UNDP Project Document

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Biodiversity conservation in the productive landscape of the Venezuelan Andes

(PIMS 2734)

Brief description

The Mérida Cordillera is a mountain range covering an area of 30,732km^2 in western Venezuela, with high levels of species and ecosystem diversity. The latter is currently threatened by the loss of biodiversity-friendly productive systems such as shade coffee which have predominated in this productive landscape for over two centuries. This 7 year project, to be executed by the CIARA Foundation of Venezuela's Ministry of Popular Economy (MINEP), will address a variety of key barriers impeding the effective mainstreaming of biodiversity into this biodiversity rich productive landscape and arrest current trends affecting the BD value of this landscape mosaic. The objective of the project is that farmers' systems remain BD-friendly, as a result of the following outcomes i) increased capacities among producers to apply BD-friendly practices; ii) enabling policy, planning and regulatory frameworks and iii) replication processes from pilot areas. Principal co-financing will be provided through MINEP's National Coffee Plan.

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Acronyms

APR	Annual Project Report
AWP	Annual Work Plan
Bs.	Bolívares ($1 = Bs. 2145)
CCRZ	Coffee/cattle rearing zone
CIARA	Foundation for Training and Innovation for Rural Development
CLPP	Local Council for Local Planning's Technical Secretariat
CODESU	Cooperation for Sustainable Development
IUCN	International Union for the Conservation of Nature
IR	Inception Report
IW	Inception Workshop
LAC	Latin America and the Caribbean
LCC	Local Coordination Committees
LPU	Local Project Unit
MARN	Ministry of Environment and Natural Resources
m.a.s.l	Metres above sea level
MAT	Ministry of Agriculture and Lands
M&E	Monitoring and evaluation
NBSAP	National Biodiversity Strategy and Action Plan
NEX	National Execution Modality
NSC	National Steering Committee
NYSE	New York Stock Exchange
PAT	Programa Andes Tropicales (Tropical Andes Programme)
PIRs	Annual Project Implementation Reviews
PTA	Principal Technical Adviser
qq	Quintales (1 quintal = 46kg)
RCU	Regional Coordination Unit
PC	Project Coordinator
RSC	Regional Steering Committee
SC	Steering Committee
TA	Technical Adviser
TOCU	Technical and Operational Coordination Unit
TMEC	Technical Monitoring and Evaluation Committee
TPR	Tripartite Review
TTC	Thematic Technical Coordinators
TTR	Terminal Tripartite Review
UNCBD	United Nations Convention on Biological Diversity
UNDP	United Nations Development Programme
UNDP-CO	United Nations Development Programme Country Office
UNDP-GEF	United Nations Development Programme - Global Environment Facility Unit
UNEP	United Nations Environment Programme
WWF	World Wildlife Fund

Glossary

Cordillera	Mountain range
Mucuposada	Family run tourist accommodation
Páramo	Upland moor
Quintal	46kg

SECTION I Elaboration of the Narrative

PART I Situation Analysis

CONTEXT AND GLOBAL SIGNIFICANCE

Global biodiversity importance

1. The Venezuelan Andes forms the most extreme eastern tip of the **North Andean (Tropical Andes) Bioregion** (Map 1) renowned for its biological distinctiveness and housing 45,000-50,000 plant species (8-20 percent of the global total), 20,000 of which are endemic.. Conservation International identifies this bioregion amongst the 25 *hotspots* for biodiversity at the global level (Myers et al 1999) and WWF includes it amongst the 17 priorities for conservation in Latin America in their Global 200 ecoregion programme. Bird Life International considers the Northern Andean region as an area of world-wide relevance for endemic birds (Stattersfield et al 1998, Wege & Long 1995). It houses the world's highest level of avian diversity and has 9 centres of plant diversity recognized as globally important by IUCN and WWF (Davies et al 1997).

2. The Venezuelan Andes exhibit all the characteristic diversity of this rich Northern Andean Bioregion. Furthermore, positioned between the Caribbean Coast in the north, the Orinoco lowlands in the southeast and the coastal range of the east, it has representations of Andean, Amazonian, Coastal and Llanos species, making this region particularly biodiverse. It marks the northern limits of numerous Andean species and the eastern limits to a number of Central American species. The Merida Cordillera (mountain range) for example, holds the westernmost population of the banded anteater *Tamandua mexicana* in South America, and the northernmost populations of the Andean rat opossum, *Caenolestes obscurus*.

3. One of the two major habitat types of the Northern Andean Bioregion is tropical broadleaf moist forest, composed largely of humid **Montane Forest** (evergreen, cloud and elphin). Found between 500 and 3,500 m.a.s.l, this montane forest is one of the richest in the world and comprises a complex group of forests that change enormously across altitudinal ranges and between different ranges and east and west facing slopes. The Venezuelan Andean region houses two of seven North Andean Montane forest ecoregions classified by Dinerstein et. al (1995) as the highest priority for conservation with globally significant biological distinctiveness. These are the **Venezuelan Andes Montane Forest Ecoregion**, covering 2.94 million ha, (Mérida Cordillera) and the Cordillera Oriental Montane Forest Ecoregion trans-bordering with Colombia, covering 7.3 million ha and including the Serrania Perija and Tama Cordillera in Venezuela.

4. The Mérida Cordillera (above 400 m.a.s.l.) covers an area of 30,732 km^2 and includes a very wide range of ecosystems (see Map 3) ranging from thorn and tropical dry forest at lower altitudes on leeward slopes, through to upland moor (*páramo*), whose lower altitudinal limit varies between 2,800 and 3,500 m.a.s.l. Between these two extremes are evergreen and montane cloud forests. In comparison with montane forests elsewhere in the Northern Andes Bioregion, as much of 90% of which have been lost already (Tropical Montane Cloud Forest Initiative, 2002) those in the Merida Cordillera are relatively well preserved, with an estimated 52% still remaining intact (Map 4).

5. The montane forest zone is home to a number of globally important species including the Andean spectacled bear (*Tremarctos ornatus*) which is classified in the IUCN Red List as vulnerable; the red siskin (*Carduelis cucullata*) which is classified as endangered and the endemic La Carbonera stubfoot toad (*Atelopus carbonerensis*), which is classified as critically endangered. 90% of the emblematic species of the Andean region which are included in the IUCN Red List are represented in forests in this zone, including the mountain lion (*Puma concolor*) and the little spotted cat (*Leopardus tigrinus*) both of which are listed as not threatened but potentially vulnerable, and the little coati (*Nasuella olivacea*).

Productive sectors and systems

6. The Mérida Cordillera is home to around 20% of the country's population with a little more than 24% of the land in the 400 – 3,500 m.a.s.l zone under active use for agricultural activities, constituting the main productive sector of the region. The non-protected productive landscape as a whole, defined as those areas not included in the 11 National Parks, makes up 77.4% of this altitude zone.

7. Farm sizes are variable but the average is around 4 ha. Four main categories of agricultural producers can be distinguished: i) *'infra-subsistence farmers'*, who are either landless or own plots of up to 0.5ha, and depend principally on off-farm employment for survival; ii) '*subsistence farmers'* who typically own 1-5ha (sometimes up to 10ha) and balance on-farm agricultural activities with off-farm employment, and may produce a small surplus of agricultural production for sale; iii) *'semi-mercantile producers'*, typically owning 5-50 ha, principally dedicated to production for market, with some access to productive infrastructure; and iv) *'mercantile or entrepreneurial producers'*, with properties of greater than 50ha, dedicated exclusively to intensive and high yielding production for market. Farmers mostly depend on family labour, except in harvest periods when temporary labour is hired, largely from urban centres and nearby villages. In some municipalities labour availability is limited during the time of coffee harvests, due to emigration by younger community members or their employment in non-agricultural activities. Annual farm incomes (see Table 6 for a typical farm economy) are typically in the range of Bs. 1,800,000-4,800,000 (US $840-2,238) and there is little off-farm or non-agricultural income. Production from these farm units is typically diverse, and the nature and relative importance of the different production systems varies widely, depending largely on the scale of the producer.

8. ***Coffee.*** Coffee production (Map 5) occurs between 400 and 2,000 m.a.s.l., in those areas where rainfall is greater than 600 mm. Three broad categories of coffee production system can be distinguished in the smallholder sector (see SECTION IV PART VII): i) traditional, small scale systems, for domestic markets, typically with diverse tree shade and low levels of artificial inputs; ii) technified small and medium scale systems for domestic markets, typically with high levels of artificial outputs and with tree shade either highly modified or (in the case of "sun coffee") entirely absent; and iii) small and medium scale commercial "polycultures" with certification (e.g. Fairtrade, shade coffee, bird-friendly or organic), for export.

9. The average areas of coffee per farm in the project area vary between 0.7 and 2.3ha, and the average areas of other crops vary between 1.2 and 1.6 ha per farm. The relative importance of coffee compared to other crops is often inversely proportional to the size of the farm: small farms up to 1 ha generally dedicate up to 77 % of the surface to coffee production when in farms exceeding 5 ha this percentage is between 20 and 50% (30-50 % is pasture, 10-20% traditional crops and up to 35% is fallow or woodland). Many smallholder coffee producers lack formal title to the land which they work[1], a situation which limits their access to formal credit and financial and technical support programmes (although they may have access to other sources of credit on the basis of "solidarity guarantees"). Typically, marketing chains for smallholder coffee are long (Figure 2) and producers have little participation in either processing or marketing, which is largely in the hands of traders and a limited number of industrial concerns.

10. Levels of coffee production and areas of shade coffee have been subject to significant fluctuations over time (see Figure 6); in recent years large areas of shade coffee in the Mérida Cordillera have been cleared and converted to cattle pasture (see problem statement in paragraph 30 and project rationale in paragraph 78).

11. ***Livestock***. In both the 400-2,000 m.a.s.l. coffee production zone and the 2,000-3,500 m.a.s.l. vegetable production zone, there is much dairy production. These producers fall into three principal categories: smallholders with typically one or two animals, the dairy products from which are principally

[1] No reliable data are available on the proportion of farmers with title; the Government is currently carrying out an inventory to provide such data.

consumed within the farm itself; small scale semi-commercial producers who produce dairy products for sale and carry out a moderate level of investment in pasture grasses, stabling and milking machinery; and larger scale commercial farmers who carry out intensive dairy farming with heavy use of nitrogen-rich chemical fertilizers. This last group is relatively limited in number and is typical of relatively high altitude areas, for example around *La Azulita* in *Andrés Bello* Municipality. The establishment of pastures at the expense of shade coffee stands is most attractive for semi-commercial and commercial producers, of which the semi-commercial category is most widespread. A typical balance sheet for semi-commercial dairy production is shown in Table 7.

