GEF-6 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: FULL-SIZED PROJECT
TYPE OF TRUST FUND: GEF TRUST FUND

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PART I: PROJECT INFORMATION

Project Title:	Ecosystem-based biodiversity friendly cattle production framework for the Darien Region of Panama.		
Country(ies):	Panama	GEF Project ID:[1]	9589
GEF Agency(ies):	CAF	GEF Agency Project ID:	CAF 03/GEF
Other Executing Partner(s):	Agricultural Development Bank (BDA) in cooperation with ANCON	Submission Date:	03/03/2017
GEF Focal Area(s):	Biodiversity and Land Degradation	Project Duration (Months)	48 months
Integrated Approach Pilot	IAP-Cities ☐ IAP-Commodities ☐ IAP-Food Security ☐	Corporate Program: SGP ☐	
Name of parent program:	[if applicable]	Agency Fee ($)	316,775

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES[2]

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in $)	
		GEF Project Financing	Co-financing
BD-4: Mainstream Biodiversity and sustainable use into production landscapes, seascapes and sectors. Program #9: Managing the Human-Biodiversity Interface	GEFTF	1,759,862.5	7,173,286
LD-1: Program #1: Agro-ecological Intensification	GEFTF	1,759,862.5	7,173,286
Total Project Cost		3,519,725	14,346,572

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: Establishment of an ecosystem-based biodiversity friendly cattle production framework for the Darien Region of Panamá.

Project Components	Financing Type[3]	Project Outcomes	Project Outputs	(in $)		
				Trust Fund	GEF Project Financing	Co-financing
Component 1: Cattle production shifts to Silvo-pastoral systems (SPS) delivering environmental and socio-economic gains.	TA	**Outcome 1.1:** Conservation oriented Silvo-pastoral Systems are adopted in cattle farms and the productive landscape of the Darien as part of a biodiversity conservation and land restoration landscape model. *# of farms implementing SPS (Aichi Target # 5)*[4] *Restoration of connective corridors and degraded areas within the*	**Output 1.1.1:** Conservation-oriented Farm Management Plans guide the application of Silvo-pastoral Systems and the sustainable use of resources within farm plots. **Output 1.1.2:** A connectivity and restoration strategy for the establishment of conjoining corridors and restoration activities between cattle farms, the productive landscape and protected	GEF TF	Total: **1,945,810** LD: 1,518,715 BD: 425,095	12,000,000

[1] Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.
[2] When completing Table A, refer to the excerpts on *GEF 6 Results Frameworks for GETF, LDCF and SCCF*.
[3] Financing type can be either investment or technical assistance.
[4] Since most of the proposed outcome indicators will address several Aichi Targets simultaneously, only the main target is highlighted.

		productive landscape and between PAs (measured by ha.) *(Aichi Target # 5)* *Land area under effective management in production systems with improved vegetative cover.*	areas.			
		Outcome 1.2: Cattle producer have the technical know-how and managerial skills for implementing conservation-oriented SPS within cattle farms and productive landscapes. *(x) % of cattle producers in the project area which receive technical training in SPS.(Aichi Target #4 and #19)*	**Output 1.2.1:** Training Programmes for cattle ranchers are developed by government counterparts and vocational skill training institutions for the long-term application of conservation-oriented silvo-pastoral systems. *(Aichi Target #4 and #19)* **Output 1.2.2:** "Rancher to rancher" SPS exchange programmes are organized to illustrate the benefits of SPS and facilitate their application under diverse farming scenarios and investment options.			
		Outcome 1.3: Technical government counterparts and extension agents are able to deliver timely quality support in the application, oversight, and replication of SPS. *(#) of extension agents providing technical support in the application of SPS.*	**Output 1.3.1:** Capacity building programmes for extension service providers in SPS are tested and delivered by government institutions and technical training institutes. (Aichi Target #4 and #19).			
		Outcome 1.4: Cattle ranches in the Darien demonstrate the socio-economic and environmental benefits of SPS, including eco-labelling for SPS farm products. *(#) of farms under SPS management which receive an SPS eco-labeling designation. (Aichi Target #4, # 11)*	**Output 1.4.1:** An SPS eco-labeling designation under a single SPS logo is registered with The National Certification Authority. **Output 1.4.2:** A training and entrepreneurial skill enhancement programme detailing production and marketing requirements for SPS eco-labelling is tested			

		Outcome 1.5: Institutions and relevant stakeholders' groups (i.e. producers, consumers, extension agents, policy-makers, sector representatives and land use planners) actively support the application, and replication of SPS in the Darien and nationwide. (Aichi Target # 1, #2)	and available from public and private institutions. **Output 1.5.1:** A *communication and awareness raising strategy* targeted for producers, consumers, and decision-makers is disseminated by various institutions highlighting the environmental, social and economic benefits of SPS.			
Component 2: Biodiversity conservation and sustainable land use is mainstreamed into integrated land use planning, financial mechanisms, and policy and regulatory frameworks.		**Outcome 2.1:** A consolidated and integrated *Land Use Management Plan* guides productive activity (cattle ranching), land use zoning and conservation efforts in the Darien. *Avoided deforestation of natural habitats in the productive landscape of the project area (number of ha. to be provided in PPG stage) (Aichi Target # 5)* *# of institutions (i.e. Ministry of Environment, Ministry of Agricultural Development, National Land Authority ANATI, etc.) which consult and abide by the land use categories detailed on the on-line GIS. (Aichi Target # 2 #4)* *(#) of agreements formalized among relevant Ministries for coordinating resources and staff for technical assistance, extension services, and enforcement. (Aichi Target # 4)* **Outcome 2.2:** Financial institutions support systemic changes in the appraisal of credits by incorporating	**Output 2.1.1:** *A conservation oriented Land Use Management Plan and corresponding regulatory frameworks* are prepared by relevant institutions for the Darien with local and national stakeholder participation. **Output 2.1.2** *An online geographic information system for government officials, planners and resource users*, provides updated information on land use categories, zoning and demarcation, as well as guidelines for productive activity in the Darien region **Output 2.1.3:** *Inter-institutional Agreements and multi-sectoral partnerships* are formalized at local and national levels to ensure institutional coordination, operational consistency and collective oversight in the implementation of designated land-uses. **Output 2.2.1:** Environmental and social risks assessments and appraisal processes are implemented and guide credit approvals.	GEF TF	Total: **1,200,000** BD: 1,145,810 LD: 54,190	1,600,167

		conservation and sustainable use into their lending portfolios and mitigating the environmental, social and economic risks of their operations. *# of financial institutions applying conservation and sustainable use parameters into their lending portfolios.* *(Aichi Target # 4)* *(#) of credits approved in which conservation and sustainability measures are incorporated.* *(Aichi Target # 4)*	**Output 2.2.2:** Training Programmes, knowledge management tools, and instructive manuals for risk assessment and appraisals are developed as part of corporate policy to actively mainstreaming conservation objectives into lending operations. **Output 2.2.3:** *A national programme for exchanging experiences amongst banking institutions and disseminating best practices* is implemented to further mainstream sustainable use and conservation measures into loan and credit programmes as part of the systemic adoption of risk management considerations in financing portfolios.			
Component 3: Monitoring, evaluation and knowledge sharing.		**Outcome 3.1:** Project implementation follows a Results Based Management framework (RBM), applies SMART indicators for measuring progress and impact, and employs adaptive management principles to systematically re-incorporate monitoring and evaluation feedback into project performance.	**Output 3.1.1:** A *Project Monitoring and Evaluation Strategy* is developed, including annual work-plans, progress and impact indicators, annual budget allocations, and independent evaluation requirements. **Output 3.1.2:** *Baselines for biological indicators* (BD and LD) at the farm and productive landscape level are available for the project intervention area. **Output 3.1.3:** *A monitoring plan* is developed to determine the benefits and impacts of eco-labelling on sustainable resource use and biodiversity conservation.[5] **Output 3.1.4:** *A project website* provides updated information on	GEF TF	Total: 206,309 BD: 103,155 LD: 103,154	63,235

[5] As explicitly recommended by STAP for GEF project engaging in any form of eco-labelling activities.

			project progress, measureable results, lessons learned, including links to the Ministerial websites, the on-line GIS, and blogs pertaining to SPS issues , ranching, conservation, and sustainable resource use topics, etc.			
				Subtotal Biodiversity Land Degradation	**3,352,119** 1,676,060 1,676,059	13,663,402
				Project Management Cost (PMC)[6]	167,606	683,170
				Total Project Cost	**3,519,725**	**14,346,572**

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here:

C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount ($)
Government	Bank for Agricultural Development	Cash	12,000,000
Government	Bank for Agricultural Development	in-kind	377,700
Government	Ministry of Agricultural Development	in-kind	685,282
Government	Ministry of Environment	in-kind	1,283,590
Total Co-financing			**14,346,572**

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS [a)]

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in $)		
					GEF Project Financing (a)	Agency Fee (b)[b)]	Total (c)=a+b
CAF	GEFTF	Panama	Biodiversity	(select as applicable)	1,759,862.5	158,387.5	1,918,250
CAF	GEFTF	Panama	Land Degradation		1,759,862.5	158,387.5	1,918,250
Total GEF Resources					3,519,725	316,775	3,836,500

a) Refer to the Fee Policy for GEF Partner Agencies.

E. PROJECT PREPARATION GRANT (PPG)[7]

Is Project Preparation Grant requested? Yes x No ☐ If no, skip item E

[6] For GEF Project Financing up to $2 million, PMC could be up to10% of the subtotal; above $2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

[7] PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to $50k for PF up to$2m (for MSP); up to $100k for PF up to $3m; $150k for PF up to $6m; $200k for PF up to $10m; and $300k for PF above $10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

Project Preparation Grant amount requested: $150,000					PPG Agency Fee: $13,500		
GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in $)		
					PPG (a)	Agency Fee[8] (b)	Total c = a + b
CAF	GEFTF	Panama	Biodiversity	(select as applicable)	75,000	6,750	81,750
CAF	GEFTF	Panama	Land Degradation		75,000	6,750	81,750
Total PPG Amount					**150,000**	**13,500**	**163,500**

F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS[9]

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	**4,500 ha**
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	**5,000 ha**

PART II: PROJECT JUSTIFICATION

1) The global environmental problems, root causes and barriers that need to be addressed

Panama is a biodiversity rich country, covering 74,733.4201 km2 of the large isthmus that joins Central and South America. Conforming one of the most crucial migratory routes in the Western Hemisphere it has facilitated the migration of species from North to South America since its formation playing a critical role in the preservation and evolution of biodiversity. Panama is also among the eight countries with the greatest diversity in amphibians in Latin America and the Caribbean and includes the eco-region with greatest number of vascular plant species.

Politically, Panama is organized in ten different regions. Of these, the Darien region is the most extended, remote and unpopulated. Totaling 77,500 ha the Darien borders with Colombia on the East and with the Emberá-Wounaan and Guna Yala indigenous reserves to the West. The Darien region not only sustains Panama's highest levels of biodiversity but also forms part of the Choco-Darien eco-region shared with Colombia and listed by WWF among the highest priority eco-regions for conservation due to its high levels of endemism and globally significant biodiversity.

The Darien's high levels of biodiversity include 2,638 species of plants (27.7% of all registered for the country); 166 species of mammals (78% of the total for the country); 670 species of birds (69% of those registered in the country); 78 species of amphibians and 127 species of reptiles (the later corresponding to 60.4% of registered species in Panama). With respect to freshwater fauna, 72 species of fish have been recorded in the Darien, including 168 saltwater and brackish water fish, as well as 15 commercial species of bivalves and eight commercial species of gastropods (ANCON, 2010, Plan de conservación de sitio, Darién, The Nature Conservancy).

Recognizing the Darien's ecological value, the government of Panama (GoP) has progressively established nine different natural conservation areas encompassing over 46% of this biologically endowed region. These are: **(i)** the *Darien National Park*, **(ii)** the *Natural Private Reserve of Punta Patiño*, **(iii)** the *Biological Corridor Serrania de Bagre*, **(iv)** the *Filo del Tallo-Canglón Hydrological Reserve*, **(v)** the *Chepigana Forest Reserve*, **(vi)** the *Bosque*

[8] PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

[9] Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the *GEF-6 Programming Directions*, will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and/or SCCF.

Protector Alto Darien, **(vii)** the *Serrania del Darien Hydrological reserve*, **(viii)** the *Punta Patiño Wetland and Ramsar Site and* **(ix)** *the recently created Wildlife Refuge Laguna de Matusagarati,* a globally recognized wetland, adjacent to the *Filo del Tallo–Canglón Hydrological Reserve.* The *Darien National Park* is the largest in Panama and the second largest protected tropical forest in Central America[10]. Part of the Darien region is also covered by two indigenous reserves, the Emberá-Wounaan and Wargandí reserves both of which are independently managed by these communities. This network of protected areas was established in recognition of the region's unique value and biological diversity, as well as the socio-economic and vital ecosystems services it provides, including water supply and regulation, carbon capture, cultural services, eco-tourism, and medicinal plant extracts, among others.

In spite of the GoP's efforts to safeguard the region's outstanding biodiversity through protected area designations, land use changes have progressively affected the area since the 1950s. After 1978 these became more evident with the construction of the new stretch of the Pan-American Highway connecting Panama City to the town of Yaviza (just outside the Darien National Park). Satellite imagery from the 1970s confirms the dramatic trends of deforestation expectedly along the Pan-American Highway. In this regard, the Darien's biodiversity faces similar threats as other tropical forests in the world. The third "Global Environment Outlook" report for Latin America and the Caribbean further confirms that the greatest threats to biodiversity stem from changes in land use with the resulting reduction, fragmentation and loss of habitats (Alkemade et al. 2009). Illegal logging of commercially valued timber species, the expansion of land for agriculture, and the clearing of forests for cattle ranching have resulted in the highest deforestation rates in the country (almost twice the national rate). Unsurprisingly, land use changes have also caused the loss of native species communities, shrinking and fragmented habitats, encroachment of protected areas and the progressive disruption of ecological processes and the multiple services these provide.

