will also be included in the platforms to be established through Output 2.2 that connect buyers and sellers and provide a forum through which stakeholders can provide inputs to best practices and policies (see paragraph 38).

42. The **global benefits** to be delivered by the project include: (i) 500,000 hectares of high value conservation forests in the Amazon, Cerrado and Caatinga under direct sustainable management of NTFP and AFS in selected forest landscapes, and (ii) increased connectivity across 2,500,000 hectares of the three biomes and reduced pressure and deforestation rates as a result of adopting sustainable management practices. Further benefits to be accrued include the improved effectiveness of conservation units; increased connectivity throughout the landscape; fostering of multiple uses of the landscape over mono-crops; reduction of deforestation and degradation of forests, 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.

### **B.3. SOCIOECONOMIC BENEFITS TO BE DELIVERED BY THE PROJECT AT THE NATIONAL AND LOCAL LEVELS**

43. The contribution of BD products for income can be substantial across different ecosystems, according to information available. For instance, in the savannahs of Central Brazil, family income can be increased by US\$360/month by selling wild fruits and in the semiarid Caatinga by US\$180/month. In the Tapajós National Forest in the Amazon, unprocessed *andiroba* and *copaiba* oils can contribute up to US\$120/month/year, and “plant leather” obtained from wild rubber contributes with an additional US\$62/month. There is potential for value adding. One liter of *andiroba* oil is sold at US\$2 by traditional communities, but reaches US\$23 after processing to achieve the quality demanded by cosmetic companies.

44. The project will create an enabling environment for sustainable use of BD products that will derive in socioeconomic benefits and at the same time generating global environmental benefits beyond the project's lifetime. The project's direct beneficiaries are estimated in 4,500 producers that will adopt sustainable management of NTFP/AFS. An additional number of people to be involved in storing, processing, transport and sales of BD products will be benefited as a result of the increased production and commercialization of BD products within the project framework. The project covers vast areas where several million small farmers may adopt sustainable NTFP/AFS in the long term, thus the importance of this project. The socio-economic benefits will span across all sections of the society including women and marginalized groups. Women are identified as active natural resource users and bearing this in mind will be targeted as key beneficiaries and will benefit from and participate in the sustainable management of NTFP and AFS that constitute an opportunity to improve their livelihoods.

**B.4. RISKS INCLUDING CLIMATE CHANGE AND MEASURES THAT ADDRESS THESE RISKS TO BE FURTHER DEVELOPED**

Risk	Rating	Risk Mitigation Measure
Governmental policies and programmes do not mainstream project results and lessons learnt	Medium to Low	Participation of different sectors of Federal and State Governmental institutions as project partners may significantly contribute to mainstream project results and lessons learnt to improve the public policies and designing new ones. Additionally, Ministries (e.g. MMA, MDA and MAPA) in charge of public policies and programmes targeting biodiversity and agroextractivists, and Civil Society Organizations should have seats in the Steering Committee. Capacity building and awareness raising will facilitate mainstreaming of best practices, tools and instruments into the policies and programmes.
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 of Federal 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 BD 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 levels of society.
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 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. The project will also ensure that climate change issues are included in the design of awareness programmes, planning tools and guidelines.

**B.5. IDENTIFY KEY STAKEHOLDERS INVOLVED IN THE PROJECT INCLUDING THE PRIVATE SECTOR, CIVIL SOCIETY ORGANIZATIONS, LOCAL AND INDIGENOUS COMMUNITIES, AND THEIR RESPECTIVE ROLES:**

Stakeholder	Relevant roles
<b>Government</b>	
EMBRAPA	GEF Executing Agency in charge of Project management, coordination, fostering partnerships, developing best practices, technologies, products and studies to improve biodiversity use in forest landscapes, as well as extension and capacity building.
MAPA (Ministry of Agriculture), MDA (Ministry of Agrarian Development), CONAB (Food Supply Company)	In charge of agriculture, livestock and forestry policies and programmes. Will be involved in the planning of intervention areas, in piloted areas, and capacity development in piloted areas. Will be beneficiaries of project results to be mainstreamed in public policies related with production and marketing of biodiversity products. Also provides extension and capacity development.
MMA (Ministry of Environment), ICMBio, IBAMA	In charge of environmental policy. Will be involved in the planning of intervention areas, in piloted areas, and capacity development in piloted areas. Will be beneficiaries of project results to be mainstreamed in public policies related with best practices for the production of biodiversity products, biodiversity conservation strategies and mechanisms within and outside protected areas. Main providers of environmental safeguards following project results.
Research Institutions (Universities, IPEA –Applied Economics Research Institute)	Will support research, case studies and generation of information and knowledge on BD.
Extension Services (EMATER – Rural Extension and Technical Assistance)	Technicians will receive capacity building to identify, disseminate and replicate best practices and train farmers, their organizations and local communities.