12. ***Vegetable production.*** In areas with less than 600 mm rainfall, intensive production of tomatoes, onions and peppers occurs, and areas between 2,000 and 3,500 m.a.s.l. supply much of the nation's vegetable produce including cauliflower, carrot, lettuce, beetroot, potatoes and garlic. Much of this activity is carried out by producers who originate in the *páramo* zone and who lease land from local smallholders.

13. ***Food crops.*** Smallholdings also typically include a range other food crops such as beans, maize, root crops (such as yam and cassava) and vegetables, all of which are chiefly destined for family consumption. Average production of beans per harvest is around 500kg/ha and that of maize is around 1,000kg/ha.

14. ***Tourism.*** Following agriculture, ***tourism*** is one of the region's most important productive sectors with a million visitors per year (PAT, 2002). The tourism sector has undergone major growth in Venezuela since the country first entered significantly into the international market in the 1980s. Rural tourism has acquired increasing importance compared to the more conventional "sun and sand" tourism which dominated the sector in its early years. The international market for special interest and adventure tourism is very significant[2]: representing 35% of the US market, equivalent to 4-5 million people per year, of which around 10% is directed at Central and South America. The European market for adventure and nature tourism is smaller (currently around 1 million people) but has an annual growth of 12-15%.

15. In the project area, the local NGO the Tropical Andes Programme (PAT) has conclusively demonstrated the practical feasibility and local benefits of family-based rural tourism based on farm-based tourist lodges (*mucuposadas*) and the provision of guide facilities along the hiking routes that connect them. The total gross income received from visitors staying at 11 *mucuposadas* and using 8 guide organizations rose from just over $40,000 in 2003 to over $100,000 in 2004, while the number of visitors using the services rose from 549 to 1,256 between the two years in question. A typical net monthly income from a *mucuposada* is in the order of $200 (calculated on the basis of an average of 40 visitors per month). This constitutes a significant addition to smallholder family incomes, and is equivalent to around 20% of the basic monthly income typically required by a family of 5 to cover costs of food, education, clothing, transport, recreation, medical care and services (see Table 6). Rural family-based tourism has been demonstrated to have the additional benefit of strengthening attachments to local traditions, particularly among younger members of the community who are typically the first to emigrate, thereby contributing to the stabilization of demographic trends.

16. ***Water production.*** The Mérida Cordillera is also of importance for ***hydroelectric generation***, ***agricultural irrigation*** and ***domestic water supply***, due to its topography and its proximity to fertile, water-stressed valleys and urban centres. Major reservoirs draining from the area include *Camburito-Caparo, Onia, Rìo Santo Domingo, Masparro, Boconó-Tucupido, Dos Cerritos, Acarigua and Yacambú-Quíbor;* aqueducts include *El Vigia, Barinas* and *Acarigua* and major irrigation systems include *Rìo Santo Domingo* and *Rìo Guanare*. As shown in Map 7, 47.9% (20,640km^2) of the Mérida Cordillera, and 21.4% (9,215km^2) of the CCRZ, consists of hydrological catchments for such infrastructural works.

[2] National Strategic Tourism Plan 2003-2007.

Economic viability of production systems

17. The conversion of large areas of coffee to pasture in recent years has been largely due to the low and unstable prices for coffee (Figure 4) and the limited proportion of the sale price which is passed back to the producer (Figure 5). Decisions on maintaining coffee production are also often influenced by geographical location: the further away from roads, commercial centres etc., the less feasible it is to switch from coffee to other commercial crops.

18. Even at the relatively high current national price of $1.15/lb, coffee production for the domestic market is not competitive in terms of net incomes with livestock (dairy) production when only the coffee component of the shade coffee stands is taken into account; domestic prices would have to reach $2.45/lb for it to be so. However, if the income generating potential of other goods and services provided by coffee stands, such as environmental services, timber and fruit, is considered, shade coffee systems are competitive with livestock within the range of national market prices of coffee that have prevailed over the last 20 years (Figure 9). In addition, net incomes from certified (Fairtrade and organic) coffee are on average significantly higher than those obtainable from coffee on the national market, even when the additional costs associated with obtaining certification and accessing niche export markets are factored in (Figure 8). This is due to the protection offered to Fairtrade producers against drops in prices, and the social and organic premiums awarded above base prices. When base prices are in excess of $1.89/lb, certified Fairtrade organic coffee (taking into account only the coffee component itself) for sale on the NYSE provides higher net incomes than dairy production. When the economic potential of all the additional productive components of shade coffee stands is realized (for example minor products such as bananas, timber and environmental services), net incomes per hectare from shade coffee significantly exceed those obtainable from livestock production over all price scenarios (Figure 10).

19. National demand for coffee is strong is relation to supply, as evidenced by the period strategic decisions of the Government to impose bans on exports in order to ensure adequate availability for national consumers. Demand for certified coffees is principally international rather than national, and has shown a steady growth which shows no signs of leveling off (see Figure 3). To date, coffees for certified and niche markets have been exempt from Government export bans.

20. Case study analyses of two hydrological catchments within the project area, which take into account water yield, consumption and willingness to pay on the part of consumers, suggest that payment for hydrological services has the potential to generate income for shade coffee producers of $70-75/ha, and payment for carbon storage has the potential to generate $12/ha (see Table 16 and Table 17). This is significant, relative to an estimated monthly income requirement of around $662 for a typical family of five to meet minimum needs of food, services, clothing, health care and education (Table 6).

Socioeconomic conditions

21. Data on socioeconomic conditions in the project area are given in SECTION IV PART VI. Population densities vary widely between municipalities, ranging from 5.55-98.08 persons/km^2. In all municipalities except one, there are greater numbers of men than women (masculinity rates range from 99.33-115.81[3]), suggesting higher emigration rates among women than men. Human development indices (based on considerations of health, education and income) in all of the pilot municipalities are depressed, ranging from Low to Medium-Low (0.4024-0.5605). The percentage of the population living in poverty ranges from 25-46% (6.42-17.27% in the case of extreme poverty), and the percentage of the population without access to running water or sanitation ranges from 23-72%. There is wide variation in conditions between the pilot municipalities. *Aricagua* Municipality in Mérida State has the highest levels of poverty (according to a number of criteria), followed by *Andrés Bello* in Mérida State and Andrés Eloy Blanco in Lara State).

[3] Masculinity index = (Number of men/Number of women) x 100

Biodiversity in the productive landscape

22. This project will focus on the 800-3000 m.a.s.l. zone of the Merida Cordillera (above 3000 m.a.s..l. montane forests give way to *páramo,* which is the focus of the regional GEF project described in paragraph 164). The **Coffee/Cattle Rearing Zone (CCRZ)**[4] (Map 5), between 800 and 1,800 m.a.s.l[5]., is of particular importance for biodiversity as it contains a large proportion (33.1%) of the remaining forest in the Mérida Cordillera (56% if shade coffee stands are included), despite making up only 43% of the total area (the CCRZ covers 19,750km^2). At the same time, it has a relatively high ratio of converted land to non-converted vegetation (around 1:3), indicating a high level of threat.

23. Since the 19th century shade coffee producing farms (Map 4) have prevailed in the Merida Cordillera. Characterized by a wide diversity of products including staple grains, root-crops, dairy products, bananas, coffee and timber, these farming systems are highly compatible with biodiversity as coffee and fruit trees are planted under the canopy of the pre-existing forest. "*Traditional polyculture*" systems (*sensu* Moguel and Toledo 1999) were therefore established. The importance of such shade coffee plantations for the conservation of biodiversity has been widely demonstrated throughout Latin America. The diversity of canopy tree species in such *traditional polyculture* coffee plantations typically resembles that of the forest from which they have been developed, with important associated communities of epiphytes (such as bromeliads, mosses and lichens) and insects, especially when dead trees and fallen wood are allowed to remain. In addition, ample evidence within the region confirms that coffee plantations are beneficial to migratory birds such as Pacific Northwest species (Seavey 2002), while offering significant connectivity potential amongst protected areas nested in productive landscapes.

24. In the specific context of the Venezuelan Andes, while the conversion of original forests to shade coffee inevitably entailed a reduction in attendant biodiversity, the resulting shade coffee stands (on average around 3-4 ha in size) represent a productive alternative containing considerable higher levels of structural and species diversity than those found in nearby cattle pastures and/or vegetable growing fields. Coffee plantations are also favourable for fish populations, by providing shade for the streams and rivers of the southern slopes of the Venezuelan Andes and thereby maintaining their temperatures stable and low, and contributing organic material (such as flowers, fruits, seeds, leaves and sticks) and a plethora of aquatic insects that provide crucial food resources. This benefits fish species such as *Prochilodus mariae,* the most important food fish of the Orinoco River Basin, which uses these streams as dry season refuge, and the bristle-nosed armored catfishes of the family Loricariidae, many of which are local endemics. As keystone species and major habitat engineers, as well as important nutrient concentrators (particularly phosphorus which is scarce and perhaps limiting in Andean streams) these fishes play key roles in maintaining the biodiversity of algae and aquatic invertebrates, by constantly scraping algae to feed on the rocky substrate.

25. Finally, shade coffee provides a refuge for many species at the landscape level, because embedding forest fragments in less intensely managed agricultural landscapes may be correlated with higher richness or less patch isolation (Philpott and Dietsch, 2003; Fahrig, 2001; Ricketts, 2001; Vandermeer and Carvajal, 2001; Steffan-Dewenter 2002). A matrix of shaded coffee (and particularly rustic or traditional coffee farms) constitutes a matrix of large-seeded animal-dispersed trees that attract dispersal agents, maintaining the ecological processes and natural population dynamics of many plant and animal species (Philpott and Dietsh 2003). Coffee stands also act as corridors for mature forest species, allowing their movement among remaining forest patches and acting as stepping-stones allowing the emigration of trees from relict forest stands into regenerating matrices.

26. Furthermore, the biodiversity rich montane forests in the band between the CCRZ and the *páramo* are also considered part of the productive landscape targeted by the project. In many cases shade coffee

[4] The coffee/cattle rearing zone is defined as coffee plantations plus a 5km buffer surrounding them.
[5] These altitudinal limits are approximate; in areas coffee occurs as low as 400m.a.s.l. and as high as 2000 m.a.s.l.

producers lower down also own and/or manage land in this higher zone, meaning that montane forests also form part of the same farming systems as shade coffee stands and are equally affected by conditions of producers' family economies. An additional link between the shade coffee landscape and montane forest zones is that in many cases the shade coffee "forests" and the human communities associated with them act as buffers against the upward advance of the agricultural frontier into the montane forest zone by external actors.

27. Biodiversity in the productive landscape is also of significance for farmers. For example, increased diversity of bee species visiting coffee stands, as a result of increased proximity of forest areas, increases the fruit set of highland coffee (Klein et al, 2003). In Indonesia, it was found that an increase in bee diversity from 3 to 20 species may increase fruit set from 60% to 90%.