Current threats to globally important biodiversity and ecosystem integrity:

In Panama, the conversion of natural habitat for agriculture and specifically cattle ranching, as in the case of the Darien, constitutes one of the major threats to its biodiversity. Almost all areas presently under cattle use and now mainly covered by degraded pasture, were originally Mesoamerican Tropical Forests. In the case of the Darien, the expansion of traditional livestock production has been the unintentional result of past policies to improve access to food, respond to rising demand and promote economic development in a resource rich albeit economically depressed area. Unfortunately, agricultural growth has transpired without the considerations for production in highly diverse and fragile ecosystems (tropical forest-soils) thereby quickly becoming degrading and unsustainable. Vital ecosystem services such as carbon sequestration, soil preservation, flood and temperature regulation, and the conservation of biological diversity along with its attendant benefits have all being negatively and progressively affected.

Annual habitat conversion rates in the Darien (or percentage of intact habitat degraded each year) between 2006 and 2012 stand at 1.53% (Ministry of Environment, 2016). Threats to biodiversity and ecosystem services are also on the rise from cattle ranching which has become the region's main economic activity and a growing share of its gross domestic product over the last decade. The latest agricultural census (2011) counted a total of 1,136 cattle ranchers. The national increase in the cattle sector is also reflected in the Darien with cattle growing from 29,012 heads in 1991; to 84,570 in 2001; to 184,850 in 2011; and to 194,400 in 2014, corresponding to a six-fold increase since 1991. As noted, the expansion of cattle in the Darien has lead to progressive deforestation and continuous clearing for pastures with important habitat loss, fragmentation and ensuing land degradation. Cattle rearing is now threatening untouched and pristine areas, and dangerously infringing upon existing protected ones, threatening their integrity, overall functionality and the indispensable ecosystem services they collectively provide.

Nevertheless, in spite of agricultural expansion, 78% of the Darien forest remains mature forest, 13.9% secondary forest and 3.8% mangroves (Ministry of Environment's 2016 figures). Figures however also confirm that deforestation, primarily for ranching may now be the most serious problem. Of the nine protected areas of the Darien, perhaps the most highly threatened is the *Filo del Tallo-Canglón Hydrological Reserve*, particularly due to its proximity to the Pan

[10] Created in 1980, the Darien National Park was declared by UNESCO a World Heritage Site in 1982 and a Biosphere Reserve in 1983.

American Highway and the easy access it confers to prospective cattle ranchers seeking new lands.

Several underlying causes explain the environmental problems detailed above.

- Nationally, a displacement from "established cattle rearing provinces" towards the Darien has been occurring as resources (water, soil, pastures) have become progressively depleted from overuse and exploitation in these traditional cattle producing regions. The prospect of new lands with bountiful resources, a reliable water supply, and the possibility of purchasing plots at comparatively lower prices has attracted cattle producers to either rent or buy land and "clearing" these new areas for the expansion of the sector. Rising meat consumption has also contributed to production increases to meet growing demand. Furthermore, most cattle rearing in the Darien has been conducted "the traditional old fashioned way" occupying large swaths of land, deliberately deforested and cleared for pasture, further exacerbating the impact and pressure on the area's unique and highly delicate resource base.

- Extension services and technical assistance with regards to livestock production have been basic, sporadic and practically non-existent in the Darien. The prevalence of conventional cattle rearing practices in the Darien is partly the result of cultural trends (the vast majority of ranchers came from traditional cattle producing regions in the country) but also the fact that technical assistance, whenever available, has been limited to supporting the basic fundamentals of traditional livestock rearing (vaccination, plague control, etc.) rather than the promotion of innovative and less degrading alternatives. The few initiatives promoting sustainable cattle ranching in biodiverse ecosystems, although noteworthy in several aspects, have been experimental, limited in coverage and scope, purposefully site-specific, fragmented in their approach, and generally ineffective in altering long established production paradigms in this traditional sector. Valuable lessons derived from these initiatives have however been analyzed for relevance and applied to this project, as appropriate and as detailed in sections #5 and #7 of this PIF. A review of the GEF portfolio experience in productive landscapes, entitled "*Biodiversity Mainstreaming in Practice"* will also inform project design with the aim of "further refining the GEF's investment strategy at the productive landscape level and the GEF Theory of Change for biodiversity mainstreaming[11]."

- Land use plans have not been implemented in the Darien leading to deforestation for agricultural expansion and the progressive deterioration of ecosystem services. Land use planning in the Darien has been primarily directed at establishing protected areas under varying management and protection categories. The remainder of the region is comprised of open lands, nestled among protected areas, with no specific designations, regulations, or enforcement mechanisms. Of these lands, only 9.4% (equivalent to approximately 151,034 ha) are deemed suitable for agriculture. The region's unsuitability for agriculture coupled with its inaccessibility has generally detracted government institutions from establishing a permanent presence in the area. Land use planning[12] and the sustainable use of resources in productive systems was never regarded as a priority and consequently not pursued. The last decade has thus witnessed an unprecedented expansion of unsustainable land use practices in agriculture, and more specifically cattle ranching, as no regulatory frameworks, clear land use zoning, reliable technical support, alternative production practices, or enforcement frameworks have provided the necessary controls or permanent oversight for productive activities and land use.

- The Darien's isolation, scarce population, limited social services and infrastructure, have made technical assistance and reliable extension services a challenge for past government administrations. Addressing the challenges inherent to the Darien have not always constituted a priority for the GoP as competing development needs elsewhere in the country have taken precedent over issues in one of the continent's last frontiers. This situation however has now become a pressing concern as inadequate technical and institutional support has further exacerbated the disorganized, degrading, and unprecedented pace of agricultural expansion.

The barriers summarized below constitute the main challenges in the implementation of conservation-oriented

[11] Biodiversity Mainstreaming in Practice: A Review of the GEF Experience over 25 years.

[12] Other than the region's protected area network and indigenous comarcas which have no specific land use plans but for the most part are considered as forest reserves.

cattle production systems in the Darien's biodiversity rich ecosystem.

- ***Cattle ranchers continue to use and rely on traditional practices and methods for cattle production.*** The concepts of integrated resource management and the application of silvo-pastoral systems (SPS) remain unfamiliar to Darien's cattle producers. The sustainable intensification of existing farm-lands and the application of alternative production practices, including crop rotation, crop diversification, water-saving techniques, and the application of conservation-oriented SPS, among others, are neither practiced, promoted nor sufficiently understood. Neither are the socio-economic benefits and environmental services silvo-pastoral systems can provide by way of: healthy watersheds, soil preservation, carbon sequestration, habitat preservation, functionality and maintenance of vegetative cover in agro-ecosystems, productivity gains and additional income sources. Unfortunately, cattle producers moving to the Darien often apply the same unsustainable methods utilized in their place of origin, irrespective of the environmental consequences these practices have progressively had on the resource base they depend on. A knowledge and opportunity vacuum is thereby disempowering producers from engaging in sustainable alternatives, and impeding the opportunities, efficiencies, and numerous benefits conservation oriented SPS would offer to their livelihoods on a variety of fronts.

- ***Extension services and technical support remain conventional, outdated and scarce***. Specialized assistance and institutional backing for cattle producers has been limited in both quantity and quality. As mentioned, cattle ranchers are neither empowered or appraised of new technologies, conservation oriented production methods, nor the win-win situations and productivity gains sustainable alternatives can generate. Dependence on conventional inputs and "standard" production practices remains the norm as does the environmental degradation associated with these long-established production scenarios. The resulting patterns of degradation and unsustainable land uses are both evident at the farm and landscape level. Extension agents also reflect a generational gap in technical knowledge and the perceptions of what constitutes sustainable production models. In this regard, a new generation of extension professionals needs to be nurtured, promoted and established to replace unsustainable production paradigms.

- ***Cattle rancher associations and networks are disorganized and weak, minimizing the potential socio-economic benefits a collective approach within this productive sector could generate.*** Networking structures and cattle ranchers' associations remain incipient and disorganized compared to those in other regions in the country, as well as other agricultural sectors. This constitutes an important organizational barrier preventing ranchers from defining common needs, mutual goals, the scope and frequency of assistance requirements, and the possible economies of scale in delivering and optimizing technical support. Improved networking structures and consolidated cattle ranchers' associations could assist producers in reaching their full potential in terms of productive sustainability. In the same vein, a united front of cattle producers could significantly leverage a reconversion from traditional cattle production towards eco-friendly systems both within farms and the productive landscape alike. Consolidated producers' networks are significant structures for establishing a critical stakeholder mass, unifying support needs, facilitating the delivery of technical assistance, promoting the permanent exchange of experiential learning, and ultimately ensuring the replication and emulation of best practices in this increasingly relevant productive sector.

- ***Awareness of the multiple benefits associated with eco-friendly silvo-pastoral systems within a sustainable land management framework is limited among producers and consumers alike.*** The socio-economic and ecological benefits of sustainable cattle ranching - through the application of conservation-based practices within a sustainable integrated land use management model - remains elusive at local and national levels. Conversely, the socio-economic costs and ramifications of engaging in "business as usual ranching" along with the environmental degradation it entails have not been internalized, costed, nor fully understood by producers and consumers alike. This lack of awareness results in unrealized potential for improvements, as well as missed opportunities for modifications and innovations along the productive chain. This needed "awareness raising" could be significantly addressed through well articulated informational campaigns and communication strategies purposefully designed for a variety of stakeholder groups at local and national levels, including producers and consumers, policy makers, land use planners and decision-makers, as well as financial institutions, among others.

- ***Land use planning and regulatory frameworks in the Darien are inadequate and do not incorporate conservation objectives at the wider landscape level.*** The Darien does not have a cohesive land use plan which integrates conservation, ecosystem services, and sustainable resource use objectives. Existing plans almost exclusively focus on protected areas with no consideration to the wider multi-functional landscape in which these reside. A holistic integrated land-use management plan, adjusted to current developmental challenges and consistent with productive sector pressures (agriculture/livestock) is now a pressing requirement for the region's sustainable development. This planning tool is indispensable to safeguard biodiversity, (both within and outside protected areas) the functionality of protected areas and the multiple services these provide on an individual and collective basis. The establishment of a sustainable land use management plan is also critical considering the uncontrolled expansion of agricultural production. In this regard, an integrated zoning and conservation land use framework would merge conservation and sustainability concerns within its planning objectives, operational structures, enforcement mechanisms, and financing considerations. Without this land use plan and regulatory framework, productive activity in this resource rich, albeit fragile ecosystem, could irreversibly jeopardize the Darien's unique and globally significant ecological attributes.

- ***Government institutions (Planning, Agriculture, Environment) and their respective technical departments are neither sufficiently coordinated or trained to address the challenges facing the Darien nor able to provide the required support for implementing sustainable productive options.*** Government institutions, namely the Ministry of Environment and the Ministry for Agricultural Development, have made commendable efforts in recent years to establish and maintain a small local presence in the Darien. Nevertheless, technical assistance for cattle rearing in the Darien remains limited to basic sanitation and inoculation priorities, censuses, and to a certain extent maintenance of road access for livestock transportation purposes. Also, while ad hoc communications exist between government institutions at local levels, these do not replace a formal, coordinated, inter-institutional framework that would allow these government entities to deliver local stakeholders the technical support required by their respective mandates.

- ***Financial resources (credits/loans) are not complemented by the technical assistance, nor extension support required for the adoption of on-farm reforms in the cattle sector's productive systems.*** The absence of technical expertize to ensure that financial mechanisms[13] deliver transformational changes within productive systems at the farm and landscape level, constitutes a significant impediment that will need to be addressed if alternatives are to be sustainably implemented by producers. To date, the absence of reliable, specialized and informed technical assistance to facilitate and guide cattle ranchers in accessing capital, particularly among small to medium sized producers, has undermined progress towards the application of SPS and the possibility of achieving lasting productive changes in the Darien. Experience has also shown that even with accessible financing at attractive rates cattle farmers remain reticent to engage in alternative production practices *if they do not receive a commensurate amount of reliable technical assistance to support them in the implementation of these changes*. The case in the Darien illustrates that the successful adoption of conservation-oriented SPS, requires *both* technical assistance and financial resources to mitigate the perceived risk these proposed alternatives represent for traditional cattle producers. In brief, changing "how things are done" amongst ranchers implies a meaningful shift in their established customs and mind-sets. This attitudinal change represents a commitment for which both resources and technical assistance are required *in equal measure*. Experience has repeatedly shown that without reliable technical assistance for implementing, monitoring, and replicating these changes, financial resources alone - even if readily available – will not be sufficient to effect lasting change. Consequently, a two-pronged approach, pairing financial resources with ample technical assistance is considered indispensable for long-lasting productive changes.

- ***Cattle farmers in the Darien do not have the required information, knowledge or experience to develop farm management plans based on SPS and conservation-oriented principles.*** To access credit farmers will have to prepare "Planes de Finca" (farm plans) as a requirement for financial institutions. In these plans, farmers will need to detail and cost how they will transition from a "business as usual" scenario to a situation in which production practices based on conservation objectives and silvo-pastoral systems will prevail. Among other elements, these

[13] Subject to the implementation or adoption of BMP and socio-economic risk analysis

"Planes de Finca/Farm Plans" will need to include; the specific practices that they will be adopting in their farms[14], the costs of corresponding inputs and staff, expected time-frames and yields, as well as the means to monitor positive changes in the preservation and rehabilitation of environmental resources (soil, water, biodiversity, etc.) and the services they provide. With these considerations in mind, these Farm Plans will differ considerably from those currently guiding production in the Darien. However, the technical support needed to move from "business as usual" to the proposed "alternative scenario" is currently unavailable thus constituting a significant barrier to optimize the potential of available credit. Practical training in SPS and immersion in the techniques they entail at the farm and landscape level, in addition to the investments and inputs these require, is precisely what prospective farmers will need technical assistance in and one of the barriers this project proposes to overcome.