Stakeholder	Relevant roles
Agency, SEBRAE – Brazilian Service for Assistance to Micro and Small Businesses)	
NGOs, CSOs	
ISPN (Institute for Society, Population and Nature)	Implements GEF SGP in Brazil. Will be involved in the planning of actions and capacity development for communities in the selected high biodiversity areas targeted by the project. SGP Grant implementation in the project intervention high biodiversity areas can use project results and following monitoring expanded to other areas.
CSOs/GOs	CSOs are important stakeholders and will be engaged taking into account their specialties, local experience and knowledge/views
Private Sector	
Natura, Boticário, Carrefour, Pão de Açúcar, others	May test and implement environmental safeguards. Pilot projects on production, processing, marketing. Providers of information on product demand and quality. Potential members of platforms and buyers of BD products.
Farmer cooperatives and associations/ individual farmers / local communities	Key users and beneficiaries of BD in forests landscapes. Project stakeholders and beneficiaries.

## B.6. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES:

45. The project will coordinate with governmental programmes and projects that promote the sustainable use and conservation of biodiversity, livelihoods, traditional people and communities. The project will work in close cooperation with the MMA *Project for Promotion of Agroextractivism* and *National Plan for Promotion of Chains of Sociobiodiversity Products* to promote farmer’s capacity on sustainable BD production with capacity development *in situ*, and organize production chains in the selected areas of high biodiversity. The project will be highly complementary to the MMA/ICMBio/UNDP *Extractive Reserves Project*, which is promoting the implementation and sustainability of extractive reserves in the Amazon. This complementarity arises as high biodiversity areas in the Amazon to be targeted by the project are also the object of intervention of the MMA/ICMBio/UNDP project. In these areas complementarity actions will be seek, involving the development of the technology and the promotion of capacities.

46. The project will coordinate with MAPA’s *PPA* and *PGPMBio* programmes. By working with the PPA CONAB’s team, the project will be able to drive the acquisition of BD product from the high biodiversity areas selected and promote, in close cooperation with MMA, the development of local capacities on sustainable management. Additionally, capacity development material can be used by the CONAB to disseminate sustainable management to other areas target by CONAB project that promotes the organization of pilot agro-extractive organizations. The Project will provide data on BD species production and production costs to contribute for PGPMBio improvements on minimum prices and on the inclusion of new products supported by this policy.

47. The MDA *Project for Promotion of Family Agriculture* promotes family agriculture and includes agroextractivism. The promotion of capacity development can target project areas to foster production through access to the PRONAF (National Program of Family Agriculture) and proper capacity development, which will also involve the MMA *Project for Promotion of Agroextractivism* and *National Plan for Promotion of Chains of Sociobiodiversity Products* and MAPA’s *PPA* program. Most importantly, by working in cooperation with MDA, the project can provide the necessary data to improve the PRONAF actions aimed at promoting BD production.

48. The project will build on the experience of the GEF *Small Grant Programme* (GEF SGP) to identify practices, stakeholders, and target areas. GEF SGP grants can be driven to the areas targeted by the 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.

49. EMBRAPA’s initiatives and this project will coordinate capacity building activities as well as mainstream new approaches within the institution towards research on use and conservation of BD.

50. The project also has parallels and synergy with the UNDP/GEF project *Catalyzing the Contribution of Indigenous Lands to the Conservation of Brazil’s Forest Ecosystems*”. The Project will promote both better NTFP management and production, as well as AFS to recuperate degraded areas and contribute to food security, increasing the BD value of Indigenous lands buffer zones and promoting connectivity.