28. In conclusion, while the structural and specific diversity of the shade coffee landscape is comparatively lower than that of the primary forests it has gradually replaced, shade coffee does contain and promote much higher biodiversity and habitat value than other productive practices characterized by monocultures or large expanses of introduced pastures. In addition, the social structures associated with shade coffee production have been traditionally characterized by high levels of social and cultural consolidation, cohesion and stability, which in the past has been reflected in the stability of land uses and the landscape as a whole.

29. Concerns have been raised in the literature (e.g. Rappole et al 2003[6]) about the risk of the promotion of shade coffee leading to it being increasingly established in areas of existing natural forest, with the consequent loss of structural and specific diversity. This concern is recognized in the formulation of this project and concrete strategies are incorporated into project design in order to ensure that such negative impacts are fully avoided (see paragraph 122).

The global problem to be addressed

30. Approximately 48% of the montane forest in the Mérida Cordillera has been lost to date; of the remaining area of around 16,000 ha, approximately 50% is classified as moderately or severely disturbed and 60% is currently under no form of conservation oriented land-use. In addition to the immediate loss of forest habitat which this process represents, subsequent further increases in clearance will lead to the degradation of the remaining forest fragments, due to increased edge effect and increases in the unsustainable extraction of forest products.

31. The area of shade coffee stands has diminished by an estimated 50% in the last 30 years (equivalent to around 2,500 ha) over the same period. In addition to the loss of these habitats themselves, the complexity, connectivity and habitat value of the productive landscape as a whole is being reduced through its gradual conversion from a mosaic of small patches of different land uses to increasingly homogenized and ever larger continuous expanses of pasture. The processes through which forest and shade coffee clearance occurs are shown in Figure 1. The area where these processes are concentrated is termed here the **Coffee/Cattle Rearing Zone (CCRZ)**. As shown in Map 5, the CCRZ is here defined as the coffee plantations themselves in the Mérida Cordillera plus a 5km wide zone around them. This zone contains a mosaic of different land uses (Map 5).

32. Land conversion processes occur principally within small farms formerly characterized by coffee production and high levels of productive and land use diversity, and are largely determined by individual farmers' choices between alternative land uses within the context of the farm unit. In the south-western part of the *Merida Cordillera*, above the 2,000 m. contour, these processes are also occurring in larger holdings (ranging from 20-150 ha in size), which have in many cases replaced smaller, more diverse

[6] Rapple J.H., King D.I. and Vega Rivera J.H. (2003). Coffee and Conservation. *Conservation Biology* Pages 1–4 Volume 17, No. 1, February 2003

farms; however such farms are limited in number and total extent. Currently, only 22.6% of the *Mérida Cordillera* and 38.5% of the CCRZ (Map 6) is under exclusive protected areas status (national parks), making any land conversion processes in the broader productive landscape of particular significance, in terms of their impact on the conservation status of local biodiversity. The landscape changes occurring in the 800 – 3,000 m.a.s.l. altitude zone represent the most significant threat to globally significant biodiversity in the *Mérida Cordillera*, by virtue of the size of the area which they encompass and the global importance of the biota which they affect.

33. As the Andean region becomes increasingly important in the nation's development, as proposed in the 2001-2007 National Development Plan (NDP), productive sector activity will increase. Sectors particularly flagged for expansion in the 2001-2007 Regional Development Plan (RDP) are agriculture and tourism. Unless capacities are strengthened for mainstreaming conservation objectives into the productive landscape where these activities are set to occur, pressure on habitats and species will increase with the concomitant loss of highly significant global biodiversity values. The potential environmental impacts of the development of the Western Development Axis are highlighted as an issue of concern in the *National Biodiversity Strategy and Action Plan.*

34. Additional globally important implications of this situation, of relevance to other focal areas, include: the liberation of large volumes of carbon stored in forests and shade coffee stands when these are cleared, of relevance for global **climate change**; and increased threats of erosion and mass movement on the steep slopes which predominate in the area, as a result of the reduction of soil cover and the decay of tree roots following clearance, the disruption of hydrological cycles due to clearance of the tree cover which serves to trap cloud moisture and promote infiltration, and soil contamination, through the application of agricultural chemicals, all of which are of relevance for **land degradation**.

THREATS, ROOT CAUSES AND BARRIERS

Threats to BD in the productive landscape and system boundaries

35. The productive landscape of the *Mérida Cordillera* is of great significance for the conservation of globally important biodiversity. 77.4% of the Cordillera falls outside of formally declared National Parks, and includes a large proportion of the area's forest cover, in the form of primary forest and shade coffee stands, both of which are currently subject to high rates of conversion to other land uses. In addition, large areas of the National Parks themselves are used for coffee and livestock production (Map 6). Most of the 49.550 ha of coffee present in National Parks is located within their 2 km-wide buffer zones, accounting for 9.8% of the total buffer zone area. Of particular significance in regard to threats in the productive landscape is the 800 – 3,000 m.a.s.l. zone, where shade coffee stands and primary forests are being cleared to establish extensive cattle pastures and, to a lesser extent, sun coffee and market vegetables. Within this zone, the clearance of shade coffee occurs between around 500 and 2,000 m.a.s.l., which represent the approximate upper and lower altitudinal limits of the crop in this area; while the clearance of primary forest occurs not only in the coffee-growing zone itself but also in those parts of the 2,000 – 3,000 m.a.s.l. zone which the coffee farmers own or to which they have access. Even in this higher band, it is largely the coffee producers at lower altitudes who are responsible for either clearing these forests themselves or for renting out land for vegetable growing. These processes principally occur in small farms (around 5 ha).

36. Within the small farms where these processes most commonly occur, land-use decisions are influenced by a variety of factors which are not specific *to one given sector*, but by the interactions between the range of sectors typically represented in such farms and their respective contributions to farmers' livelihood support strategies. The decision to eliminate or retain shade coffee stands, for example, is based not only on the condition of the coffee sector but also on the relative competitiveness of other sectors (such as cattle rearing and vegetable production) which represent *alternatives within these farm units*. This implies that issues of biodiversity conservation in the productive landscape require

consideration on an integrated, geographical basis at the level of the farm and landscape, rather than on a sector-specific approach. Within this target landscape, however, certain sectors warrant particular attention due to the threats and opportunities which they respectively pose for biodiversity conservation. These include coffee, cattle, market vegetables, tourism and hydrological services.

Principal root causes of biodiversity loss in the productive landscape

1) Prices received by farmers for coffee compared to alternative productive activities

37. The principal reason why farmers tend to eliminate shade coffee plantations and replace them with cattle pasture and market vegetables is that coffee prices are unstable, and when these are low coffee production is less profitable than alternative land uses. Although prices are currently favourable, depressed prices at the end of the 1990s (around 25% of the current level) resulted in the elimination of large areas of coffee (see Table 13).

38. The low prices received by farmers are the result a number of factors, not all of which are related to global market prices.

- Producers depend on market intermediaries and have limited access further down the market chain to processors, wholesalers and consumers. Farmers typically receive around 50% of the end price paid for coffee by consumers (see Figure 5).
- Farmers add limited value locally to the coffee they produce, through processing and presentation, and, for reasons explained below, have limited access to niche export markets offering price premiums (for example for shade and/or organic coffee). In 2003, 99.9% of the coffee exported had not received any prior toasting in the country. Export markets are poorly developed and subject to wide annual variations in volume (see Figure 7), partly in response to price fluctuations of regular coffee on export markets, which affects the attractiveness of exporting, and partly to periodic bans placed by the Government on regular coffee exports to guarantee national supply for internal consumption. (see paragraph 120.ii).
- Individual producers and those belonging to organizations with low levels of consolidation have little "bargaining clout" and decision-making ability for negotiating favourable prices; accessing reliable and updated market information, and lobbying for the marketing, managerial, technical and financial assistance required for the production standards and quality levels typically demanded by niche markets.
- Many farmers are not eligible for participation in credit and technical assistance programmes as they do not have the formal land title which is in many cases required by the Government[7]. This situation is being actively addressed through the Government's land titling programme (see SECTION II PART I).

2) Limited valuation of biodiversity compatible goods and services

39. Farmers' economic assessments of the relative attractiveness of alternative land uses (for example primary forest, shade coffee, pasture and staple grain production) tend only to take into account a limited number of products, from which they currently receive an income. On this basis, it is difficult for BD-supportive production systems such as shade coffee, forest-based products or non-timber forests products to compete with alternatives such as cattle rearing and high yielding sun coffee, despite the fact that the total value of the products and services associated with these BD compatible systems is actually or

[7] The Government is currently carrying out an inventory of land titles. At present no reliable data exist on the numbers of producers who have formal title.

potentially higher (for example bananas, timber, water cycle regulation and landscape value). The potential implications of internalizing the benefits of these products and services are presented in Table 16 and Table 17. The income which farmers currently earn from associated products of shade coffee stands and forests is reflective of their limited managerial, organizational and marketing capacities, all of which affect their ability to effectively access available markets (which for most of these products are significant in scale), see SECTION IV PART VIII, and the credit and technical knowledge required for the processing of these products. This access is further constrained by the sub-optimal organization of many producers and the fact that resources available for technical support are not maximized by the economies of scale required to deliver a lasting impact. Although shade coffee stands and forests in the Mérida Cordillera provide important environmental services, for example in the form of the protection of hydrological processes essential for the long-term viability of a number of reservoirs (see Map 7), producers receive no compensation for these services from downstream recipients.

40. The ineffective application of environmental regulation, due to the limited capacities of municipal authorities and the local offices of Government ministries, then means that there is little to stop farmers clearing their forests to establish alternative land uses supportive of conservation objectives.

3) Increased viability of alternative land use options and products

41. Improvements in transportation and access, as a result of Government-sponsored schemes for the building and up-grading of roads, are making it increasingly feasible to produce high value, perishable crops, such as market vegetables, in formerly remote areas. This is increasing pressures for the elimination of shade coffee stands and primary forests in these areas. The production of these crops leads in some cases to severe soil degradation, through the build-up of soil-based pathogens and the accumulation of agricultural chemicals, resulting in the eventual abandonment of the areas in question and the consequent advance of these activities into new areas. These phenomena are exacerbated by limited capacities for the application of environmental regulation among local authorities, and by the fact that many of the producers involved are tenants with little interest in safeguarding the long-term productivity of the soil. The readiness of local landowners to rent out their land in this way is to a large extent a function of the decline of autochthonous production systems such as shade coffee.