- ***Another barrier is that banks and other financing institutions have not incorporated conservation and/or sustainability considerations, nor social and environmental risk management assessments in their lending operations and sectoral portfolios.*** Credit for agricultural development has been easily granted on favorable terms for "business as usual" production in a variety of sectors including cattle rearing, irrespective of resulting socio-environmental impacts. This prevailing situation in the banking sector has been a defining variable in inadvertently maintaining unsustainable agricultural production patterns in the Darien and elsewhere. Today, leading national banks are re-examining and modernizing their corporate policies, directives and guidelines to fully integrate sustainability considerations into their lending portfolios, including the efficient use and conservation of natural resources. Risk management assessments are progressively becoming part of credit operations thereby incentivizing significant modifications in the agricultural sector through the adoption of sustainable alternatives in production practices. A notable example is the *Bank for Agricultural Development,* the principal financier of the agricultural sector and the financial arm of the Ministry of Agricultural Development. The Bank is currently leading this process at national levels, and in the context of this project encouraging the application of SPS within its existing preferential financing.

2) The baseline scenario or any associated baseline projects

Recognizing the importance of cattle ranching in Panama's agricultural sector and acknowledging its impact on fragile ecosystems in a "business as usual context", the GoP is actively encouraging the adoption of conservation-oriented approaches and sustainable productive practices in this sector. Current efforts form part of a greater paradigm shift geared towards the sustainable modernization of agricultural in which sustainable production, conservation priorities, ecological integrity and the preservation of key environmental assets are integrated into decision-making, policy formulation, and sectoral development objectives. In this regard while past projects[15] could be construed as one-off interventions yielding limited results, current efforts, will be implemented in an enabling environment characterized by: supportive policies, legal and regulatory frameworks at the sector and landscape levels; technical assistance linked to credit from key banking entities; and the inter-institutional alignment and coordination required for systemic change at the scale of the Darien and nation wide.

To this end, the GoP through its Ministry of Agricultural Development and the Ministry of Environment is implementing a series of indispensable baseline measures and policies designed to progressively address the barriers and challenges mentioned above. As a result, today's programmatic baseline provides a far more enabling institutional, financial, legal and regulatory environment for the implementation of sustainable cattle production in biodiversity rich landscapes, *then at any other time in the country's history and in the development of the sector itself.*

[14] Manual of 15 best practices for establishing Silvo-pastoral Systems. USAID, ANAGAN, MIDA and COPEG.
[15] Past initiatives while contextually very different in scope, time-frame, location, and stake-holder group do provide valuable lessons that will contribute to the design, development, and implementation of the proposed project.

The following initiatives provide baseline foundations for the proposed project and are considered indispensable for the delivery of its intended objectives.

- *"The National Outreach and Extension Programme for Cattle Farming*" led by the Ministry of Agricultural Development. The programme operating at local, regional and national levels reflects the Ministry's new strategy to modify production patterns in the agricultural sector along environmentally sound and socio-economically viable parameters. This has led to corresponding reforms and modifications in the quality and substance of its outreach and extension programmes. Among the agricultural sub-sector targeted for these changes is cattle production. Through its *outreach and extension programme*, the Ministry of Agricultural Development aims at strengthening its technical capacities to underscore resource efficiency and conservation, whilst maintaining productive output. To this end, a new cadre of technical staff versed in environmentally sound production systems will be trained as part of this broader institutional and sectoral goal. This *new outreach programme* will be decisive in supporting the implementation, replication and sustainability of conservation-oriented SPS in the Darien but also ensuring its subsequent expansion at national levels.

Among the activities conducted so far under this programme is the selection of pilot ranches in cattle producing regions in order to begin the introduction and implementation of technological shifts in cattle management, including the efficient use of land, soil, water and vegetation in production practices. Pilot ranches are responsible for supporting a number of other ranches to ensure the transfer of technologies and know-how in a cascade model. The proposed project will partner with this *outreach and extension* programme complementing its activities in the Darien with its own strategy for "farmer to farmer" knowledge transfer and dissemination. This will reinforce the efficacy of experiential learning for biodiversity-friendly cattle production systems and subsequently facilitate the replication of project objectives both in the Darien and nationwide. In this regard the *National Outreach and Extension Programme* represents a fundamental tool for imparting alternative production systems in the cattle ranching sector, both within farms and at the broader landscape level. Unlike prior efforts, which to a great extent constituted limited interventions, the current mainstreaming of conservation practices into established national extension programmes for cattle rearing confirms that project goals are consistent with the systemic changes taking place in the agricultural sector, its leading institutions, and the GoP's sustainability goals.

- The *"Pilot for Sustainable Livestock and Agroforestry Systems in selected areas of the Darien*"[16]. Developed by the Ministry of Agricultural Development, the U.S. Agency for International Development (USAID) and *The Tropical Agronomic Centre for Research and Education* (CATIE), the pilot developed a "Manual of 15 Good Practices for Sustainable Cattle Ranching" exclusively for ranchers. The proposed project will illustrate the application of these best productive practices in the Darien both at the farm and broader landscape level. The field implementation of these conservation-oriented practices through this project will produce the Ministry of Agriculture's first official *"Technical Chapter on Sustainable Cattle Production"* and form part of its *"Operational and Technical Procedures Manual"* (equivalent to the "how-to" book of the Ministry in technical matters). In addition, the (USAID/MIDA) project also identified practical and reliable indicators to demonstrate livestock profitability and ecosystem services generation as a result of SPS implementation. These indicators and the methodology to effectively monitor them at the farm and landscape level will be incorporated into the project's monitoring and evaluation strategy (component #3) and will be further developed during the PPG stage.

The "*National Livestock Traceability Programme"* implemented by Ministry of Agricultural Development. The programme, regulated by the traceability law issued in 2013, involves the establishment of a single national agricultural record that identifies: each ranch and farm; a record of all species managed in the ranch; an ID for each single animal or group of animals; a record of the animal movements; the corresponding means of transportation; and a centralized and Official Information System of Livestock Traceability. This important programme will support – among other efforts - the proposed eco-labelling component of the project, providing consumers with critical sector

[16] AED/CATIE, 2006. Pilot Sustainable Livestock and Agroforestry Systems in elected areas of the Darien. Academy for Educational Development/ Tropical Agronomic Centre for Research and Education, funded by USAID.

information along its productive chain and the assurance that they are buying meat produced in biodiversity-friendly ranches. In the absence of such a traceability programme any efforts pertaining to labelling or providing any specifications regarding the practices and processes by which cattle is produced would neither be credible nor viable thereby making the *National livestock traceability Programme* a centerpiece of this proposed project's baseline.

"Mainstreaming of environmental and sustainability considerations into banking operations". As part of a broader strategy for establishing environmental and social risk assessments into its lending portfolio, the *Bank for Agricultural Development* (BDA) is incorporating biodiversity-friendly SPS within its agricultural credit lines, beginning with this project in the Darien. The *National Association for the Conservation of Nature* (ANCON), the non-governmental entity spearheading this project, in a collaborative agreement with the Bank, will complement these credits with the technical assistance and oversight required for the effective implementation of sustainable management practices at the farm and landscape level. As previously noted, a lesson learned from past experiences, and a significant barrier limiting the impact of credit to farmers, has been the absence of sufficient technical backstopping to cattle producers. This "technical assistance void" has also been the recurrent reason why producers have been averse to engage in credit ventures involving and/or promoting "innovative" and "alternative" conservation-oriented production practices. Through ANCON's technical assistance, ranchers acquiring these loans will receive, as part and parcel of this financial support, the necessary guidance to prepare their "Farm Plans/Planes de Finca" in accordance to a set of established "best practice criteria". The availability of permanent technical assistance will allow farmers to implement the proposed suite of conservation-oriented sustainable use practices designed to minimize socio-economic risks and environmental degradation whilst maximizing productivity and economic gains. In brief, a fundamental barrier affecting the outcome of previous efforts will be addressed through a new receptiveness on the part of farmers to access available funding for SPS production practices, as a result of having access to targeted assistance. Ancon's assistance to the project will supplement that of extension services service providers, also benefiting from the project.

"Authority for the Control of Certification of Agricultural Organic Production". This newly established entity ascribed to the Ministry of Agriculture has been in operation since January 2017. Its creation illustrates the steady growth in the production of organic produce in Panama and the corresponding rising demand at national and local levels. Currently, over 6,000 hectares, managed by 271,000 farmers are under organic production, corresponding to a 10% increase during the last decade. Previously, only four private entities, all international, had the ability to certify producers in Panama along internationally established criteria (i.e. recognized in the US and Europe.) In addition to being the first *national* certification body, the Authority's mandate is to provide tangible assurances to consumers regarding the organic, biodiversity-friendly, and ecologically compatible attributes of a variety of agricultural produce. In addition, the Authority's responsibilities include furthering consumers' understanding regarding the different kinds of existing labels and/or certifications, resulting in an official authoritative guide to understanding the productive origins and specificities of a variety of goods, including their associated socio-economic and environmental benefits. Another critical part of the Authority's mandate is to facilitate the engagement of small-scale producers in applying and accessing certification. In sum, in addition to generating eco-labelling information, proof of origin, and trustworthiness among discerning consumers, the Authority seeks to encourage and foment a new generation of small-scale producers to join the more experienced private sector operatives linked to private international certification entities. A group of Ministry staff has been trained in certification requirements and the support it will be providing, particularly to smaller-scale producers. Henceforth all certification in Panama will need to pass through this new Authority, regardless of previous arrangement with international certifying agents. During the preparatory stage (PPG) this project will liaise with the Authority regarding the eco-labelling activities envisaged by the project for products emanating from SPS farms.

The "Alliance for one million of reforested hectares" is public-private partnership by the GoP officially presented at the 2014 Climate Change Summit and representing one of Panama's commitments and contributions to mitigate climate change. The Alliance brings a host of key players, including the National Chamber of Commerce, industry representatives, the Ministries of agriculture and Environment, and The National Association for the Conservation of Nature (ANCON) among others, working together in their respective fields and capacities to reforest a million hectares in the next 20 years. Aimed at reducing and reversing current deforestation rates in *natural forests* (including those in

the Darien) this public-private partnership seeks to recover degraded areas in key critical watersheds and protected areas, including areas such as Filo del Tallo Canglón Hydrological Reserve in the Darien. Reforestation activities in the project area will be geared towards establishing connecting corridors in intervened areas in the buffer zone and within the reserve itself, thereby also supporting the application of SPS. Cognizant that currently 25% of the national territory is mostly dedicated to ranching, this effort also implies a significant partnership with cattle ranchers and their respective national organization (ANAGAN). In practical terms it demands a shift in production paradigms towards the application of best management practices (i.e. planting scattered trees to ensure connectivity, establishing live fences, protecting water sources and reforesting and restoring hillsides, etc.[17]) and the incorporation of conservation and sustainable resource use considerations in the overall management of fragile biodiversity rich productive landscapes.

Land use planning. While some land use plans exist as part of the project's baseline in the Darien they do not conform a cohesive and articulated landscape management model tailored to the complex nature and current development needs of this biodiverse region. During the project preparation phase (PPG) existing plans will be analyzed to determine gaps, required modifications, needed updates, as well as information that can be optimized and expanded upon. Among the land management plans and initiatives that will be analyzed are: *The Sustainable Development Program for the Darien*; the *land use plan for the Pinogana district* prepared this year by the Housing and Land Use Ministry; the existing management plans for the protected areas located in the Darien; the forest management plans prepared with the support of USAID for a percentage of the two districts of the Comarca Emberá-Wounaan and the Comarca Wargandí[18], among others to identify elements applicable to productive forest landscapes. On-going baseline programmes addressing, albeit imperfectly, land use planning and protected area management, will be thus be complemented by the integrated landscape management plan proposed by project in order to ensure that existing efforts collectively deliver their intended conservation and sustainable development objectives.

3) The proposed alternative scenario, GEF focal area[19] strategies, with a brief description of expected outcomes and components of the project.

The project's objective is the establishment of an ecosystem based biodiversity-friendly cattle production framework for the Darien Region of Panamá. The alternative scenario summarized below is based on the following considerations: (i) an assessment of the threats and root causes affecting biodiversity conservation and sustainable land use in the Darien; (ii) an appraisal of the principal barriers impeding conservation-oriented cattle production in the Darien, including the efficient use of its natural resource base; (iii) consultations and inputs from relevant stakeholder groups at local and national levels; (iv) a supportive programmatic baseline well poised to benefit from incremental funding to deliver global conservation benefits; and (v) full consistency with sector plans, national development objectives and conservation priorities.

The project will target the expanding ranching activity occurring in the productive landscape of the Darien and more specifically the area surrounding the *Filo del Tallo-Canglón Hydrological Reserve*, including the productive cattle plots spreading within the reserve before these expand any further. Several important considerations have informed the selection of this area and are worthy of mention. Located at the entrance of the Darien region, the *Filo del Tallo-Canglón Hydrological Reserve* spans 38,014 ha. and is critically important not only because of its biological relevance but primarily because of the strategic and vital ecosystem services it confers. In this regard, the *Reserve* harbors 32 water sources providing 55% of the population's drinking water (Ministry of Health, 2015). In addition, the Reserve's close proximity to the Pan American Highway has made it more vulnerable to cattle ranching settlements and encroachment. The landscape around the *Filo del Tallo-Canglón Hydrological Reserve* while attesting to cattle

[17] The riparian forests on river banks should be no less than 10 meters on each side of existing water sources in order to: ensure water quantity and quality, the prevention of soil erosion, flooding and mitigate the effects of droughts during extreme weather events.
[18] Comarcas are independently managed and therefore have their own management and land use plans. Existing ones will be reviewed in case valuable insights and relevant features can be applied, as appropriate, to the larger management plan proposed for the Darien region.
[19] For biodiversity projects, in addition to explaining the project's consistency with the biodiversity focal area strategy, objectives and programs, please also describe which Aichi Target(s) the project will directly contribute to achieving.

expansion is also a strategic site from which to showcase conservation-oriented SPS for demonstrative purposes, due to its visibility, the number of stakeholder groups converging in the area, and the scale of the impact that could be accomplished through a single intervention.