51. The Project will likewise coordinate with IADB/GEF project *Consolidation of National System of Conservation Units (SNUC) and Enhanced Flora and Fauna Protection*. Synergies between the two projects will arise mainly in SFM work in the Caatinga, adjacent to protected areas where the IADB/GEF will support the strategic restoration of deteriorated landscapes in priority forest and non-forest lands to enhance carbon stocks, and apply sustainable management practices in existing forests. The IADB/GEF project proponents – MMA and ICMBio – will also be involved in this project and will be beneficiaries of project results. They will also be part of the Project Consulting Committee during the PPG phase, and meetings will be held between technical staff and consultants developing the two initiatives. In the long term the experiences and safeguards established for the NFTP products in all forest biomes will be integrated into the SNUC and thus synergies go well beyond the GEF-TER project and to the entire SNUC.

52. These initiatives will benefit from project best practices, and sharing of information, know-how and lessons learnt which will be mainstreamed into them allowing replication over greater geographical areas. No duplication is envisaged with the initiatives that the GoB is defining for its biodiversity STAR allocations. Formal coordination mechanisms will be established at management and field levels, including participation in the Steering Committee, working agreements, and technical meetings.

**C. DESCRIBE THE GEF AGENCY’S (UNDP) COMPARATIVE ADVANTAGE TO IMPLEMENT THIS PROJECT:**

**C.1. INDICATE THE CO-FINANCING AMOUNT THE GEF AGENCY (UNDP) IS BRINGING TO THE PROJECT:**

53. UNDP is leveraging a total of US\$27.8 million of co-financing for this project of which US\$ 300,000 is from UNDP own sources.

**C.2. HOW DOES THE PROJECT FIT INTO THE GEF AGENCY’S (UNDP) PROGRAMME (REFLECTED IN DOCUMENTS SUCH AS UNDAF) AND STAFF CAPACITY IN THE COUNTRY TO FOLLOW UP PROJECT IMPLEMENTATION:**

54. UNDP has accumulated considerable experience over the past 20 years in developing and implementing improved governance systems for biodiversity conservation and forestry management. It also has significant experience in capacity building and in working collaboratively with different government agencies and other stakeholders. UNDP has strong and effective working relationships with all concerned government agencies, as well as with many other stakeholders. At the national level UNDP has a long history of supporting small and medium rural producers and communities in alternative productions as part of its poverty alleviation and environmental goals. It is currently closing two very successful projects that have set up (i) a mosaic of land uses across forested landscapes in the NW of the Mato Grosso State that includes the demonstration over 10 years of AFS and NTFP production nested strategically between conservation units and forest reserves so increase connectivity across the wider landscape and (ii) an integrated land management project in the Caatinga with sustainable practices for the production of fire wood and use of natural resources, capacity building, and institutional strengthening to relevant local institutions.

55. The project fits the UNDAF Outcome *Incorporating Sustainable development, green economy and decent labour paradigms into national public policies*—**Related Strategic Plan focus areas:** Environment & Sustainable Development and contributes to the achievement of the UNDP Outcome *Green Economy and Decent Labour in Poverty Eradication and Sustainable Development context*. The UNDP Country Office will assign eight staff members to be responsible for the overall management and supervision of the project implementation. From the programme side the project will be under the overall supervision of the Environment Unit Coordinator, with a Ph.D. on Forestry Engineering and 25 years of experience in environment area with the direct support from a Programme Officer with a Masters Degree and 16 years of project management experience, and a Programme Assistant. Three additional staff members with several years of experience within the organization will provide implementation support for Human Resources, Procurement and Finance. All UNDP local staff will be directly supervised by the Programme Coordinator on implementation matters and, overall, by the Resident Representative.




**PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT AND GEF AGENCY****A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT ON BEHALF OF THE GOVERNMENT:**

(Please attach the Operational Focal Point endorsement letter).

NAME	POSITION	MINISTRY	DATE (MM/DD/YYYY)
Rodrigo VIEIRA	General Coordinator for External Financing	Ministry of Planning, Budget and Management	August 20, 2012

**B. GEF AGENCY CERTIFICATION**

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for project identification and preparation.

Agency Coordinator	Signature	Date	Contact	Telephone	Email Address
Yannick Glemarec, UNDP/GEF Executive Coordinator		January 10, 2013	Helen Negret, EBD Senior Technical Advisor	+507 302-4508	<a href="mailto:helen.negret@undp.org">helen.negret@undp.org</a>