4) Unsustainable cattle ranching

42. Poor management practices, such as overgrazing, in the extensive cattle ranching systems with which many farmers replace their shade coffee plantations, are progressively leading to pasture degradation. This in turn forces farmers to clear additional areas of vegetation, such as primary forests in the 2,000 – 3,000 m.a.s.l. zone, in order to maintain their herds. Farmers are constrained in their ability to modify these practices by a variety of technical, financial, and knowledge barriers such as pasture carrying capacity, their limited exposure to alternative, more sustainable technologies (such as pasture rotation, semi-enclosure and the establishment of fodder banks) and their scarce access to financing for the establishment of such systems. This in turn is also reflective of the resources currently dedicated to technical support and the incipient degree of organization of many producers. The expansion of the cattle rearing frontier into forest areas also occurs in larger properties (15-30 ha), but is limited in geographical extent in comparison to the coffee/cattle rearing zone of the Mérida Cordillera as a whole.

5) Loss of social and productive traditions

43. The increasing viability of high value perishable alternative crops, such as market vegetables, due to the improvement of road access, is leading to an influx of newcomers, typically with greater financial capacity to invest in these high input crops than local smallholders. This process, coupled with the progressive elimination of shade coffee stands by the local population themselves, is leading to a gradual

erosion of the traditional social and productive culture of the area, traditionally based on small, diverse farms including areas of shade coffee. In a self-perpetuating cycle, this weakening of the traditional base of local communities is exacerbating emigration processes, further facilitating the takeover of the area by newcomers.

Priority issues and barriers to be addressed

44. The mainstreaming of BD principles into the productive landscape of the project target area is hindered by a wide range of barriers. Some of these are specific to the geographical area where processes constituting threats to globally important BD are occurring, while others relate to the dynamics of particular productive sectors. As these processes depend strongly on *the internal functioning of farm units*, and the interrelations between sectors at the local level, the project will principally address them, and the barriers to their resolution, from an integrated, 'geographical' perspective rather than from a 'single sector' approach. Sector specific barriers will be addressed , partly by support to the effective local application of relevant broader policy frameworks, and partly through baseline activities.

The key barriers to be addressed by the project are detailed below.

1) Producers have limited capacities to apply biodiversity-friendly production systems

45. In order to stabilize and reverse the current trends towards the replacement of productive land uses providing habitat for globally important biodiversity with other less biodiversity-friendly alternatives, it is necessary to ensure that producers have the capabilities and know-how to engage in production systems, which are either compatible with, or actively favour, the conservation of biodiversity. Such biodiversity-friendly productive alternatives include shade coffee, organic agriculture and rural tourism. At present, barriers to ensuring the widespread adoption of such alternatives include: (i) incipient knowledge among farmers regarding the potential of such practices; (ii) low levels of organization and information on markets constraining effective access to production and marketing chains; (iii) limited recognition (as reflected in farmers' incomes) of the full range of benefits which BD compatible systems provide; and (iv) ineffective access to credit and technical support required for the establishment and long-term application of these BD supportive productive systems.

2) Planning tools at municipal level are not adequately guided by the information necessary to ensure that land use options and production systems are matched to considerations of biodiversity.

46. Municipal authorities are legally responsible for territorial land use planning, land tenure registry and the planning of agricultural, livestock and tourism development activities within their territories. To this end, they are obliged to establish land use registries and municipal planning offices, with the support of the Simón Bolívar Venezuelan Geographic Institute (a dependency of the MARN). However, in general, municipal authorities do not benefit from relevant technical knowledge or reliable access to up to date maps and other geographical information sources. As a result, municipal ordinances regarding land use changes, and the territorial land use plans on which they are based, are currently drawn up with little consideration of issues such as the productive potential and carrying capacity of different sites, the existence of rare or vulnerable species and ecosystems, the ecological requirements of key components of biodiversity (such as connectivity, minimum landscape patch size and the specific or structural diversity of habitats) and their potential for sustainable management and use. The development and application of plans which incorporate such considerations is hampered by inadequate access to the tools, mechanisms, and information needs, equipment and overall know-how required for the effective interpretation and application of conservation based land-use planning. The result is that BD is subject to avoidable impacts as a result of inappropriate land use changes, such as the conversion of shade coffee stands to cattle pastures; while opportunities for win-win situations, in which productive practices such as shade coffee

and rural tourism actively contribute to conservation, are missed. This situation is compounded by the limited resources available to municipal authorities to ensure that ordinances are respected.

47. The effective promotion and application of biodiversity-friendly productive practices and planning frameworks is dependent on the support and incentives received from policies, programmes and legislative instruments. In this regard, the Government currently has a substantial portfolio of such instruments which collectively promote the goal of *endogenous development* in accordance with ecological principles, including productive sector-based initiatives, territorial land use planning and the promotion of public participation in resource management and decision-making (further details provided in the Institutional, Sectoral and Policy Context section). On this basis there is a very real potential for synergy between the concepts of *endogenous development* promoted by the government and biodiversity conservation in productive landscapes. However, given the complex nature of rural economies, farming systems and livelihoods, and the diversity of the themes covered by these instruments, spanning disciplinary and sector divisions, the realization of this potential and the avoidance of unintended negative impacts presents a significant challenge to policy makers. The principal barrier to overcoming this challenge is the limited availability of adaptive management tools and corresponding skills (including accurate and useful information, monitoring instruments, technical guidance and know-how) to assist in the prediction and monitoring of the potential cumulative implications of the application of these instruments in practice.

3) Initiatives related to BD mainstreaming are dispersed and disconnected

48. In recognition of the growing trends mentioned above, there is a significant level of baseline activity addressing many of the different threats and respective causes described above (more detail provided in Baseline section). This includes: (i) the provision of support to producers in relation to their internal organization and to the production, certification and marketing of shade coffee; (ii) the promotion of family level ecotourism through the provision of organizational, financial, logistical and marketing support; and (iii) the provision of technical support to coffee producers by the Government and to the reforestation of the drainage areas of major reservoirs. There is clear potential for these initiatives to complement each other and for the resulting integrated approaches to be replicated broadly throughout the whole project area, with local adaptations according to variations in needs and conditions. Government policies, emphasizing the promotion of sustainable endogenous development in accordance with ecological principles, offer a clear conceptual framework for such a process. The principal barrier which has prevented this happening to date is the dispersed and disconnected nature of these initiatives, which, at least at municipal level, is in turn partly due to the limited access of local authorities to the information which they need in order to take informed decisions regarding the implementation and integration of such initiatives.

INSTITUTIONAL, SECTORAL AND POLICY CONTEXT

49. Government policies, based on the principles of the Constitution of the Bolivarian Republic of Venezuela (1999) provide for shared responsibility in the protection of the environment between the State and the citizenry, the promotion of local participation in natural resource management and planning, and the equitable distribution of benefits arising from the resulting goods and services. Community level actions are based on the concept of *endogenous development*, the principles of which include "the recuperation of traditions, respect of the environment and equitable forms of productive organization, allowing the conversion of natural resources into products which can be consumed, distributed and exported".

50. The **National Development Plan (2001-2007)** recognizes the fundamental importance of the environment at national and international levels, and its relation with economic, social, educational, scientific/technological, cultural and geopolitical policies, and national sovereignty. Strategic guidelines proposed in the **National Plan for Regional Development (2001-2007)** for the Western Development

Axis (of which the Mérida Cordillera forms a part) include promotion of the transformation and revitalization of agriculture; promotion of the region as a tourist destination; strengthening public and private environmental management, with increased participation; active participation of local governments in the formulation and execution of strategies to guarantee the viability of territorial land use plans; and application of the recommendations of territorial land use plans**.**

51. The Venezuelan Government is implementing a number of "missions", or programmatic initiatives, for the achievement of its social goals. Through the **Vuelvan Caras Mission**, the Government of Venezuela pursues the goal of *endogenous development*, which stresses the relationship between local communities and their territories, rooted in productive, cultural and historical traditions, and the realization of the capacity of natural resources to generate productive activities, subject to considerations of respect for the environment. The Ministries of Science and Technology (MCT) and Environment and Natural Resources (MARN) have developed a **National Programme for Bio-commerce**, as a framework for initiatives aimed at realizing the economic value of biodiversity.

52. These policy instruments are also backed up by a significant body of legislation of relevance to the project, particularly regarding land use changes which may have detrimental impacts on biodiversity. The **Organic Law for the Environment (1976)** provides for territorial land use planning; sustainable use of natural resources; the creation, protection, conservation and improvement of areas subject to special management regimes; the orientation of educational and cultural processes in support of environmental awareness; and the promotion of public and private initiatives to stimulate citizen participation in environmental problems. The **Organic Law for Territorial Land Use Planning (1983)** provides for the preparation, approval, management, execution and monitoring of land use plans and the adoption of the corresponding regulations. The **Organic Tourism Law (2001)** requires States and municipal authorities to develop strategies for tourism development, in accordance with principles of environmental protection and sustainable economic growth, in social and environmental terms. Other specific laws which support biodiversity conservation include the **Forestry, Soils and Water Law (1966)**, the **Wildlife Protection Law (1970)**, the **Penal Environmental Law (1992)**, and the **Biological Diversity Law (2000)**, which emphasizes the promotion of compatibility between economic activities and environmental protection, of civil society participation in conservation and sustainable use, of the recognition and preservation of local knowledge of biodiversity and its uses, and just and equitable participation in the benefits derived from its use. The **Law for State Level Councils for Planning and Coordination of Public Policies (2002)** and the **Law for Local Councils for Public Planning (2002)** provide for the establishment of mechanisms for the implementation of Government policies emphasizing decentralization of policy formulation and planning, and the participation of local communities. These legislative instruments are currently undergoing a process of review in order to ensure that they conform to the new model of development proposed in the 1999 Constitution of the Bolivarian Republic of Venezuela. Rather than focusing separately on productivity or environmental protection alone, this emphasizes social development based on principles of equity, sustainability, productivity and local empowerment.

STAKEHOLDER ANALYSIS

53. The most important project stakeholders are as follows (these are described in more detail in SECTION IV PART IV and Table 4, together with mechanisms defined during the PDFB preparatory phase for promoting and ensuring their active participation in project implementation.

Central Government Institutions

54. The key institution of the central Government in the implementation of the project will be the *Ministry of Popular Economy* (**MINEP**) and in particular its dependency the *Foundation for Training and Innovation for Rural Development* (Fundacion de Capacitacion e Innovacion para el Desarrollo Rural/**CIARA**), which is attached to the *National Institute for Rural Development* (INDER). The CIARA Foundation will be the Execution Agency for the project. CIARA is responsible for the implementation of

the *National Coffee Plan*, which will be the key co-financing initiative with which the project will work in promoting BD-friendly productive practices.

55. *The Ministry of Agriculture and Lands* (**MAT**), through its dependency the *National Institute for Lands* (**INTI**) also has a critical role to play in ensuring that producers and their lands are registered, enabling them to participate fully in Government support programmes, including credit and technical assistance programmes.