GEF Focal area strategy: The project is consistent with BD-4: *Mainstreaming Biodiversity Conservation and Sustainable Use into Production landscapes and sectors; Programme #9: Managing the Human-biodiversity Interface*, as well as *Land Degradation* LD-1: *Maintain or improve the flow of agro-ecosystems services to sustain food production and livelihoods; Programme #1: Agro-ecological intensification.*

Specifically, the project will operate in a mixed-use landscape in the Darien region in which protected areas harboring globally significant biodiversity and generating a suite of environmental services are interspersed with productive activities, e.g. the livestock sector. The project will seek to manage this "human-biodiversity interface" by: (i) promoting innovative silvo-pastoral productive practices in cattle rearing farms and the productive landscape; (ii) improving and regulating livestock grazing pressure through sustainable intensification and rotational grazing systems, (iii) increasing diversity of animal and grass species; (iv) implementing integrated approaches to soil fertility and water management; (v) conserving and improving hydrological functions and critical ecosystem services for agro-ecosystem productivity; (vi) enhancing ecosystem resilience (including water availability) and risk management through sustainable land management (SLM) practices;[20] (vii) providing the necessary technical support and backstopping for the application and internalization of SPS at the farm and broader landscape level; (viii) establishing land use planning, regulatory frameworks, and enforcement measures for both protected areas and the wider production landscape,; and (ix) integrating conservation and sustainable use principles into banking operations, credit and loans, to motivate and empower actors to substitute degrading practices by sustainable alternatives.

The project is based on the premise that biodiversity and ecosystem services can be sustained in mixed landscapes through conservation-oriented production practices (in this case SPS) and sustainable land management plans. *Under BD4, Programme #9, expected GEF Programmatic Outcomes[21] include*: (i) increasing the area of production landscapes that integrate conservation and sustainable use into management - demonstrated by objective data or independent certification - and (ii) developing sector policies and regulatory frameworks which incorporate BD considerations - illustrated by the degree in which sector policies and regulatory frameworks incorporate BD concerns and implement regulations.[22]

Under LD-1, Programme #1 expected GEF Programmatic Outcomes[23] include: (i) improved agricultural rangeland and pastoral management, measured by the area under effective agricultural, rangeland, and pastoral management practices, and (ii) the functionality and cover of agro-ecosystems maintained, measured by the land area under effective management in production systems with improved vegetative cover.

Additionally, by changing cattle production practices to be more biodiversity friendly, the project will contribute to the Aichi targets of the Convention on Biological Diversity. More specifically on Target #1, regarding awareness of the values of biodiversity; Target #2 on the integration of biodiversity values into local development; Target #4 with regards to actions taken by governments and stakeholders towards sustainable production and consumption; Target #5 associated with the reduction of degradation and fragmentation of natural habitats; Target #7 promoting areas under agriculture, aquaculture and forestry to be managed sustainably; Target #11 focusing on areas of importance for biodiversity and targeting ecosystems services under effective management; and Target #14 on restoration and safeguarding of ecosystems; Target #19 regarding to knowledge learned, shared and applied.

[20] GEF6 Programming Directions.
[21] In the GEF Programming Directions (BD4) two main outcomes under OP#9 are presented. The project will include complementary ones which will result from the PPG stage
[22] GEF Programming Directions, Biodiversity Focal Area Strategy.
[23] In the GEF Programming Directions (BD4) two main outcomes under OP#9 are presented. The project will include complementary ones which will result from the PPG stage

Expected Project Components and Outcomes.

Component #1: Cattle production shifts to Silvo-pastoral systems (SPS) delivering environmental and socio-economic gains.

Outcome 1.1: Conservation-oriented Silvo-pastoral Systems are adopted in cattle farms and the productive landscape of the Darien as part of a biodiversity conservation and land restoration landscape model.

Output 1.1.1: Conservation-oriented Farm Management Plans guide the application of silvo-pastoral systems (SPS) and the sustainable use of resources within farm plots. Farm Plans/"Planes de Finca" will include a menu of silvo-pastoral practices designed to ensure conservation-oriented production but also sustainable farm diversification. Silvo-pastoral practices will be consistent with the characteristics of the farms in question and include grazing management options in accordance to herd size, defining the percentage of forest cover remaining on the farm and determining viable and potential increases, identifying connectivity options, detecting restoration needs for degraded pastures and/or riparian forests, etc.[24] Farm plans will include an assessment of inputs, corresponding costs, and estimated time-frames for the establishment of conservation-oriented SPS, along with related technical assistance requirements. SPS at the farm level will form part of a larger landscape improvement model (detailed in component 2) designed to maintain critical ecosystem services and functions, establish sustainable land management principles, and increase farm productivity whilst generating measurable environmental and socio-economic benefits for local producers.

Output 1.1.2: A connectivity and restoration strategy for the establishment of conjoining corridors and restoration activities between cattle farms, the productive landscape and protected areas. The definition of corridors and land restoration activities will be conducted as part of farm management plans but also at the wider landscape level as part of the proposed integrated land use management plan for the Darien described in Component 2.

Outcome 1.2: Cattle producers have the technical know-how and managerial skills for implementing biodiversity conservation-oriented SPS within cattle farms and productive landscapes.

Output 1.2.1: Training Programme for cattle ranchers are developed by government counterparts and vocational skills training institutions for the long-term application of conservation-oriented silvo-pastoral systems. Capacity needs assessments will be conducted with local producers and cattle associations at local and national levels to ensure that training programmes are tailored to the current challenges and opportunities of the Darien, meet the diversity of stakeholder needs, and are consistent with the preferred mechanisms for their delivery. Cattle ranchers' support requirements will in turn inform the Ministry of Agriculture's training programme for extension service providers as part of the GoP's strategy to improve the efficiency of government institutions in fulfilling their mandates and extension's responsibilities at local and national levels. Training and extension services in SPS for sustainable cattle production will be integrated in the Ministry's extension programmes and continue beyond the life of the project.

Output 1.2.2: "Rancher to rancher" SPS exchange programmes are organized to illustrate the benefits of SPS and facilitate their application under diverse farming scenarios and investment options. These will include cattle ranchers from the Darien but also those from other regions of the country successfully implementing SPS within their farms. In addition to promoting and exemplifying the on-farm and landscape benefits of these practices, these direct exchanges will also serve a critical role in: (i) consolidating producers' associations and local networks, and (ii) establishing and consolidating these "rancher to rancher" exchange mechanisms and offering *proof of evidence* regarding the benefits resulting from SPS practices. The National Association of Cattle Ranchers (ANAGAN) will be an indispensable partner in organizing, promoting and endorsing these exchanges, further leveraging their credibility and effectiveness in promoting the necessary productive paradigm shifts. These exchanges will also include visits to model silvo-pastoral farms, (notably in Colombia and Costa Rica) following a practice which ANAGAN has begun to promote in recent months.

[24] Menu of best practices prepared by the Ministry of Agricultural Development (MIDA) in conjunction with the national Cattle Rancher Asociation (ANAGAN).

Outcome 1.3: Technical government counterparts and extension agents are able to deliver timely quality support in the application, oversight and replication of SPS.

Output 1.3.1: Capacity Building Programmes for extension service providers in SPS are tested and delivered by government institutions and technical training institutes. As part of a larger national GoP effort to modernize its agricultural sector and incorporate within its productive activities sustainability and conservation considerations, technical staff and extension service providers will receive the training and practical tools to deliver the knowledge and skills required for the application of conservation-oriented SPS techniques at the field level. Productive activity (i.e. cattle ranching) in areas of recognized high biodiversity and ecosystem value will be prioritized. The capacity building plan for technical staff will reflect the needs expressed by producer groups to meet the challenges and opportunities inherent in the application of conservation SPS in biodiversity rich ecosystems.

Outcome 1.4: Cattle ranches in the Darien demonstrate the socio-economic and environmental benefits of SPS including eco-labelling for SPS farm products.

Output 1.4.1: An SPS eco-labelling designation under a single logo is registered with the National Certification Authority.[25] Eco-labelling for goods produced in farms applying SPS will be selected during the preparatory stage of the project (PPG), particularly as barriers which previously discouraged farmers from engaging in certified ventures are now being pro-actively addressed as part of the project's baseline. Developments at the national level which bode well for eco-labelling initiatives, include: (i) growth of national demand for certified organic produce; (ii) private sector and supermarket chains expressing interest in supplying these products; (iii) new legislation detailing consumers and producers alike what eco-labelling and certification processes entails; (iv) a National Certification Authority facilitating user-friendly information and support to producers engaging in eco-labelling ventures; (v) available capital for producers willing to engage in eco-based production alternatives; (vi) established traceability procedures for meat, developed and implemented by the Ministry of Agriculture (a critical tool for labelling); and most importantly (vii) a growing body of technical expertise available to guide producing groups.

Output 1.4.2: A training and entrepreneurial skill enhancement programme detailing production and marketing requirements for SPS eco-labelling is tested and available from public and private institutions. This will include guidance, coaching and instruction in the technical, legal, informational, and marketing requirements associated with goods produced in conservation oriented SPS farms.

Outcome 1.5: Institutions and relevant stakeholders' groups, (i.e. producers, consumers, extension agents, policy-makers, sector representatives and land use planners) actively support the application and replication of SPS in the Darien and nationwide.

Output 1.5.1: A communication and awareness raising strategy targeted for producers, consumers, policy and decision-makers is disseminated by various institutions highlighting the environmental, social and economic benefits of SPS. The strategy will promote and encourage replication potential, assist in catalyzing systemic change, and inform audiences of progress achieved regarding these experiences at local and national levels. Similarly to capacity building efforts, communication and awareness raising activities will need to be tailored to intended recipients and delivered in the effective and most appropriate manner, i.e. radio, newsletters, television, websites, etc. based on the preference and receptiveness of the intended beneficiaries and the target audience in question. Communication strategies will operate at local, regional, and national levels and include a variety of means such as testimonies, presentation of experiences, interviews, thematic discussions, workshops, all related to different aspects of sustainable cattle production, SPS, land use management, conservation in productive landscapes, efficient resource use, etc. Awareness raising activities, while

[25] Guidance from the the following "Environmental Certification and the GEF: A STAP Advisory Document, 2010" will be applied in the definition of potential options. During the preparation phase (PPG), recommendations emitted by the STAP, based on prior GEF project experience and best practices for determining certification feasibility, will be applied. Product options considered will thus need to be analyzed against four main threats identified by STAP as likely to impact the effectiveness of certification programs, these include: (i) weak standards; (ii) non-compliance; (iii) limited participation; and (iv) adverse self-selection.

touching on similar issues and targeting similar stakeholder groups at local, regional and national levels, will cover a wider audience and frame conservation and sustainability issues in a development policy context, but with the same goal of fostering and promoting wide scale support, adoption and replication.

Component #2. Biodiversity conservation and sustainable land use is mainstreamed into integrated land use planning, financial mechanisms, and policy and regulatory frameworks.

Outcome 2.1: A consolidated and integrated sustainable land use management plan guides productive activity (cattle ranching), land use zoning, and conservation efforts in the Darien.

Output 2.1.1: A conservation oriented Land Use Management Plan and corresponding regulatory frameworks are prepared by relevant institutions for the Darien with local and national stakeholder participation. Presently, a network of nine protected areas of different management categories covers over 46% of the Darien region. With few exceptions these conservation efforts have not included considerations pertaining to connectivity, optimal size, or other ecological parameters. Furthermore, land use management, including zoning categories, has not been established in the Darien resulting in scattered non-protected lands void of the management required for their sustainable use, the productive suitability of their soils, the integrity of the ecosystems they conform, or the maintenance of the vital environmental services they provide. Considering the growing development pressures affecting the region, it is imperative to consolidate and establish an integrated region-wide land use plan able to: (i) acknowledge the Darien's unique biodiversity status *and its implications for productive activities;*(ii) incorporate and revitalize its existing PA network and indigenous Comarcas as interdependent functional systems**;** and (iii) ensure that the intervening landscape is managed in a cohesive integral manner consistent with the region's fragility, sustainability objectives, and current productive trends. Essentially, a sustainable land-use management plan that would illustrate the possible co-existence of conservation and sustainable development objectives in a globally significant biodiversity area.

Output 2.1.2: An online geographic information system for government officials, planners and resource users, provides updated information on land use categories (including protected areas) zoning and demarcation, as well as new guidelines and regulations, for land use, productive activity and conservation in the Darien region. An updated region-wide land use plan, detailing a multi-functional landscape comprised of protected areas, buffer zones, and multiple use areas of varying categories and degrees of conservation and productive uses will be reflected in a GIS tool accessible on-line to all relevant institutions and stakeholder groups. Productive activities will rely on this guiding framework, as will the development plans and strategies of institutions entrusted with resource use, regional development, planning, zoning and enforcement. This GIS will reflect a participatory process with regards to its content, and serve as a transparent and widely accessible instrument making its users *the real custodians of its objectives and sustainable conservation goals.*

Output 2.1.3: Inter-institutional Agreements and multi-sectoral partnerships are formalized at local and national levels to ensure institutional coordination, operational consistency and collective oversight in the implementation of designated land-uses. Commitments at the ministerial level with the Ministry of Agriculture and the Ministry of Environment have confirmed the disposition, viability and expressed necessity both institutions view as imperative to establish a new conservation-oriented development paradigm in the Darien. Past experience has shown that without the required institutional alignment and collaborative arrangements it will be impossible to generate the systemic changes and economies of scale (in terms of training, capacity building, monitoring, regulatory oversight) needed to effectively implement the proposed conservation oriented land use management plan.

Outcome 2.2: Financial institutions support systemic changes in the appraisal of credits by incorporating conservation and sustainable use into their lending portfolios and mitigating the environmental, social and economic risks of their operations.

Output 2.2.1: Environmental and social risks assessments and appraisal processes are implemented and guide credit approvals. Consistent with larger programmatic and corporate objectives, the lead national bank for agricultural

development is mainstreaming sustainable use and conservation objectives into its lending operations and development portfolios. This entails the applications of new tools, considerations and appraisal processes in the assessment of credit requests and their subsequent approvals on the basis of potential socio-economic and environmental implications.

Output 2.2.2: Training Programmes, knowledge management tools, and instructive manuals for risk assessment and appraisals are developed as part of corporate policy to actively mainstreaming conservation objectives into lending operations. To this end, targeted technical training programmes will be developed for all banking personnel responsible for agricultural credit programmes including the cattle sector.

Output 2.2.3: *A national programme for exchanging experiences amongst banking institutions and disseminating best practices* is implemented to further mainstream sustainable use and conservation measures into loan and credit programmes as part of the systemic adoption of risk management considerations in financing portfolios. The national programme intends to further mainstream sustainable use and conservation measures into loan and credit programmes of other banking institutions (national and regional) as part of the systemic adoption of risk management considerations into financing portfolios.

Component #3. Monitoring, evaluation and knowledge sharing.

Outcome 3.1: Project implementation follows a Results Based Management framework (RBM), applies SMART indicators for measuring progress and impact, and employs adaptive management principles to systematically re-incorporate monitoring and evaluation feedback into project performance.

Output 3.1.1: A Project Monitoring and Evaluation Strategy is developed, including annual work-plans, measurable and verifiable progress and impact indicators, annual budget allocations, and independent evaluation requirements. The preparation of work-plans and the corresponding definition of SMART indicators for each project component will occur annually along with associated budgetary requirements. Project preparation will follow the GEF's Monitoring and Evaluation policy which provides norms and standards for GEF funded projects. The project's M&E strategy will be further developed during the project preparation (PPG).

Output 3.1.2: Baselines for biological indicators at the landscape level are available for the project intervention area (selected farms and adjacent landscapes), including the tools and methodologies for assessing BD and LD impacts over time. This information will be revised during forthcoming preparation work (PPG). Since an exhaustive inventory of biological indicators cannot be realistically compiled, a representative selection will need to be identified as the best means to assess progress and the sustainable impact of the proposed interventions on biodiversity status and ecosystem services. The project will use drone technology in complement to high-resolution satellite imagery to support field observations and to monitor expected changes at both the farm and productive landscape level (as part of the project's M&E strategy and at different intervals of project implementation). The use of drones will prove to be an innovative and cost-saving measure, at the farm level but also in effectively and accurately monitoring project progress with regards to intended conservation goals in the broader productive landscape. Monitoring results will inform any required changes or modifications in the project's components and overall implementation strategy.

Output 3.1.3: A monitoring plan is developed to determine the benefits and impacts of eco-labelling on sustainable resource use and biodiversity conservation. Following GEF-STAP guidance and recommendations on certification and eco-labelling, practical mechanisms will be identified to determine - to the extent possible - the causal links and benefits of eco-labelling on: (i) biodiversity conservation objectives; (ii) maintaining producers' commitment to eco-labelling; and (iii) the additional socio-economic benefits this activity confers to producers' livelihoods and conservation-oriented SPS in general. Despite the amount of eco-labelling or certification programs in the region, according to the aforementioned GEF/STAP analysis, few have been able to measure the environmental and/or socio-economic impacts of these activities.

Output 3.1.4: A project website provides updated information on project progress, measureable results, lessons learned, including links to the Ministerial websites, the on-line GIS, and blogs pertaining to SPS issues, ranching, conservation, and sustainable resource use topics, etc.

4) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF and co-financing." The proposed project will build upon the following baseline initiatives all of which are considered essential for the delivery of its intended components and corresponding outcomes. The initiatives listed below will be complemented with GEF resources and co-financing to go beyond their intended scope in order to yield local, national and global biodiversity benefits.

- The *"National Outreach and Extension Programme for Cattle Farming*" [USD 1,812,000] (Ministry of Agricultural Development). As previously mentioned, the proposed project will partner with this existing national baseline programme for technology dissemination and complement it with a "*farmer-to-farmer knowledge transfer strategy*" for conservation oriented silvo-pastoral systems. By incorporating conservation based SPS in select farms located in area of high biodiversity[26], the proposed project will demonstrate the benefits and sustainability of these production practices, but more importantly develop a variety of practical mechanisms by which SPS and the knowledge associated with their application can be diffused and shared amongst ranchers on a permanent basis. The proposed project will build on past initiatives (apply what worked, avoid what did not), devise useful methods as part of its knowledge transfer strategy, whilst both complementing and drawing upon the existing national baseline programme.

- *"Capacity building programme for improving extension services"* [USD 1,767,600] (Ministry of Agricultural Development). As mentioned in the baseline a former project carried out between the Ministry and USAID developed a *"Manual of 15 Good Practices for Sustainable Cattle Ranching"*. The proposed project will apply these practices so as to fully incorporate conservation oriented SPS into cattle ranching farms and the productive landscape. Resulting experiences will be captured and incorporated into the Ministry of Agriculture's official "Operations Manual", its capacity building programmes at local, regional and national levels, as well as in its extension work and assistance. The application of these 15 good practices for sustainable cattle ranching will complement and collectively build on current extension programmes, as well as training and capacity building activities, thereby mainstreaming conservation oriented principles into the technical assistance and extension support for cattle rearing and production.

-The Ministry of Agriculture's *"Programme to finance and support conservation oriented cattle production in the Darien"* [USD 12 million]. Presently, these resources are being earmarked for credit and loans dedicated to the establishment of conservation oriented SPS in the Darien. Credits will be assessed on the basis of "Farm Management Plans/Planes de Finca" which will contain a checklist of conservation oriented considerations based on SPS. This mainstreaming of conservation and sustainable use measures into credit operations will be assisted by ANCON.

-The Ministry of Environment's objective to *consolidate and develop and integrated and conservation oriented land use plan for the Darien* [USD 1,283,590[27]]. A variety of disaggregated and uncoordinated land use plans and regulatory frameworks, including protected areas, are currently operating in the Darien. These investments will be complemented with incremental funding to ensure a biodiversity conservation overlay for the holistic and integrated management of this globally significant region both in its protected and productive landscape.

-*The National Livestock Traceability Programme.* [US 1,859,400] (Ministry of Agricultural Development). This programme is significant in terms of its contribution to project objectives, particularly in the context of eco-labelling considerations. In addition to providing and consolidating vast and critical information on animal identification, location (premises identification), and animal movements, a national traceability programme provides valuable services regarding animal health, food safety and public health. In essence, a national traceability programme

[26] The project area will be focused on the *Filo del Tallo-Canglón Hydrological Reserve*, its buffer zone and surrounding productive landscape.

[27] This figure constitutes a conservative estimate of the resources expanded by the Ministry of Environment in the Darien for its protected area network, the costs of maintaining a local presence, training and basic enforcement activities. The amount refers to in-kind expenditures. A more precise figure will be defined during the PPG.

constitutes a valuable management tool in the provision of a wealth of information from one point of the supply chain to the other ("from farm to fork"). Such a system would permit the generation of individual level databases and customized reports for a variety of purposes. It will assist in identifying producer needs, performance gaps, current practices along the entire supply chain and on the demand side, and provide important product differentiation information that will serve to validate producers' reputation and consumers' confidence. Additional contributions from the baseline are expected during the PPG stage.

5) Global Environmental Benefits.

The project will generate measurable global environmental benefits in a biodiversity hotspot recognized for its diversity, endemism and critical ecosystem services. It will do so by incorporating conservation principles into productive activities, namely cattle ranching, occurring in the productive landscape.

Global environmental benefits will result from the establishment of a new conservation model and development paradigm in the Darien designed to arrest land degradation, reverse deforestation and ensure the productivity of agro-ecosystems nestled between protected areas. In addition, reducing the pressures associated with ineffective land use will be addressed through sustainable land management plans designed to manage productive systems, in this case cattle ranching, within the context of a wider conservation model. Specifically, the implementation of silvo-pastoral systems and the increase of hectares under effective management will support resource regeneration and conservation, and promote a sustainable landscape model in which productive activities can co-exist with conservation goals.

The global benefits resulting from the application of conservation techniques in cattle production include: safeguarding biodiversity, reducing deforestation and increasing tree cover, reducing soil erosion and securing gains in soil health and quality, storing and sequestering carbon, supporting water availability, nutrient cycles and the overall functionality of hydrological services. Areas such as the *Filo del Tallo-Canglón hydrological reserve*, where the project will be operating, host 55% of the population's drinking water, thereby providing a crucial hydrological service.

In addition, silvo-pastoral systems greatly reduce, if not eliminate, the use of chemical inputs in the soil thereby reducing the incidence of water contamination and securing additional benefits for fresh water biodiversity. Avoided contamination and turbidity due to reduced soil erosion is particularly important in the Darien as its marine and coastal areas host some of the most productive coral reefs in the Pacific.

The project will thus generate global environmental benefits in biodiversity and land degradation through the application of a conservation model and development paradigm consistent with the ecological attributes of a region unparalleled in its resource abundance but also highly vulnerable to conventional resource use and exploitation.

6) Innovation, sustainability and potential for scaling up.

Sustainability and replication: The establishment of SPS practices in the Darien will be sustained by the favorable institutional and policy changes in the agricultural and financing sector, as well as those pertaining to land use planning and regulations for productive activity and sustainable resource use. In this regard key determinants of *mainstreaming success*[28] exist in the context of this project and project design considerations have been deliberately embedded within this changing framework.

More specifically, with regards to agriculture, the GoP through its Ministry of Agricultural Development is moving towards "modernizing" the sector through: (i) the promotion of efficiencies in the use of resources, (ii) mainstreaming conservation and sustainability concerns in its operations and policies, (iii) addressing and prioritizing sectors with "inappropriate practices" currently affecting biodiversity and ecosystem services critical to maintaining production

[28] Mainstreaming Biodiversity in Practice: A STAP Advisory Document.

potential, (iv) exploring regulatory tools and incentives to encourage behavioral change and the application of conservation-oriented parameters and standards; and (v) identifying optimal entry points and "sector-specific" tools through which to conduct lasting interventions.

The same strategic alignment is reflected in the policies of the Bank for Agricultural Development, the financial arm of the Ministry of Agriculture. Consistently with the Ministry, the Bank is moving towards the progressive inclusion of the same conservation priorities and sustainable use principles within its lending operations by developing enabling tools and incentives and discouraging degrading "business as usual" scenarios. The adoption of social-economic and environmental risk assessments for credit appraisals in agriculture, coupled with the use of "Guiding principles for conservation-oriented livestock rearing" (guia ganadera) for cattle sector loans, will be decisive in promoting, sustaining, and replicating these changes at scale.

In addition, a cross-sectoral approach including dialogue, cooperation and high-level support between the key institutions needed to impart lasting change in cattle production and land use planning is actively present. The Ministry of Agricultural Development, The Ministry of Environment, The Bank for Agricultural Development, in addition to other indispensable counterparts such as the National Association of Cattle Ranchers, and The National Land Authority (which works alongside the Ministry of Environment in matters pertaining to zoning and land use planning) are equally invested in this project and fully endorse its objectives.

In parallel, a growing awareness in the public and private domain is leading towards behavioral and attitudinal changes supportive of conservation-oriented production practices and the products resulting from these modified production models.

Past lessons in sustainability and replication: The establishment of silvo-pastoral systems and biodiversity-friendly production practices are relatively new concepts in the Darien. Analyses of prior experiences have shown that two critical variables need to be addressed in tandem to ensure SPS success, these are: (i) the availability of financial resources and (ii) the simultaneous provision of technical assistance. Former efforts have typically focused on one at the expense of the other with results confirming that any disconnect between the two will negatively affect project outcomes in terms of their sustainability and their potential for replication. In cases when resources were available (grants, loans, credit, subsidies) producers were not provided with the required technical assistance beyond the life of the project (nor did projects contemplate this as a potential long-term need.) Targeted training or capacity building measures were simply insufficiently incorporated into project design to support the sustainability or the replication of achievements. The result was a quick and predictable return to a "business as usual scenario" and the unsustainable productive practices cattle producers felt more familiar and comfortable with.

Another fundamental and decisive factor for sustainability and replicability refers to the policy and regulatory framework guiding the cattle sector's development. In the past, while initiatives might have benefited from sporadic funding to implement sustainable production, efforts were not simultaneously supported by the necessary "in-country" conditions to make them lasting propositions. In this sense, prior initiatives lacked the institutional backing of a system wide enabling policy environment, supportive regulatory instruments, targeted capacity building measures, and financial incentives, which *collectively combined*, could have realistically delivered long-term changes and replication. In brief, prior efforts did not benefit from the policies and institutional frameworks needed for sustainable productive practices to have any lasting impact nor the means to expand beyond a given location.