56. *The Ministry of Environment and Natural Resources (***MARN**) is the technical focal point for GEF. MARN is also, through its dependency INPARQUES, responsible for the planning and management of protected areas (there is a significant degree of overlap between the protected and productive landscape in the Mérida Cordillera). A number of other semi-autonomous dependencies of MARN, including the *Yacambú-Quíbor Hydraulic System* and *Hidrolara*, are equally relevant as these are undertaking reforestation and watershed management activities within the project area..

Public/Private Institutions

57. The **National Coffee Board** is integrated by trade associations in the coffee sector and public authorities. It is a recently formed entity; however, given the importance of its role in determining sector structure and market and price conditions at national level, which may affect the potential of shade coffee production targeted by this project, its involvement, participation and systematic consultation during the project's implementation phase will be of utmost importance.

State and Municipal Governments

58. The roles of **State and Municipal governments** in planning and regulating land use are equally of strategic importance for the project in helping to ensure that land use changes are made in accordance with sound ecological and productive principles. They also have an important role in determining how the programmes of central Government are implemented at local level, through the **Local Councils for Public Planning**, **Inter-institutional Municipal Councils** and **State Councils for Planning and Coordination of Public Policy**.

Non-Governmental Organizations

59. A number of non-governmental organizations have made significant advances in supporting pilot activities in relation to BD-friendly productive systems and planning practices. Examples are the *Tropical Andes Programme* (**PAT**) which works in the promotion of rural family-based tourism, and the *Commission for Sustainable Development* (**CODESU**) which supports cooperative-based production of shade coffee for certified export markets, and the processing of associated products such as paper and dried bananas. These organizations have much potential to contribute to the project and have been actively involved in the PDF-B design phase.

Producer Organizations

60. Particularly in the coffee sector, producer organizations exhibit a wide range of capacity levels. The existence of consolidated organizational capacities is of key importance if producers are to be able to negotiate and satisfy markets for their products. Organization is also a key requirement for producers to be able to gain full benefit from Government support programmes. An association of family-based rural tourism operators has also recently been formed and provides an important opportunity for the interchange of lessons learnt.

Local Stakeholders

61. The key group of stakeholders to be targeted by the project at local level are **smallholder coffee producers** (see description of social and productive characteristics in paragraphs 6 to 10, Table 5, Table 6 and SECTION IV PART VI). The Government similarly targets small and medium scale producers through its *National Coffee Plan.*

62. **Semi-commercial** and **commercial producers** (in the coffee and ranching sectors) typically have greater access to technical and financial resources than smallholders, and are therefore in less need of

external support. However they have significant impacts on the productive landscape, given the levels of resources and the size of the landholding which they typically control; in the *La Azulita* area, for example, such producers have bought out smallholder producers in order to replace their diverse farming systems with large dairy production holdings. The project will address this stakeholder group indirectly, by strengthening the productive systems of the smallholder producers and thereby reducing their motivation to sell to larger operators; and by strengthening capacities at municipal level to regulate the operations of this sector on the basis of sound information and planning tools.

63. Commercial **traders and industrial concerns** currently dominate the marketing and processing chains for coffee, with the result that smallholder producers typically receive only a small proportion of the end sale price. Strengthening of the capacities of smallholder producers will enable some of them to by-pass these actors, or negotiate with them more effectively thereby ensuring more direct and equitable markets access and concomitant benefits. While recognizing that established commercial traders will continue to play a predominant role in the market, it is however envisaged that they will, as a result of project activities, come to handle an increasing proportion of high quality organic coffee (currently such coffees make up only a minimal proportion of the commerce at national level).

64. **Downstream water users** (including commercial agricultural producers, urban water consumers and State-run water enterprises) have an important role to play as participants in the schemes for the compensation of environmental services that will be supported by the project. Currently there is little provision for these consumers to compensate producers in the upper watershed areas for the actions which they take to protect hydrological services. It is envisaged that channels will be established through which these consumers will enter into communication with stakeholders in the upper watersheds to determine mechanisms for such compensation.

BASELINE ANALYSIS

Baseline initiatives

Baseline programming supportive of the delivery of project Outcomes is detailed below:

Outcome 1: Producers in pilot area have the necessary capacities to carry out BD-friendly productive systems

65. There are very significant **baseline activities** in the areas of *endogenous development* and biodiversity conservation in the Mérida Mountain Range. The most significant are the *Missions* or programmatic initiatives of the Venezuelan Government, particularly the Vuelvan Caras Mission, which includes a series of thematic "battle fronts" in the areas of agriculture, tourism, industry, infrastructure and services. Through this Mission which the Government pursues the goal of *endogenous development*, which stresses the relationship between local communities and their territories, rooted in productive, cultural and historical traditions, and the realization of the capacity of natural resources to generate productive activities, subject to considerations of respect for the environment. These initiatives will result in the creation of social, productive and environmental conditions which are fundamental pre-requisites for achieving sustainable biodiversity conservation in harmony with local needs.

66. In particular, the *CIARA Foundation* (the operational arm of the *Ministry of Popular Economy*) provides credit and technical support to farmers, including, through the *2004-2007 National Coffee Plan*, (Plan Cafè) to small and medium scale coffee producers. The goals of Plan Cafè include the maintenance of 135.000 ha of coffee, the renovation of 15.000 ha and the establishment of 50.000 ha (of which (5.000 ha will be organic) over 3 years in 100 municipalities spread over 15 states, and an increase in productivity from 6.5 qq/ha. a 17.5 qq/ha. over four years, through improvements in productive practices and the genetic quality of planting stock.

67. The *National Coffee Plan* represents significant Government baseline support to principles of conservation. Its objectives specifically include reference to the importance of shade coffee for the protection of hydrological catchment areas, and specific provision is made for support to organic coffee.

68. Through its *Programme for the Development of Rural Communities* (PRODECOP), CIARA also promotes and organizes cooperatives in poor rural municipalities, raising income levels and living standards through the promotion of direct participation in the management of local and community development, the formulation and execution of community projects and the provision of local savings and credit services. PRODECOP is jointly financed by the National Government, the International Fund for Agricultural Development (IFAD) and the Andean Foment Corporation (CAF).

69. The *Ministry of Agriculture and Lands* (MAT), through its *Fund for the Development of Agricultural, Livestock, Fishery, Forestry* and other Sectors (FONDAFA), is also promoting and financing projects aimed at developing production and productivity in agriculture, livestock, fisheries and other sectors, and channels resources for the finance of social programmes. The *Ministry of Environment and Natural Resources* (MARN) also supports producers through its *Programme for Conservationist Social Infrastructure*, which promotes the substitution of natural resource management activities by others which are favourable for social and conservation aims. At local level, the *Municipal Agricultural and Livestock Directorates* also provide technical support for agricultural and livestock activities. The non-government organization *CODESU*, meanwhile, is providing support to cooperative members in *Andres Bello* municipality in organization and the production, processing and export of organic coffee and associated products from shade coffee stands.

70. A number of institutions and organizations are providing support in the area of tourism. These include MARN, through the *National Institute of Parks* (INPARQUES); the *Ministry of Production and Commerce,* through the *National Tourism Institute* (INATUR), which promotes tourism destinations and trains tourism operators and, through the Mixed Tourism Fund, provides financial support to small and medium scale tourism operators; State level Tourism Corporations, which support tourism promotion campaigns; and the non-governmental organizations *Conservation International* and the *Tropical Andes Programme (PAT),* which provide technical and financial support to community-level tourism.

71. MARN (through the *Yacambú Quibor* Hydraulic System and *Hidrolara*), the Uribante Caparo Anonymous Development Company, and the Ministry of Planning and Development through its regional Andes Development Corporation (CORPOANDES) and Southwest Development Corporation (CORPOSUROESTE) are all carrying out reforestation activities in various parts of the project area, including the establishment and renovation of shade coffee stands.

72. These diverse initiatives provide a solid baseline for the project to build upon, allowing it to concentrate its incremental support on assisting these baseline programmes to incorporate global biodiversity concerns in ways that contribute to local needs, and on ensuring that these initiatives receive the full benefit of lessons learnt to date and in the future in pilot experiences throughout the area.

Outcome 2: Enabling policy, planning, and regulatory frameworks support BD-friendly productive systems in pilot municipalities

73. The *Yacambú Quibor* Hydraulic System and INPARQUES, both dependencies of MARN, are carrying out environmental education activities in the area. INPARQUES, within the context of the National System for Environmental Vigilance and Control, also is responsible for protection and regulation in protected areas. INPARQUES, together with local universities and PAT, is formulating a proposal for a Páramo Biosphere Reserve, which would cover a significant area of the Merida Mountain Range, both within and outside the *páramos* themselves.

74. The *Ministry of Agriculture and Lands*, through the *National Institute of Lands* (INTI) is investing in the titling and agrarian registry of the lands of farmers in the zone. This contributes to the resolution of a significant barrier to the access by farmers to technical and financial support, namely the need for their

productive units to be formally registered. Municipal authorities carry out planning of municipal development activities and also maintain fiscal registries. Regional Councils for the Planning and Coordination of Public Policy also contribute to planning by guaranteeing that State level development plans are articulated with regional plans, while State Councils for Planning and Coordination of Public Policy act as consultative, advisory, coordinating and technical support body in relation the public administration of the states that make up the area.

75. Under the baseline scenario, therefore, adequate structures exist for planning and decision-making in relation the land uses, with local participation. There is also a substantial body of relevant legislation (see paragraph 52) which may be applied to land use changes with potentially negative impacts on biodiversity, for example the destruction of natural forests or their conversion to coffee production. The *Ministry of Environment and Natural Resources* and *municipal authorities* are responsible for applying this legislation. What is lacking in many cases is the technical know-how on the part of those participating in planning and decision making, access to the type and quality of information necessary to allow them to take sound decisions, and guidance on how most constructively to apply the existing legislation. In addition, municipal authorities typically lack the human, financial and physical resources required for the effective application of legislation.

Outcome 3: Pilot municipalities operate as platforms for the interchange, dissemination and replication of experiences on best practices and lessons learnt

76. This outcome relates to the replication of the activities undertaken under outcomes 1 and 2 in pilot municipalities. The range of baseline initiatives is the same in the pilot municipalities as in the target municipalities for replication. These are complemented by the research and information management activities carried out by the various universities present in the area, including the *University of the Andes* (Universidad de los Andes/ULA), *Ezequiel Zamora National Experimental University* (Universidad Nacional Experimental Ezequiel Zamora/UNELLEZ), *La Salle University Institute* (Instituto Universitario La Salle). The PDF-B phase of the project has also resulted in a significant development which will contribute to processes of information exchange and learning among institutional and local stakeholders, namely the initial conformation of the *Terrandina Network* which includes a wide range of public and private actors that have been involved in project formulation of which otherwise have interests in the themes covered by the project.

77. Under the **baseline scenario**, the degree to which biodiversity conservation goals are mainstreamed into productive systems will continue to be limited. Despite the significant investment by the Government in promoting sustainable coffee production, for many farmers shade coffee and other BD-friendly productive systems will continue to have limited financial attractiveness compared to available alternatives such as dairy farming, due to the dispersed and disconnected nature of pilot initiatives to date aimed at accessing niche markets and obtaining benefits from other goods and services provided by such systems (such as timber, non-timber forest products and environmental services). Due to the inadequacy of the tools and information available to land use planners and managers, the land use systems applied will not necessarily correspond with the use potential of the land or with considerations of biodiversity and environmental vulnerability. In consequence, there will be a continued loss of the biodiversity value of the landscape, and local farmers will fail to realize the full potential of the natural resources which they manage to contribute in a sustainable manner to their livelihoods. In addition, key water catchment areas are likely to suffer continued degradation, resulting in the loss of hydrological services currently provided to downstream users.

PART II Strategy

PROJECT RATIONALE

78. The elimination of primary forest and shade coffee stands, in the 500 – 3,000 m.a.s.l. altitude band of the *Mérida Cordillera* in the Venezuelan Andes, is leading to the loss of significant areas of habitat for globally important biodiversity. The resulting landscape is thereby moving from a prior mosaic of biodiversity compatible land uses to one in which productive practices replacing original land uses are proving unsustainable, and the abandonment of traditional farming systems are undermining the social and productive traditions which until now have prevailed in the *Mérida Cordillera*. These processes have important implications for other GEF focal areas as follows: the clearance of forests and shade coffee stands is leading to the loss of carbon stocks and hydrological services, while the application of inappropriate agricultural practices in their place is leading to land degradation.

79. The Government of Venezuela, through its National and Regional Development Plans and the Vuelvan Caras Mission, places strong emphasis on the support of endogenous production and resource management systems, integrating social, productive and environmental goals. This project will form part of these national initiatives, taking advantage of the great potential which exists for compatibility between biodiversity conservation in the productive landscape and the promotion of enhanced and sustainable livelihoods for rural families (the main characteristics of the *Mérida Cordillera* landscape which give it its high conservation value and potential - namely its small scale heterogeneity and its high content of woody perennials - are also the characteristics traditionally sought by farmers as a means of obtaining multiple goods and services from farm plots and thereby minimizing risk through productive diversity).

80. The project will build upon a significant baseline of activity on the part of public, private and community-based actors, at a range of levels, including the promotion of alternative productive activities, the provision of support to producer organizations, and territorial land use planning. Of particular relevance to the project is the *National Coffee Plan* within the Vuelvan Caras Mission, whose objectives are: (i) the recuperation of coffee production as a proposal for *endogenous development*; (ii) increase in the well-being and conditions of life of local producers and their families, through their participation in and co-management of the Government Missions; and (iii) protection of the environment and hydrological catchment areas.

81. Despite the scale and relevance of these baseline activities, the widespread mainstreaming of biodiversity conservation goals into this productive system currently faces a number of barriers, the most significant of which relate to: (i) the unattractiveness of BD-friendly production systems compared to available alternatives; (ii) the inadequacy of the tools available to land use planners and managers for realizing the potential for integrating biodiversity issues and local development needs in planning instruments; (iii) the capacities, resources and tools needed to support the development and application of supportive policies, programmes, plans and regulations; and (iv) the dispersed and disconnected nature of initiatives related to BD mainstreaming.

82. GEF incremental support will focus on supporting and coordinating pilot initiatives of BD-friendly production, organization and planning, in seven key municipalities, leading to their eventual replication throughout the project's target replication area. This support will result in: i) maintenance of the current habitat value of the landscape mosaic (halting the current trends of loss of BD-friendly components such as shade coffee and forests), by ensuring that productive options such as shade coffee remain competitive in relation to alternatives and by supporting new options (such as rural tourism) which increase local people's valuation of BD-friendly landscape units; ii) increased livelihood and food security, and demographic stability, among the local population, thereby again helping to ensure landscape stability; iii) processes of demonstration and replication of models for BD-friendly production and planning, which will be self-sustaining after the project ends and iv) the consolidation of a network of public, civil society and community-based institutions and productive organizations in the area, enabling their respective

initiatives to be coherent, coordinated and complementary. This will result in a critical mass of farmers having access to an increased range of productive practices and systems which are favourable for biodiversity, and increased opportunities to integrate different productive options effectively.

83. It is intended that the project will constitute the first step in a three-phased intervention covering different parts of the Venezuelan Andes. Subsequent phases will be proposed separately as stand-alone projects. The main rationale for this is that the magnitude of the Venezuelan Andes, and the logistical difficulties posed by its different constituent areas, would make it impractical to include them all in one project. The phased approach also permits the progressive learning of lessons and their incorporation into the design of successive projects.

POLICY CONFORMITY

84. The project is in conformity with Strategic Priority 2 of the GEF's Biodiversity Focal Area (BD2), as it focuses on the mainstreaming of biodiversity conservation into productive systems, in this case the smallholder farming systems in the Mérida Cordillera. The areas of direct and indirect influence of the project include parts of a number of protected areas (Map 6), however this does not detract from the project's BD2 focus as large proportions of the protected areas in question are occupied by shade coffee. The project is also in conformity with the objectives of Operational Programme 4 (Mountain Ecosystems) as it will seek sustainable use management through the wise use of the mountain ecosystems of the Mérida Cordillera, complementing the protected areas which already exist there. With regards to CBD/COP guidance, the project is consistent with Decision VII/12 which stresses "that the ecosystem approach is the primary framework for action in the Convention on Biological Diversity and that there is a need to consider the inter-linkages between the Addis Ababa Principles and Guidelines for the Sustainable Use of Biological Diversity and the ecosystem approach in the conservation and sustainable management of biodiversity." In the same light, the project is supportive of decision VII/12 of the CBD/COP (Article 10 on sustainable use) which calls for "integrating and mainstreaming the Addis Ababa Principles and Guidelines into a range of measures including policies, programmes, national legislation and other regulations, sectoral and cross-sectoral plans and programmes addressing consumptive and non consumptive use of components of biological diversity, including plans and programmes addressing the removal or mitigation of perverse incentives that undermine the conservation and sustainable use of biodiversity".

PROJECT GOAL, OBJECTIVE, OUTCOMES AND OUTPUTS/ACTIVITIES

Objectives

85. The **goal** of the project is '*To maintain the value for biodiversity of the mosaic of land uses in the productive landscape of the Mérida Cordillera*". In this respect the project will contribute to the goal of the *endogenous development*, sought by the Government through its current programmes and plans (see paragraphs 49 to 52).

86. The **objective** of the project is '*Farmers' systems in the coffee/cattle-rearing zone of the Mérida Cordillera remain BD friendly'.* To this end the project will seek to harmonize biodiversity conservation and productive sector activity by ensuring that proposed measures actually enhance and diversify livelihood improvements and secure overall project sustainability. In some cases, project activities will involve supporting the perpetuation of traditional patterns of resource use and production, where these offer both livelihood and conservation benefits; while in others, alternatives to currently unsustainable activities will be tested and promoted.

87. The project will specifically target smallholder shade coffee farms. In addition to the shade coffee itself, these productive units typically also include a range of other productive systems and enterprises aimed at meeting rural families' needs for subsistence, income generation and risk minimization. In this area it will complement the initiatives of the *National Coffee Plan* which targets small and medium scale

coffee producers. The focus of the project in this sector (reflected by the emphasis of the *National Coffee Plan* itself) will be on supporting the maintenance and restoration of existing shade coffee stands, thereby contributing to the stability of the current landscape mosaic.

88. The project will take active measures to avoid shade coffee being established at the expense of natural forest (see paragraph 222).

Outcomes, outputs and activities

89. Each of the project outcomes described below relates to the removal of a specific barrier (identified in the *Priority Issues and Barriers to be Addressed* subsection) to the mainstreaming of BD principles into productive systems in the coffee/cattle rearing zone of the Mérida Cordillera.

Outcome 1. Producers in pilot areas have the necessary capacities to carry out BD-friendly productive systems

GEF contribution: $2,889,800, **Co-Financing:** $12,864,400

90. The project will support pilot activities in a selected 480,190 ha pilot area within the coffee/cattle rearing zone in seven pilot municipalities out of the total of 37 in the Mérida Cordillera as a whole (see Map 9). The criteria for the selection of this zone, and the municipalities within which it is located, are presented in SECTION IV PART IX (see also Map 8). These pilot activities will demonstrate that productive practices which are relatively favourable for biodiversity can be viable and competitive, in economic, social and cultural terms, with alternative land uses and livelihood support activities, even when national and international market conditions are depressed. This will address the problem that farmers currently have limited capacities to carry out such practices (see paragraph 45), and will result in concrete benefits for farmers' livelihoods, in terms of increased, stabilized and diversified incomes. This pilot area constitutes 31% of the total area of coffee/cattle rearing zone in the Mérida Cordillera (1,975,000 ha). In the case that such activities should involve the direct use and commercialization of biodiversity, they will be closely coordinated with the National Biocommerce Strategy elaborated by the Ministry of Science and Technology and MARN.

91. Productive practices which are relatively favourable for biodiversity have the potential to provide viable and attractive alternatives for farmers (see SECTION IV PART VIII), providing them with significant economic and livelihood benefits. PDF-B findings, coupled with experiences to date on the part of institutions, organizations and cooperatives active in the area, have demonstrated that certain key conditions are crucial in order for these benefits to be accrued. The outputs of the project reflect these needs.

92. ***Output 1.1:*** *Producers' organizations are consolidated and fully functional.* Adequate organizational capacity is critical in determining producers' access to niche markets, for example for organic coffee and bananas from shade coffee plantations, so that producers can negotiate marketing arrangements and prices to their benefit, manage their resources effectively and ensure the continuity and consistency of product supply and quality control typically required by premium markets. To this end, project activities will result in the existence of consolidated producer organizations, whose members will have as a result have access to premium prices for the products of their BD-friendly activities, through their enhanced participation and decision-making ability in productive and market chains. Examples of project activities required to achieve this will include the provision of organizational training and advice; the exploration of alternative opportunities for commercialization (such as niche export markets and the Government's Mercal Network); support of the establishment of procedures and technical tools for quality control of goods and services; and support to the establishment of producer fairs emphasizing cultural aspects of shade coffee production. This output will be closely linked and complemented with the Capacity Building Programme detailed below. The organizational support to be provided through the project will also contribute to overcoming the problem of limited access to land titles. The potential impact of such support

has been demonstrated in the case of the Quebrada Azul cooperative, where organizational support from the NGO CODESU has resulted in cooperative members obtaining "producer registration" and "agrarian registration" with INTI, including topographical plans, farm evaluations and inscription in municipal land registry. This has greatly facilitated producers' access to, for example, credit and inspections for organic certification. In addition, as an intrinsic aspect of organizational development, support will also focus on the development of capacities for monitoring by the organizations themselves of changes in their conditions, as a result of support received from the project and other sources and their own efforts.