Conversely, Panama is now deliberately investing in the sustainability of its agricultural sector, promoting the application of sound ecological principles and the efficient use of its resource base, including the safeguarding of its ecosystem services and the contribution these confer to sustained productivity. As such, a favorable and encouraging institutional and policy environment, previously inexistent or too incipient to make a notable difference, is now available to support the success and replication of forward thinking initiatives such as the one proposed by this project.

In today's institutional and financial context, the proposed project will thus benefit from three fundamental variables

with regards to sustainability and replication: (i) the availability of established and preferential financial mechanisms, (ii) supportive policies and regulatory frameworks, and (iii) a coordinated and united institutional presence, at local and regional levels, delivering tailored technical assistance for implementation oversight and support. This assistance will be available for the necessary amount of time needed for producers to: (i) gain the required expertise and confidence in the application of conservation oriented SPS; (ii) directly witness and experience the beneficial results of these practices on their farms; and (iii) become themselves the promoters and advocates of these conservation oriented SPS. Consultations with all relevant stakeholder groups confirm that the above mentioned elements should provide the requisite contextual framework for sustainable changes in cattle rearing to become a lasting and replicable proposition.

Innovation: An important and innovative variable in the financing context of this project refers to the mainstreaming of socio-economic and environmental risk assessments into the lending portfolios of the Bank for Agricultural Development. These risk assessments reflect the policy reforms and sustainability objectives of the Ministry of Agriculture with regards to the livestock sector and how the GoP foresees its development in the coming years. These systemic changes also illustrate an unprecedented institutional alignment between the Ministries of Agriculture and the Ministry of Environment with regards to the management of productive activity in biodiversity rich areas and the mainstreaming of conservation concerns into key institutions and sectors. The project will provide an important testing ground for the banking sector in the application of risk appraisal measures geared towards the adoption of significant changes in the "business as usual" cattle rearing sector. From the standpoint of the Bank for Agricultural Development, this endeavor will also prove valuable for other banking institutions within Panama and the region. The project will document this experience to facilitate its adoption in other financial institutions granting credits and loans for agricultural development.

Furthermore, to build upon existing SPS practices and further innovate in their application, project proponents will maintain regular contact with institutions and technical staff engaged in SPS experiences particularly in Costa Rica and Colombia, i.e. CATIE, CIPAV, and CGIAR to name a few. Just recently, the national associations of cattle ranchers, along with staff from the Ministry of Agriculture, extension agents and university students visited a cattle farm in the coffee producing region of Colombia which serves as a demonstration center for the application of SPS, conservation practices, and organic produce. As part of the project's capacity building strategy and training programmes, it is expected that these technical institutions (among others) will train national producers, as well as extension staff in order to establish a critical knowledge base at local and national levels able to support and oversee the implementation of SPS in the long term. In this regard, literally a new generation of both producers and extension agents is being formed to lead the development of the cattle sector in Panama. During the project design stage (PPG), training programmes, field visits, workshops, and technical exchanges with a range of successful initiatives in the region will be scheduled to fully tap into the best expertize and the most successful experiences.

2. Stakeholders. **Will project design include the participation of relevant stakeholders from civil society organizations (yes x☐ /no☐) and indigenous peoples (yes ☐ /no x☐)? If yes, identify key stakeholders and briefly describe how they will be engaged in project preparation.**

This project reflects national objectives and on-going priorities from a diversity of national stakeholder groups in the cattle productive sector both at local and national levels, and in the Darien in particular. Namely these include, local Darien ranchers, the National Cattle Producers' Association (ANAGAN), the Ministry of Agricultural Development, The Ministry of Environment, The National Association for the Conservation of Nature (ANCON). The National Land Authority, as well as many others listed in Annex 2. Transparency and the active involvement of key stakeholders will continue to permeate all stages of the project' cycle. Government institutions, businesses, producers, cooperatives, civil society, academia, NGOs, and other actors have and will be engaged to provide relevant feedback and validation, as part of an on-going iterative process during the entire life of the project.

The coordination among this variety of actors will be lead by ANCON (the National Association for the Conservation of Nature) a non-profit, non-governmental organization founded in Panama in 1985 with the mission of conserving Panama's biodiversity and natural resources for the benefit of present and future generations. ANCON is dedicated to

promoting environmental education, sustainable development projects in rural communities, and the development and promotion of biodiversity conservation projects. ANCON, which is also responsible for the management of a 30,000 ha private reserve in the Darien region, will be in charge of project implementation. ANCON not only counts with extensive experience in the project area, which is its main geographic focus area, but also in the implementation of projects promoting sustainable development in rural communities, mechanisms for promoting civil society engagement, as well as policy advocacy at the highest decision-making levels. ANCON is a highly respected and credible actor in conservation efforts at local, regional and national levels, with an impressive convening capacity, including the ability to leverage and mobilize high level expertize in a diversity of technical fields.

ANCON will continue to work in close and direct coordination with the CAF, the Ministry of Agriculture, the Bank for Agricultural Development, the Ministry of Environment, and ANAGAN (the National Cattle Ranchers Association - Asociación Nacional de Ganaderos) as well as other relevant entities and local stakeholder groups. It is important to note that ANAGAN, a critical partner is the national cattle ranchers' association and a key ally of the project and its objectives. ANAGAN's credibility, representativeness and convening power with its cattle ranchers' constituents has been indispensable during this conceptual stage and will continue to be so during its subsequent development and implementation. Operationally, ANAGAN's support, feedback and permanent guidance will be secured via their on-going participation and consultative meetings. ANAGAN's priority objectives, as recently presented and confirmed in their *"Strategic Environmental Plan for 2016-2021",* are fully consistent and aligned with those of the project. Local producers' associations and organizations will be actively involved in project activities either through their representation in ANAGAN or on an individual basis.

The private sector will also be involved in the project particularly in relation to the proposed eco-labelling activities. As part of forthcoming project preparation work (PPG) the project will engage with privately owned supermarket chains and organic produce distributors to explore a number of working opportunities and potential marketing options.

Typically, cattle ranching farms in the Darien are not managed by indigenous communities as these are primarily dedicated to subsistence agriculture, handcrafts production and small-scale tourism activities. Afro-Darienitas, are also rarely cattle ranchers as they are located in coastal areas and make their living from artisanal fishing. Cattle rearing activities in the Darien are mostly carried out by internal immigrant (colonos) coming from other cattle producing regions of the country and recently established in Darien in search for new lands and resources.

With regards to gender issues, the project will ensure the participation of women in all training activities, including farm planning. It is important to note that women play an important role in various aspects of farm management particularly with regards to the information registries key to monitoring biodiversity and economic indicators. In the case of dairy farms, women play an even more relevant role in dairy production activities. Also, with regards to forest restoration activities supportive of SPS, native species are typically grown in nurseries tended and managed by women. Annex 2 summarizes stakeholder groups and how they will be engaged in project preparation. The role and participation of stakeholder groups will be further refined during the PPG stage, including its translation.

3. Gender Equality and Women's Empowerment. **Are issues on <u>gender equality</u> and women's empowerment taken into account? (yes x☐ /no☐). If yes, briefly describe how it will be mainstreamed into project preparation (e.g. gender analysis), taking into account the differences, needs, roles and priorities of women and men.**

Ranchers in the Darien are mainly men, but there is a small portion of women who are the head and owners of productive parcels. Statistics from the last agricultural census (2011) indicate that there are over 14,000 parcels dedicated to cattle ranching nationwide, of which 15.5% (over 2,000) are managed by women. In the Darien this percentage is slightly lower with a total of 1,136 cattle ranchers, out of which 113, about 10% are women mainly dedicated to small parcels. The gender distribution of beneficiaries involved as ranch managers in the project will be commensurate and representative reflect of the gender distribution of people dedicated to these productive activities in Darien. Also, even when women are not the head of productive parcels, their role is significant in the management of ranches and in the decision-making process related to their operations. It is therefore indispensable to include them in

project activities regardless of their role as head of household or "main rancher". Women will therefore be invited to participate with their partners in the relevant activities proposed by the project. Women will also participate in the running of a local nurseries network which provides native seedlings to ranchers, following successful models implemented in the Panama Canal Watershed project mentioned in the baseline.

In the context of training and capacity building programmes in the case of the Bank for Agricultural Development and the Ministry of Agriculture's personnel, both women and men will be involved in a balanced way, respecting the gender distribution that compose these organizations at each relevant level. The gender aspect will also be taken into account in the information and communication strategy of the project, by formulating messages specifically tailored to women and men independently, whenever relevant, and by taking into account gender aspects and the representation of both genders in all communication and information materials. In addition to the data and information available on gender distribution among cattle ranchers in Darien, a gender analysis will be carried out during project preparation to ensure that project design incorporates and recognizes the relevant differences between gender labor, knowledge, needs, priorities, and responsibilities at the productive farm level. The project will use the relevant core gender indicators for portfolio level monitoring and reporting purposes.

4 Risks. **Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (table format acceptable).**

Estimated risks are summarized in the table along with their rating category and mitigation measures as appropriate.

Risk	Level	Mitigation approach
Farmers are not willing to join the project	Low	On-going communications with individual farmers in the project area as well as ANAGAN have confirmed their interest in participating in the project. The economic benefits of SPS, mainly to increase productivity in comparison with traditional types of management have been proven in Panama as well as other countries of the region, and are strongly supported by cattle ranchers. These individuals and the organizations and cooperatives they form part of have expressed their full interest and support for project objectives provided that on-site technical support is available.
The project will unwittingly encourage the expansion of cattle ranching and deforestation	Low	Firstly, the project will only work in areas that are already under cattle farming. Secondly, SPS are geared to improve productivity, intensity, and on-farm efficiencies avoiding the need to expand to new untouched areas that would generate further deforestation. Furthermore land use planning and zoning, along with regulations and enforcement measures will further ensure that the risk of expansion is null.
MIDA's personnel on site is not available to cooperate with the project with the expected rate of involvement.	Medium	The Ministry for Agricultural Development is significantly invested in the project at its highest levels. This commitment is equally reflected amongst its staff, particularly those entrusted with extension work and technical support in the field. The Ministry is fully cognizant of the need for permanent on site-support as this is a requirement cattle ranchers have emphasized and requested. On the other hand, the Bank for Agricultural

Risk	Level	Mitigation approach
		Development (the financial arm of the MIDA) has made a formal financial commitment to ensure and facilitate the project's success and measurable impact. Furthermore, both the MIDA and the Bank for Agricultural Development will be part of the project's Steering Committee and will be appraised of implementation progress on a regular basis.
Market is resistant to accept products from the biodiversity friendly farms.	Low-low	Market indicators and demand for organic produce has steadily risen for the past decade in Panama and most notably during the last five years. The newly established Authority for National Certification (Jan 2017) further confirms this growth pattern and the need to satisfy both consumers and producers in formalizing criteria and overall credibility in certification standards. The market, private sector operators, supermarket chains, consumers, and now small-scale producers are eager to meet rising demand and participate in environmentally sound production.There is a growing demand for these products in Panama and an expansion of private sector ventures and investment supporting these endeavors.
Lack of coordination among the institutions and organizations contributing to the project.	Low	The lead organizations committed to the project at the national level, namely the Ministry of Agricultural Development, the Bank for Agricultural Development, the Ministry of Environment, and ANCON consider this project a priority in their respective programming portfolios. Their complementary roles, functions and responsibilities have been mutually discussed, as have the forthcoming institutional arrangements and coordination structures designed to guide project development and provide implementation oversight. There is a political and institutional commitment supported at Ministerial levels. This risk is considered very low.
Traceability of eco-brand products from producer to consumer cannot be guaranteed.	Low	MIDA is implementing a traceability programme that will provide consumers with all the relevant information regarding the origins of the produce they are purchasing they will purchase and the project will make full use of this programme.
Difficulties facing the approval of a regulatory instrument such as a law for the land use plan in the region.	Medium-low	A regulatory framework in the form of a ministerial regulation or an executive decree, instead of a law, is an essential first step to facilitate the subsequent adoption of a comprehensive land use plan for the Darien. The lead institutions with responsibilities and interests in the region, namely the Ministry of Environment and the Ministry of Agriculture are committed to establishing and actively supporting the necessary land use planning and regulatory frameworks needed to facilitate

Risk	Level	Mitigation approach
		sustainable production practices, both at the farm and productive landscape level.

5. Coordination. **Outline the coordination with other relevant GEF-financed and other initiatives.**

As previously mentioned, there are several initiatives as well as GEF financed activities past and present with which project counterparts are currently liaising with. At present perhaps the most relevant is the GEF's Small Grants Programme as it constitutes and on-going initiative with relevant community experience in the Darien region. Coordination arrangements with relevant on-going initiatives at the national level will entail formal participation in project coordination meetings, bi-annual workshops at the field level, as well as visits and exchanges with project teams of similar initiatives (whether GEF financed or not). Specific coordination arrangements and modalities, including participating entities, frequency, optimal time-frame, location and associated costs will be determined during the project preparation stage (PPG) in close consultation with collaborating partners and representatives of relevant initiatives.

6. Consistency with National Priorities. **Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes X☐ /no☐). If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, etc.**

The proposed project is fully aligned and supportive of Panama's *National Biodiversity Strategy* and *Action Plan* (NBSAP-2000) and its *National Strategy and Action Plan to Combat Desertification* (NAP-2004) under the UNCCD.

More specifically Panama's *National Action Plans* under the CBD and the UNCCD are complementary, coinciding in their efforts to: (i) promote sustainability objectives in production systems - particularly those whose practices are destructive for biodiversity; (ii) promote compatibility between development policies and the sustainable use of biological resources; (iii) prevent, control and minimize the negative impacts that drive environmental contamination and/or alter ecological processes in natural systems; (iv) reduce soil degradation, erosion and overall productivity loss through the application of productive methods consistent with conservation and sustainability objectives; (v) promote the application of productive practices geared towards the efficient use of resources, including water, soil, and vegetative cover; (vi) promote and enable integrated land-use planning along with the development of required institutional and regulatory mechanisms; (vi) promote and establish institutional collaboration in productive landscapes, including shared mechanisms for monitoring resource use, and the maintenance of ecosystem services, among other actions.