93. ***Output 1.2:*** *A Capacity Building Programme is developed and delivered for the application of BD-friendly productive practices, certification standards, marketing "know-how" for BD based businesses and environmental service payment schemes.* This programme will assist farmers to acquire, apply and maintain the knowledge needed to maximize the benefits obtainable from the application of biodiversity compatible productive systems, to access schemes for the compensation of the provision of environmental services and to realize of the full value of ecosystem goods and services. This programme will include activities such as the direct funding of the provision of technical support, the provision of guidance for co-financed support (training of trainers); and support of alternative mechanisms for knowledge generation including farmer to farmer exchanges and participatory research. These programmes will include provisions for helping farmers to maximize tree species diversity in shade coffee stands, through the provision of technical support and advice. Following the model of the *Andres Bello* Municipality, the project will also support the development (for example by municipal-level inter-institutional panels) of locally-specific criteria for the implementation of the *National Coffee Plan*, such as the avoidance of impacts on natural forests. Pilot project activities in support of the implementation of schemes for the compensation of environmental service payments will focus on three hydrological catchments which overlap with the pilot area of the coffee/cattle rearing zone and which were identified during the PDF-B phase as having particular potential for implementation success as they drain into major reservoirs, domestic water supply or irrigation systems. These catchments are Dos Cerritos, Boconó Tucupido and Yacambú Quíbor (see Map 7). It is envisaged that compensation for the provision of environmental services will be made by the downstream consumers of water, including commercial agricultural producers, urban water consumers and State-run water enterprises.

94. ***Output 1.3:*** *An awareness raising programme on the contribution of BD to livelihood improvement is developed and delivered in pilot municipalities.* Community members (farmers and others) will be assisted in acquiring increased awareness of the biodiversity present in the productive landscape, its global importance and its actual and potential role in contributing to their livelihoods and wellbeing. This will be achieved by facilitating participatory appraisal and planning workshops related to BD and BD-friendly practices; workshops on BD in preschool, primary and secondary schools; production of posters and other educational materials; consolidation and expansion of the project website as a source of specialized information on BD in the project area; support to local environmental groups; and support to the establishment of systems for the participatory definition, measurement and interpretation of environmental indicators.

95. ***Output 1.4:*** *An information management system is developed and operational to strengthen links between producers in pilot municipalities and consumers.* This system will allow the collection and management of geo-referenced information on demand, production, supply, commercialization routes, markets and prices of key BD-friendly products such as coffee. The potential for Geographic Information Systems (GIS) to facilitate direct connection between producers and purchasers, thereby increasing market opportunities and maximising the proportion of the final sale price that is passed back to the producer (see barrier statement in paragraph 45), has been shown in other coffee-producing countries such as the Dominican Republic, Guatemala, Costa Rica and Peru, for example through the GeoCafe internet-based Interactive Mapping System. The application of interactive internet-based information systems to rural tourism has also been demonstrated by PAT's Rural Tourism Programme in the Mérida

Cordillera. Producers will typically have access to these systems either in the offices of their cooperative organizations, or in local municipal offices.

Outcome 2. Enabling policy, planning, and regulatory frameworks support BD-friendly productive systems in pilot municipalities

GEF contribution: $2,592,500 **Co-Financing:** $2,168,044

96. The project will help ensure that a conducive environment for policies and plans exists for promoting the incorporation of BD considerations into productive systems and, at the same time, that this is duly supported by appropriately and consistently applied legislation. The project will ensure that the planning frameworks - within which regulations are formulated and applied, and investments in social infrastructural and productive initiatives are made - effectively incorporate conservation objectives (such as the recognition of rare or vulnerable species and habitats and the promotion of connectivity) thereby minimizing the risk of negative impacts and maximizing existing opportunities for sustainable use (see barrier statement in paragraph 46). The financial sustainability of these resources will be ensured through support to the development of alternative finance mechanisms (Output 2.4). Pilot activities in relation to policy, planning and regulatory frameworks will be carried out in the same 7 pilot municipalities (see Map 9) which contain the pilot area covered under Outcome 1.

97. ***Output 2.1:*** *Mechanisms are established for participatory decision-making in land use planning, zoning and management in accordance with BD conservation principles.* These mechanisms will ensure that local planning frameworks (including land use management plans and local development plans) are feasible, relevant to local needs and conditions, and include issues which transcend municipal boundaries. They will have broad representation of different interest groups from the public sector, civil society organizations and local communities. Activities will include the installation of web-based tools to allow information related to territorial planning, zoning and management to be consulted by community members, organized groups and local institutions; the incorporation of geographical information management tools in inter-institutional forums and local planning committees at municipal level; and the creation and training of geographical information units within producer organizations of the pilot municipalities, which will enable producers to record geographical information with Global Positioning Systems (GPS).

98. ***Output 2.2:*** *A capacity building programme is developed for Municipal Offices, to support planning and management of the productive landscape in accordance with BD conservation and sustainable use principles*. The resulting capacities will include reliable geo-referenced information (for example on tenure, topography, current and potential land use, protected areas, demography, social conditions, tourism potential, coffee production and coffee markets), equipment and trained personnel. This will be achieved through the direct provision of information and equipment (options for ensuring their financial sustainability will be explored under Output 2.4), the design and establishment of an interconnected GIS between municipalities and dependencies of central Government (MARN, MAT and CIARA), and the funding of training activities for staff of pilot municipalities and key ministries.

99. ***Output 2.3:*** *Technical guidelines are developed and orientate the incorporation of BD principles into planning tools and land management systems.* These will include guidelines on the application of monitoring tools to determine the effectiveness of planning measures for conservation goals, and on when and how to apply existing legislative instruments to land use changes with potential negative implications for biodiversity. The proposed guidelines will incorporate considerations pertaining to ecological vulnerability, connectivity, and the required conditions and opportunities for the sustainable use and conservation of biodiversity in the productive landscape.

100. ***Output 2.4:*** *Economic incentives are developed and financial mechanisms established allowing producers in pilot municipalities to apply BD-friendly productive practices*. Incentive mechanisms will include compensation to farmers for the environmental services provided by their BD-favourable

practices (for example regulation of hydrological cycles), thereby increasing their attractiveness relative to other land uses. 47% (9,215km^2) of the CCRZ drains into major reservoirs or other hydraulic systems providing water for irrigation and domestic consumption Map 7). It is envisaged that compensation for the provision of environmental services will be made by downstream consumers of water, including large scale commercial agricultural producers, water consumers and State-run water enterprises. This additional income will serve further to buffer the economic viability of shade coffee production against price fluctuations, reducing the minimum price level of coffee required for shade coffee to be competitive with cattle rearing by 5% in the case of national markets (Figure 9) and 3% for certified export markets (Figure 10). The mechanisms for such compensation will be defined during the implementation of the project, and will be harmonized with other Government initiatives related to this theme. Notwithstanding, options discussed during the project preparation stage include the realization of direct payments to producers, the finance of micro-enterprises in which the producers participate, and/or financial contribution to municipal offices through the establishment of environmental service compensation funds. The support to be provided will include the facilitation of negotiations between environmental service producers and consumers; organizational and administrative support for the establishment and management of such schemes; and the establishment of systems for the monitoring of the environmental services.

101. In addition, producers will enjoy increased access to credit for BD-friendly practices, as the result of a multi-pronged approach to be applied by the project.

102. *Firstly*, the project will provide guidance to existing sources of finance (principally public) on the financial viability of BD-friendly practices. Existing sources of finance include public institutions and large scale programmes such as those financed by MINEP/CIARA (which supports rural savings associations), Plan Café (which provides credit for coffee development) and FONDAFA (which funds agriculture and forestry activities in general); non-Governmental sources include organizations such as the Tropical Andes Programme, PAT (which has significant experience in providing credit and technical support for community-based rural tourism),

103. *Secondly*, the project will provide seed capital totaling $1,380,000 in support of demonstrative BD-friendly productive activities. These funds will allow producers to receive *more immediate* support for BD-friendly activities than that which may be forthcoming through the provision of guidance to existing sources of finance, described above. The result of this will be that the proposed local pilots will be able, relatively rapidly, to generate practical lessons on BD-friendly practices, whilst at the same time serving as a pilot/demonstrations showing other financial institutions (such as those described above) that BD-friendly practices are worth supporting. These funds will be used to support investments such as product certification, livestock intensification, improvement of dwellings for rural tourism and handicraft production; individual credits will be variable in size, but mostly below around $5,000, in reflection of the typical magnitude of producers' needs and the desirability of avoiding producers from assuming excessive debt.

104. The operational modality for the transfer of resources from the project to the producers will mirror that applied by existing large-scale Government institutions and programmes such as MINEP/CIARA and Plancafé, and NGOs such as PAT. Under the proposed tried and tested model, resources for demonstrations of BD-friendly production practices will be transferred to community-level micro-enterprises, which, under the provisions of agreements entered into with the project will repay the initial transfer and interest to rural Savings and Loan Associations in their communities (in this case, cooperatives' Savings and Loan Associations). Agreements will be specifically designed to finance BD-friendly ventures fully in line with project objectives.

105. These savings and loan associations will then manage the recovered funds on a rotating basis to provide further credits to their members for BD-friendly productive activities only. The initial transfer of funds from the project to producer organizations will be subject to approval by a Technical and Financial Committee, made up of MINEP/CIARA, the project's implementation unit and representatives of

cooperatives, which will base its decisions on technical, financial and administrative considerations; a key criterion for the transfer of funds is that they will be used in support of BD-friendly productive businesses. Under this model, the managerial capacities of Rural Savings and Loan Organizations in overseeing and technically assessing BD-based ventures will be progressively enhanced.

106. This model, under which resources are transferred in relatively small individual amounts to a number of producer organizations, rather than through large one-off transfers to savings and loan associations, has already been tried and tested and has the advantage of avoiding overburdening the nascent administrative capacities of the savings and loans associations. These associations will instead receive a limited, steady flow of income through loan and interest repayments from their members, in accordance with the progressive development, with support from the project, of their long term capacities to manage capitalized funds, and to make decisions autonomously on credit applications by producers. In this regard it is important to note that all resources repaid by producers organizations, including their corresponding interest will only be on-lent to BD-friendly businesses. In addition provisions will be made that in the unlikely scenario that no demand for BD-supportive businesses or practices occurs, any remaining capital will be transferred back to MINEP/CIARA for the delivery of technical assistance in line with project conservation objectives.