The proposed project is thus reflective of national priorities, supportive of Panama's commitments and Action Plans under both the CBD and UNCCD conventions, and consistent with the GEF's BD and LD focal area objectives and their corresponding operational programmes (i.e. BD-4/OP #9; LD-1/OP#1 respectively).

The project is also aligned with national priorities and UNSDG (UN Sustainable Development Goals) as summarized in the table below:

GEF-6 Biodiversity and Land Degradation Focal Area Strategy Objectives	***United Nations Sustainable Development Goals***	***Objectives of the Government of Panama's 2014-2019 Environmental Action Plan***
Reduce Threats to Globally Significant Biodiversity	**No. 13** Take urgent action to combat climate change and its impact.	Support environmental management and the sustainable use of natural resources (soil, water resources, geological and mining resources, forests and natural vegetation, biodiversity resources, landscapes, etc.) particularly in productive landscapes.

Improve Sustainability of Protected Area Systems	**No.15** Protect, restore and promote the sustainable use of terrestrial ecosystems sustainably manage forests, combating desertification and halting and reversing land degradation and loss of biodiversity.	A National System of Protected Areas able to ensure the protection of national ecosystems and the biological diversity they contain through their efficient management, and the conservation of ecological corridors and connecting areas in productive landscapes.
Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes/Seascapes and Sectors Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods. SLM for Climate Smart Agriculture	**No.2** End hunger, achieve food security, better nutrition, sustainable agriculture. **No.12** Ensuring sustainable patterns of consumption and production.	Mitigate and/or eliminate environmental degradation processes associated with inappropriate land use and human activities, and reduce potential effects associated with natural hazards, as measured by: -Improvements in the relationship between the uses and productivity of soils – Addressing use conflicts in areas of high natural value. – Sustained improvement of biodiversity indicators and ecosystem health – Improving the quality and availability of water resources for productive uses and human consumption – Promotion of activities related to the Alliance for the Million Hectares - - Improving the competitiveness of the primary sector, boosting productivity, diversification and the generation of added value of local production, as measured by: Improved productivity of small farmers with assistance in the production process.

7. Knowledge Management. **Outline the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.**

Knowledge management must be specifically tailored to the variety of stakeholders groups participating in the project. These groups will range from cattle ranchers, to extension agents, to bank personnel assessing loans, to private sector operatives engaged in organic produce emanating from SPS farms, to small-scale farmers applying SPS in their farming plots, to newly established national certification agents.

During the project's preparation stage (PPG) resources will focus on establishing effective mechanisms for the systematic exchange and dissemination of project information and experiences in a manner tailored to the individual needs and expressed priorities of cattle ranchers, extensionists, and institutional counterparts. Consultations will continue during project preparation, to examine a variety of options, tools and processes for knowledge management to determine the most suitable options, mechanisms and modalities. At an institutional level, project implementation, including lessons learnt, best practices, etc. will be documented on the websites and documentation of participating institutions. It is expected that the project itself will have a dedicated website overseen and managed by ANCON.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT[29] OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):
(Please attach the Operational Focal Point endorsement letter(s) with this template. For SGP, use this SGP OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE *(MM/dd/yyyy)*
Ms. Elba Yanel Cortes Bonilla	Director of the International Affairs Office	NATIONAL AUTHORITY ON ENVIRONMENT	**03/30/2016**

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies[30] and procedures and meets the GEF criteria for project identification and preparation under GEF-6.

Agency Coordinator, Agency name	**Signature**	**Date** *(MM/dd/yyyy)*	**Project Contact Person**	**Telephone**	**Email**
René Gómez-García Palao, Latin American Development Bank (CAF)		06/12/2017	Federico Vignati	+51 (1) 710-8530	rgomez@caf.com

C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (APPLICABLE ONLY TO NEWLY ACCREDITED GEF PROJECT AGENCIES)

For newly accredited GEF Project Agencies, please download and fill up the required **GEF Project Agency Certification of Ceiling Information Template** to be attached as an annex to the PIF.

[29] For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.
[30] GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

PIF Annex on GEF Financing Ceilings for GEF Project Agencies [1]

Date: 22/07/2016

To: The GEF Secretariat
Washington, DC 20433

Subject: ***GEF Project Agency Certification of Ceiling Information***

Per Council requirement for GEF Project Agencies, I am pleased to inform you that

(a) the value of the largest project implemented (or executed) by CAF to date is USD$ 600 million[2]; and

(b) the total value of all projects under implementation by CAF as of the end of FY are approximately USD$ 24,155 million awarded in active sovereign loans under 248 agreements as of December 31st, 2014.[3]

I certify that the GEF financing currently being requested by CAF for the project, Panama: Ecosystem based climate-smart production framework for the Darien Region Panama", in the amount of USD$ 4 million, is lower than the largest project that CAF has implemented (or executed) to date.

I further certify that the total amount of GEF financing currently under implementation by CAF plus the requested GEF financing for the above mentioned project does not exceed 20 percent of the total amount of all projects that CAF had under implementation as of the end of FY 2015.

Sincerely,

René Gómez-García
GEF Coordinator
Latin American Development Bank
(Corporación Andina de Fomento)

[1] This annex needs to be submitted together with the PIF.
[2] This amount excludes co-financing.
[3] In support of these statements, a copy of (a) the signed loan/grant agreement for the largest project implemented (or executed), and (b) a list of all projects (together with their amounts in US dollars) need to be sent via email, under a separate cover, to the GEF Secretariat at Project_Agency@theGEF.org. These supporting documents will be treated as confidential and will not be shared with any parties external to the Secretariat. The PIF will not be approved in the absence of these supporting documents.

BANCO DE DESARROLLO DE AMÉRICA LATINA

PRESIDENTE

PE-126/2015

Caracas, May 7th, 2015

Dr. Naoko Ishii,
Chief Executive Officer and Chairperson
Global Environment Facility
Washington, USA

Dear Madam Chair,

In assisting GEF to determine an appropriate ceiling for GEF grant financing, I am herewith providing you with the following requested information:

- The largest CAF loan project to date was to the Bolivarian Republic of Venezuela to finance "Central Hidroelectrica Manuel Piar" and totaled an amount of US$ 600 million. The legal contract was signed on December 20th, 2007.

- The total awarded amount and number of projects in CAF's active portfolio are as follows: Approximately US$ 24.155 million awarded in active sovereign loans under 248 agreements as of December 31st, 2014.

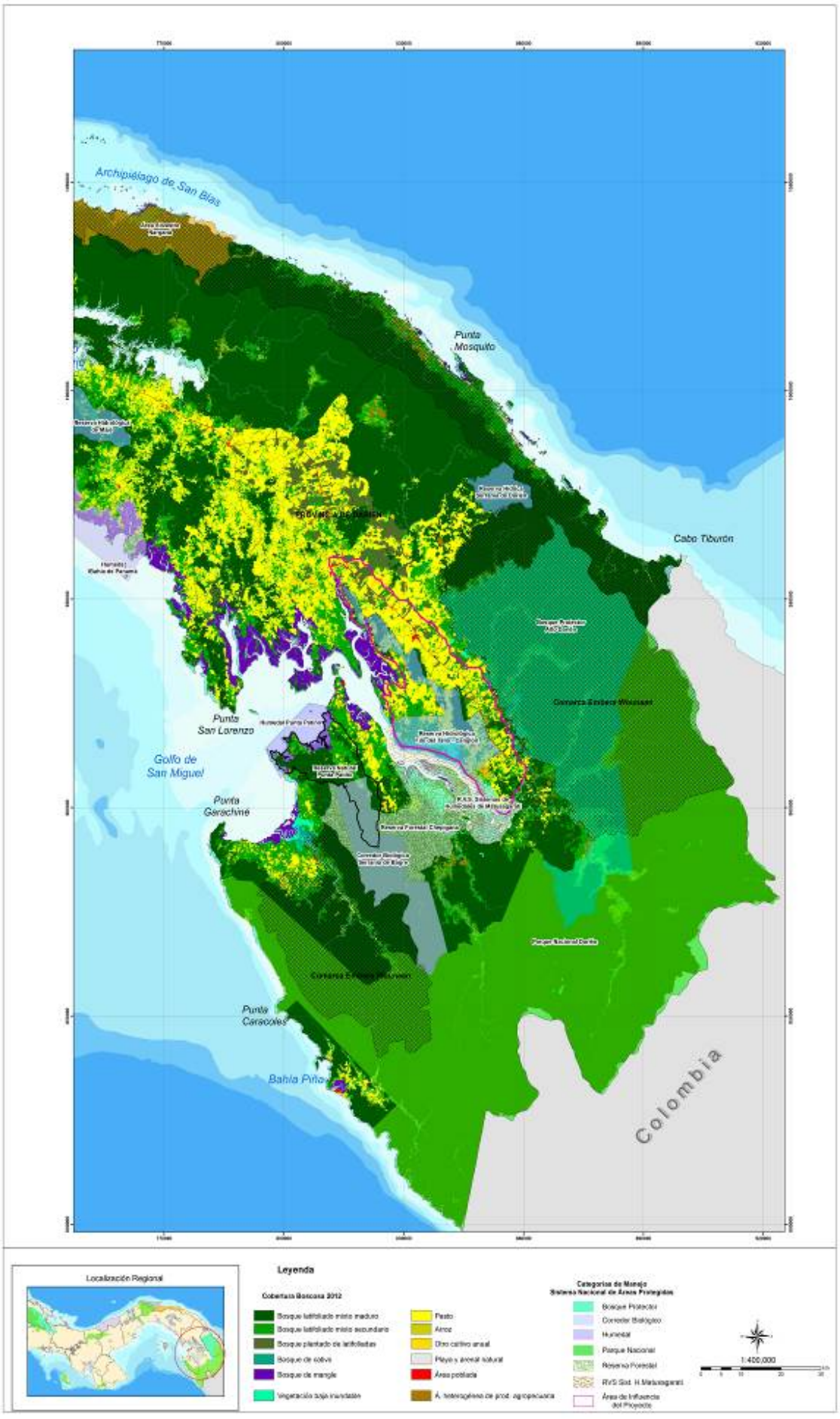
I am attaching CAF s active sovereign loan portfolio referenced in point 1 above to support these figures. Please note that these documents are proprietary and confidential and should not be released outside the GEF.

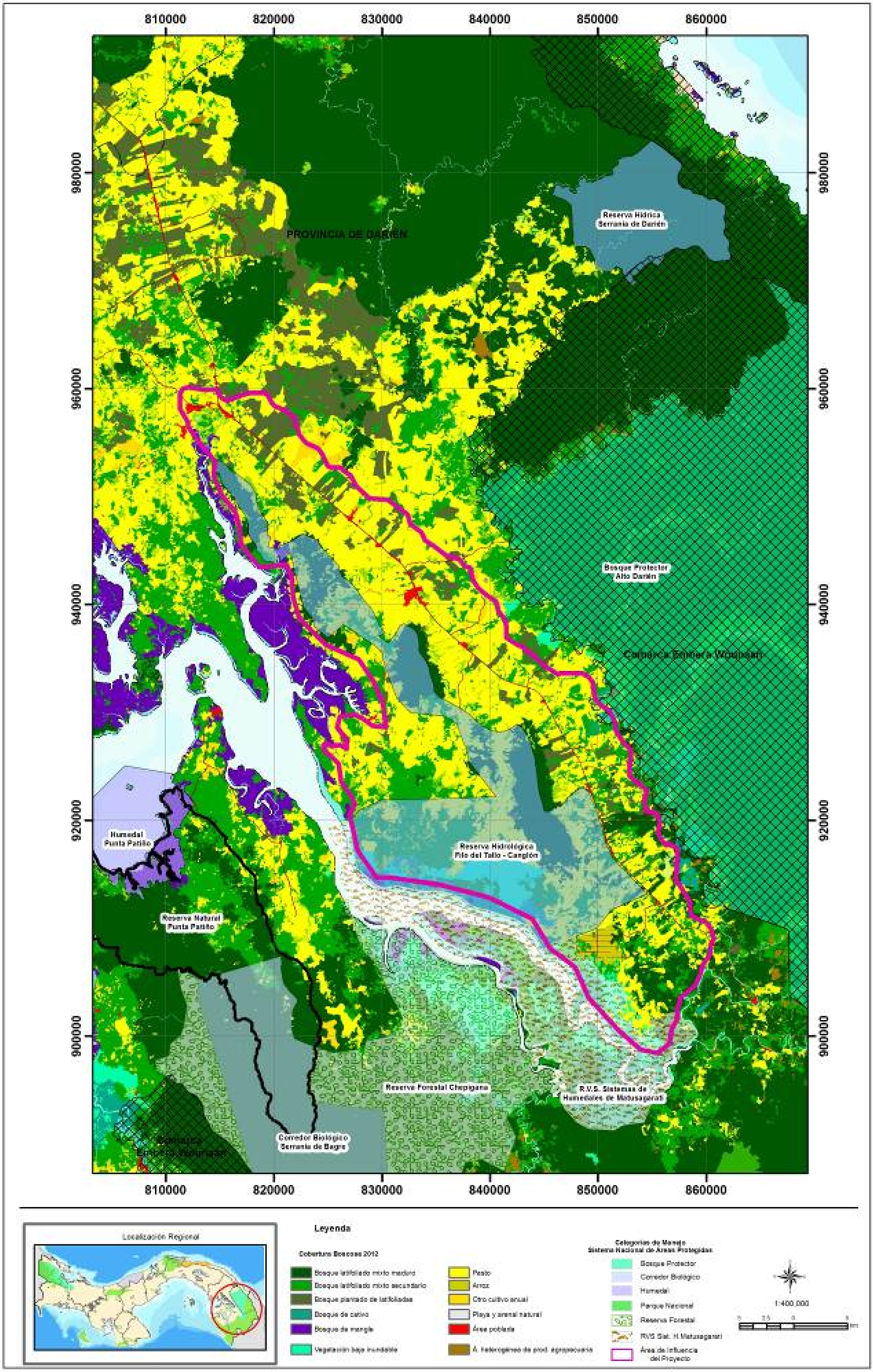
Sincerely yours

L. Enrique García

CAF Caracas - Venezuela

Annex 1 maps


Archipiélago de San Blas
Punta Mosquito
Cabo Tiburón
Punta San Lorenzo
Golfo de San Miguel
Punta Garachiné
Punta Caracoles
Bahía Piñas
Colombia
Localización Regional
Leyenda
Cobertura Boscosa 2012
Bosque latifoliado mixto maduro
Bosque latifoliado mixto secundario
Bosque plantado de latifoliadas
Bosque de salvia
Bosque de mangle
Vegetación baja inundable
Pasto
Arroz
Otro cultivo anual
Playa y arenal natural
Área poblada
Á. heterogénea de prod. agropecuaria
Categorías de Manejo
Sistema Nacional de Áreas Protegidas
Bosque Protector
Corredor Biológico
Humedal
Parque Nacional
Reserva Forestal
RVS Golf. H.Matamagarani
Área de Influencia del Proyecto
1:400,000



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PROVINCIA DE DARIÉN
Reserva Hídrica Serranía de Darién
Bosque Protector Alto Darién
Reserva Hidrológica Filo del Tallo - Canglón
Humedal Punta Patiño
Reserva Natural Punta Patiño
Reserva Forestal Chepigana
R.V.S. Sistemas de Humedales de Matusagaratí
Corredor Biológico Serranía de Bagre
Localización Regional
Leyenda
Cobertura Boscosa 2012
Bosque latifoliado mixto maduro
Bosque latifoliado mixto secundario
Bosque plantado de latifoliadas
Bosque de cativo
Bosque de mangle
Vegetación baja inundable
Pasto
Arroz
Otro cultivo anual
Playa y arenal natural
Área poblada
Á. heterogénea de prod. agropecuaria
Categorías de Manejo
Sistema Nacional de Áreas Protegidas
Bosque Protector
Corredor Biológico
Humedal
Parque Nacional
Reserva Forestal
RVS Sist. H Matusagarati
Área de Influencia del Proyecto
1:400,000

Annex 2

Institution	Rol	Responsabilidad/Influencia en el proyecto
Ministerio de Ambiente de Panamá/MIAMBIENTE	Agencia gubernamental. Solicitante de los fondos junto a ANCON. Punto focal político y técnico ante GEF. Responsable del manejo de todas las áreas protegidas incluidas el área de influencia del proyecto.	-Responsable del manejo ambiental de los sistemas productivos -Proveer información sobre biodiversidad, cobertura boscosa, límites del AP, -Acompañamiento de actividades del proyecto -Designación de un punto focal nacional para el proyecto -Designación de un punto focal regional para el proyecto -Proveer espacios para reuniones y talleres en oficinas centrales y/o regionales. -Proveer apoyo para giras de campo. Guiar a puntos estratégicos -Apoyo en equipamiento para realizar giras de campo (uso de lanchas, vehículos) -Apoyo en convocatorias para realización de talleres. -Participa Ministra y asesores/directores en Consejo - Asesor de alto nivel (gobernanza del proyecto)
Ministerio de Desarrollo Agropecuario/MIDA	Agencia gubernamental. Busca la seguridad alimentaria del país, elevar la calidad de vida de la población rural a través de un sector agropecuario competitivo.	-Es el brazo técnico del Banco de Desarrollo -Agropecuario y principal contraparte del proyecto. -Participa del proyecto desde sus direcciones agropecuarias y ambientales, tanto regionales como nacionales. -El equipo de extensionismo participa y se capacita en las nuevas técnicas de SSP -Toda la institucionalidad concerniente a agropecuaria y ambiente participan y se capacitan en nuevas prácticas ambientales ganaderas. -Se institucionaliza la perspectiva ambiental en la práctica ganadera. -Información clave sobre unidades productivas
Banco de Desarrollo Agropecuario	Proporciona financiamiento a los programas de desarrollo agropecuario, brindando atención especial al micro, pequeño y mediano productor.	-BDA compromete su participación y compromiso de contraparte de US$ 12 millones en préstamos al sector ganadero. -Participa en el Programa de capacitación en SSP orientado a la conservación de la biodiversidad. -Participa en el diseño de manuales de buenas prácticas ganaderas (checklist) para el sector financiero. Participan oficiales de crédito, ejecutivos de cuenta, gerentes analista de cuenta, zootecnistas, asistente técnicos de las regionales de BDA en Santa Fé y La Palma.
Ministerio de Salud	Direcciones	-Punto de información clave para revisar la regulación

MINSA	Regional Darién	sanitaria en el marco de la adopción de nuevos criterios de SSP. -Rigen a las Juntas de Administración de Acueductos Rurales (JAAR) los cuales son clave puesto que uno de sus objetivos es la protección de las cuencas donde se abastecen dichos acueductos. Estas JAARs son una de las organizaciones mas solidas del área de influencia del proyecto.
Ministerio de Educación MEDUCA	Direcciones Regional Darién	-Participación de Direcciones regionales en capacitaciones locales. Especialmente las escuelas agroforestales deben participar tanto estudiantes como docentes para aprender los conceptos del SSP. -Uso de espacios para realización de talleres y capacitaciones. -Actores que deben estar informados de actividades del proyecto (estrategia de comunicación)
Ministerio de Vivienda y Ordenamiento Territorial MIVIOT	Agencia gubernamental Política nacional de vivienda y ordenamiento territorial.	-Relevante para la coordinación del Plan de Ordenamiento Territorial de Darién.
Autoridad Nacional de Administración de Tierras/ANATI	Dirigir, regular y asegurar el cumplimiento y aplicación de la política nacional de tierras, mediante la regularización del catastro nacional.	-Relevante para la coordinación para el Plan de ordenamiento territorial y legalización o titulación de tierras saneadas.
Asociación Nacional de Ganaderos/ANAGAN	Único gremio de ganaderos en Panamá. Tiene un Plan Estratégico Ambiental para su sector con metas similares a las del proyecto. Cuentan con un representante en Darién	-Influencia alta e interés alto en el proyecto. -Acompañamiento a todas las actividades para el establecimiento de SSP a nivel de finca. -Apoyo en convocatoria de asociados dentro de Filo del Tallo-Canglón -Identificación de 200 fincas (participantes directos del proyecto) para implementar SSP. -Adopción/validación de nuevos SSP. -Apoyo en intercambio de experiencias entre fincas modelo y otras fincas satélite.
Comisión Panamá-Estados Unidos para la Erradicación y Prevención del Gusano Barrenador del Ganado (COPEG)	La COPEG fue creada mediante un acuerdo cooperativo firmado el 11 de	-Punto clave para proveer información sobre fincas en Filo del Talo–Canglón, su ubicación, mapas, tamaños del predio, tipo de explotación. Puede acompañar el proyecto y proveer información para la aplicación de los SSP.

	febrero de 1994, entre Panamá y los Estados Unidos, y posteriormente reconocida como misión internacional. Su principal objetivo es erradicar el gusano barrenador del ganado.	-Lleva control sobre gusano barrenador en las fincas ganaderas incluidas las del área de influencia del proyecto.
CATIE/ Programa de Ganadería y Manejo del Medio Ambiente GAMMA	Diseño de sistemas silvopastoriles como estrategia para la adaptación y mitigación al cambio climático de sistemas ganaderos del trópico Centroamericano (Arco Seco de Panamá)	-Interés alto en el proyecto. -Actor clave en el diseño de SSP. -Presencia en Darién con proyecto anteriores sobre fincas modelo en SSP -Conocimiento en producción de madera en SSP en Panamá. -Proveedor de información sobre cartografía de Darién relacionada a biodiversidad y uso ganadero. Potencial aliado para implementar actividades en campo.
Fundación Unidos por la Naturaleza (FUNAT)	Especialistas en agroforestería tropical, producción animal y seguridad alimentaria. Son colaboradores técnicos de ANAGAN	-Interés alto en el proyecto -Actor clave para la proporción de información sobre Darién respecto a avance del Plan Estratégico Ambiental de ANAGAN y su correlación con las actividades del proyecto
Organizaciones de Base Comunitaria OBC	Organizaciones civiles reconocidas por ley, organizadas por comunidad	-Influencia alta -Potenciales aliados para la difusión de la estrategia de comunicación, para difundir los principales mensajes y resultados del proyecto a nivel local.
Centro Regional Universitario CRU-Darién	Entre otras, tiene las carreras de: Facultad de Ciencias Agropecuarias Técnico en Agroforestería	-Estudiantes participan en módulos de capacitación SSP -Estudiantes candidatos a realizar apoyos técnicos en la implementación de SSP -El centro puede proveer espacios de capacitación/reunión

	Ingeniería Agroforestal. Tienen extensionistas de campo en agroforestaría. Coordina con MIDA para sus programas de extensionismo.	
Colegio Agroforestal Tierra Nueva de Canglón	Centro de formación de jóvenes darienitas interesados en la protección y conservación de los recursos. Cuenta con una reserva de bosque y un sendero que conduce al Río Chucunaque.	-Deben participar en algunas capacitaciones sobre SSP -El colegio puede proveer espacios de capacitación/reunión -Es una instancia receptora de información sobre los mensajes clave de la estrategia de comunicación del proyecto.
Fundación Pro niños de Darién	Tienen cobertura en toda la provincia. Tienen fincas modelos de producción de cultivos tradicionales	-Participación en capacitaciones locales en SSP
Fundación Sembradores de Esperanza	Trabajan junto a CRU. Tienen un vivero, y pretenden crear un corredor biológico de conservación de 14 km entre un bosque secundario y la Reserva de Filo del Tallo.	-Si el vivero tiene especies forestales, éste puede ser proveedor de plantones para la silvicultura en los SSP.
Asociación de Mujeres Productoras Agropecuarias de Quebrada Honda, Zapallal	Se dedican a la producción de rubros agrícolas tradicionales. Cuentan con personería	-Es una asociación constituida legalmente que ha tenido relevancia en la adopción de sus proyectos productivos en la zona. Zapallal se encuentra en la zona de influencia del proyecto y este grupo puede participar en actividades para relevar la perspectiva de género, a partir del desarrollo de vivieros que

	jurídica.	promuevan la silvicultura en las fincas de SSP.
Centro Pastoral Santa Fé Hierbas y Plantas Aromáticas ECODIC	Organizacion de productores comporometidos con la confeccion de productos alternativos y naturales para el mejoramiento de la salud. Reforestatacion, reciclaje, manejo de la basura, etc	-Pueden ser aliados en las capacitaciones para usos alternativos de los recursos naturales en sistemas agroforestales dentro de los SSP.
Juntas de Acueductos Rurales (JAAR)	Velan para que el servicio de agua sea funcional y permanente. Buscan que las tomas de agua esté en buenas condiciones	-Punto de información sobre buenas/malas prácticas ganaderas en centros/tomas de agua.
Voz sin fronteras	Emisora más escuchada en la región del Darien	Influencia alta en el proyecto Interés alto en el proyecto Difundir el proyecto: convocatorias, mensajes, resultados parciales, reuniones, aglutina participaciones, programas radiales particulares, acompañamiento en la campaña de comunicación del proyecto. Actor clave.
La Nueva	Emisora de la region del Darien	-Influencia alta en el proyecto.Actor clave. -Interés alto en el proyecto -Difundir el proyecto: convocatorias, mensajes, resultados parciales, reuniones, aglutina participaciones, programas radiales particulares, acompañamiento en la campaña de comunicación del proyecto.
Despacho de la Primera Dama- Biocomunidades	Tiene un programa de desarrollo comunitario en las siguientes comunidades de Darién: Zapallal La Cantera Quebrada Honda Cémaco ó Wounaan Lajas Blancas Marragantí	-No trabajan la perspectiva de SSP, pero se puede identificar grupos de mujeres para fortalecer los indicadores de género, con actividades complementarias a los SSP en las comunidades de influencia del proyeco.

	El Salto	
Servicio Nacional de Fronteras (SENAFRONT)	Conservar el orden público, prevenir, investigar y reprimir hechos delictivos y faltas, y proteger las fronteras terrestres y fluviales de la República de Panamá	-Proveer seguridad en recorridos de campo apartados cuando y si fuera necesario. -Apoyo en logística de viajes (transporte terrestre y fluvial)
Alcaldia Pinogana	Autoridades del Distrito de Pinogana	-Es una instancia de gobierno local que debe estar informada de los avances del proyecto. Por su lejanía, la municipalidad no sería considerada como punto de reunión y/o encuentro.
Alcadia Chepigana	Autoridad del Distrito de Chepigana	-Es una instancia de gobierno local que debe estar informada de los avances del proyecto. -La Alcaldía se encuentra en La Palma y puede ser centro de convocatorias para realización de talleres u otros.
Alcaldía de Santa Fé	Autoridad del Distrito de Santa Fé	-Es una instancia de gobierno local que debe estar informada de los avances del proyecto. La Alcaldía puede ser punto de convergencia para talleres y otros eventos del proyecto.
Filo del tallo Lodge Canopy Lodge	Turismo y apoyo a iniciativas de conservación junto a JAARs	
Representantes de corregimiento	Autoridad local más inmediata dentro del área de influencia del proyecto	-Pueden servir de facilitadores con las comunidades y cuentan con recursos de la descentralización para potencial apalancamiento de actividades estratégicas complementarias al proyecto.