107. This model is in full conformity with the provisions of the Venezuelan Micro-Finance Law, which defines factors such as maximum credit rates, payback periods and mechanisms for conflict; this law sets the interest rate for micro-finance at 12%, which is far lower than the rate available in commercial banks. The model has been fully field-proven: beneficiaries of credit funds established by PAT for rural tourism typically repay their credits within 2-3 years with an average default rate of between 5 and 7.5% of the total amount transferred (this rate varies inversely in relation to the level of technical support provided).

108. *Thirdly,* In recognition of the fact that most poor producers do not have land titles, MINEP/CIARA does not demand guarantees based on financial or physical resources, but rather solidarity guarantees, under which beneficiaries ask other communities to vouch for them and take responsibility for payment in case of default. Models for solidarity guarantees typically vary widely between communities depending on local social and cultural conditions. In this regard the project will provide support in the form of community-specific studies and recommendations in order to assist producers to provide such guarantees and thereby gain access to credit funds. In association with this issue, the project will provide legal and technical support to ensure that producers have the land titles or producer registrations necessary to gain access to some forms of credit such as that provided by MINEP/CIARA.

Outcome 3. Pilot municipalities operate as platforms for the interchange, dissemination and replication of experiences on best practices and lessons learnt.

GEF contribution: $270,000, **Co-Financing:** $14,512,617

109. Project activities undertaken in the pilot area of the CCRZ under Outcome 1 will lead to these functioning as demonstrations of productive, organizational and administrative models capable of replication in the remainder of the CCRZ of the Mérida Cordillera (Map 7), with modification by local actors as appropriate to take into account variations in local needs and conditions. Project activities undertaken in 7 municipalities under Outcome 2, in the area of policy, planning, and regulatory frameworks, will initially be replicated in 13 other municipalities throughout the Mérida Cordillera (Map 9).

110. ***Output 3.1:*** *Experiences and methodologies documented on mainstreaming BD principles into productive systems.* Forms of documentation will include printed materials, videos, a web page, a radio programme and local seminars.

111. ***Output 3.2:*** *A Knowledge Dissemination Strategy is developed and tailored to different groups.* This will ensure that the experiences gained in the pilot areas will be disseminated effectively to different target audiences (including producers, local authorities, Government ministries and civil society

organizations), taking into account the characteristics and information needs of each audience. In the multi-stakeholder participatory design workshops (see SECTION IV PART IV) carried out during the project preparation phase, it was for example suggested that associations of municipalities (for example based around the "Coffee Axis" of the Sierra de Portuguesa) could be supported in order to facilitate integration and dissemination of methods, techniques and lessons learnt.

112. ***Output 3.3:*** *A consolidated network of public, civil society and community-level entities, coordinating and harmonizing the development and replication of pilot level experiences in the long term.* This will ensure the sustainability of the pilot municipalities as a source of models and innovation. This network, which has been established during the PDF-B project preparation phase and provisionally termed "*Terrandina"* by its participants, will provide the focus for the strategic and operational planning of pilot activities in the long term, taking into account Government policies and the different objectives and resources of its respective members.

Outcome 4. Adaptive management principles supported by monitoring and evaluation tools guide project implementation and management functions

GEF: $1,599,600 **Co-Financing:** N/A

113. ***Output 4.1:*** *A monitoring and evaluation strategy and financing plan developed and applied facilitating effective adaptive project management.* This will generate the information needed in order to facilitate effective adaptive project management, which will respond to lessons learnt in the course of implementation and to changing external circumstances. Monitoring will also be carried out of the co-financing to be provided by the Government of Venezuela. It will make provision for the participation of local stakeholders in the measurement of indicators, as appropriate, and the interpretation of the results.

114. ***Output 4.2:*** *Methodologies developed and applied for documentation of lessons learnt, enabling effective feedback into GEF programming.* Corresponding project activities will support the development of practical methodologies for capturing, recording and codifying best practice experiences, tailoring these to the variety of actors which will participate and contribute to their development. In the same vein, mechanisms for wide-spread dissemination of experiences into GEF programming will be defined at regional, national and global levels.

115. ***Output 4.3****: Project management.* A project management structure will be established which will combine provisions for thematic guidance at policy level and for the participation of key project counterparts (see paragraphs 148-160), with operational effectiveness and efficiency at field level. Field level operations will concentrate on the seven pilot municipalities; these will be kept as streamlined as possible within the limitations posed by the topographical and access conditions of the project area.

PROJECT INDICATORS, RISKS AND ASSUMPTIONS

Key Indicators

116. The achievement of the *Objective* of the project will be measured according to three criteria: i) changes in the nature of the land uses applied in the productive landscape of the target area for replication (maintenance and stabilization of forest cover, conversion to shade coffee and/or organic agriculture); ii) improvements in livelihood conditions of producers in the target project area; and iii) by ecosystem diversity and ecological function, principally connectivity, at landscape level.

117. The viability, biodiversity impacts and potential for replication of BD-friendly productive practices (*Outcome 1*) will be measured by the number of farmers adopting the practices in the pilot municipalities, the amount of income generated by them as a result of this productive diversification within individual farm units, and the maintenance of species level biodiversity in production units.

118. The achievement of *Outcome 2* will be measured by the number of environmental management and territorial land use plans, and the corresponding area they cover, which adequately incorporate biodiversity considerations (such as maintenance of forest cover, connectivity and the location of vulnerable species and ecosystems) and thereby promote the integration of landscape planning with BD conservation.

119. The effectiveness of the pilot municipalities as platforms for awareness raising and dissemination (*Outcome 3*) will be measured by the number of municipal authorities and producer organizations in the target area for replication whose members are aware of the models developed in the pilot municipalities, the extent of application in the target area of the practices and models demonstrated in the pilot municipalities (for example shade coffee and schemes for the payment of environmental services), and species level biodiversity in production units.

Assumptions

120. The viability and replication potential of BD-friendly practices (***Outcome 1***) are dependent on:

i) The **relative stability of national and international prices for the products of BD-friendly practices** (such as shade coffee). It is essential that the income received by producers from BD-friendly productive practices remain at levels which make them competitive with alternative land uses. The risk of fluctuations in market prices affecting the relative profitability of BD-friendly productive practices is considered to be ***low***; although national and international markets are likely to continue to be subject to significant fluctuations, due largely to patterns of supply and demand, the project will ensure that producers are buffered against such fluctuations by (i) helping producers access premium markets and to add value to their products, thereby helping to ensure that even during periods of low prices these products remain competitive; (ii) increasing producers' capacities and negotiating skills to ensure a more active and equitable sharing of benefits throughout the productive and marketing chain and iii) helping producers to maximize the number of components of their productive systems from which they realize economic benefits (such as fruit, timber, landscape value and environmental services). Figure 9 shows that in this way the relatively profitability of shade coffee, compared to alternative land uses such as dairy production, can be made robust to significant changes in coffee prices.

ii) In order for producers to maximise economic benefits from shade coffee production by enjoying continued access to premium export markets, it is essential that **exports are not subject to restrictions** in times of low national supply. The risk related to this assumption is ***low***, as such restrictions are only sporadically applied. Even if this risk is realized, shade coffee production for national consumption still has the potential to out-compete alternative land uses in economic terms, when the economic benefits of additional goods and services from the shade coffee stands, other than the coffee itself, are included in the calculation (Figure 9). The project will help to reduce this risk, should it even arise, by continuing to demonstrate that the current exemption from export restrictions of niche BD-friendly coffee confers significant benefits on producers.

iii) In order for commercial contracts with overseas purchasers to be viable, it is also important that **the national currency remains relatively stable**. The risk associated with this assumption is ***medium***, and can be easily minimized by advising producers on how to negotiate contracts which take into account potential currency fluctuations.

iv) Producers' access to credit is also dependent on **interest rates remaining relatively stable**. This risk is considered to be ***low***, given the Government's current policies aimed at ensuring access by the poor to credit at reasonable rates, and can be further mitigated by the establishment of alternative credit sources offering credit at below commercial rates (without however undermining sustainability).

v) In order for producers to have access to niche markets which provide price premiums for certified products, it is important that **the costs of certification remain within reasonable limits**. The risk that these costs are subject to significant increases is ***low*** and will be further minimized by the fact that the project will be working principally with organizations of producers, rather than individuals, who will be able to achieve economies of scale through group certification.

vi) The viability of BD-friendly productive options is also dependent on their **not being affected by unforeseen pests and diseases**. The risk of this will occur is ***medium***, and will be mitigated by the promotion of productive diversity within farm units aimed at spreading risks.

vii) Finally, while Venezuela currently has a buoyant tourism industry, the functioning in the long term of community-based ecotourism as a BD-friendly is dependent on **the country's reputation as an attractive destination being maintained**. The risk that this reputation will be decline is ***low***, given that most of the current and potential clientele are in the 'adventure' and 'solidarity' sectors, which tend to be robust and increasing in numbers. This risk will be minimized by a continued focus on this particular clientele, and the provision of reliable information on the internet on local conditions.

121. The existence in the long term of a supportive framework of local planning instruments (***Outcome 2***) and policies, plans, programmes and regulations (***Outcome 3***) are both dependent on the **continuation of the current overall policy directions of central Government**. The risks of this not materializing are considered to be low and mitigation strategies associated with this assumption are described under paragraph 120 ii) above.

Strategic Considerations

122. *The following key strategic considerations were included in project design:*

1) **Avoidance of the risk of coffee production being expanded at the expense of natural forests.** This will be ensured in the following ways:

   - The project will offer significant benefits to cooperatives of coffee producers in terms of market access and incomes, as described in Part VII of the project document. **The provision of this support will be made conditional on the incorporation by cooperatives of BD considerations**, including the avoidance of impacts on natural forests, into their internal norms and regulations.
   - Association with a major co-financed initiative (the National Coffee Plan) which places specific emphasis on the importance of the conservation aspects of shade coffee (see paragraph 67) and which will include viable safe-guards for the conservation of natural forests.
   - Support to the development, application and dissemination of specific criteria for assistance to small coffee producers. In the Andres Bello Municipality in the State of Merida, criteria for accessing National Coffee Plan support have been agreed locally with the State level coordinator of the Plan, including the requisite that shade coffee plantations supported by the Plan do not affect natural forest. It is proposed that the project promote the replication of such experiences and best practices, with the expected result that the possibility of obtaining support from the National Coffee Plan under such conditions will act as a viable incentive for producers to safeguard natural forests and the avoidance of expansion within these areas.
   - Promotion of access by farmers to coffee certification schemes (such as Bird friendly coffee) which include specific criteria for access to the premium markets which they offer, including the avoidance of impacts on natural forest.

- Support to capacities for planning and the application of regulation at municipal level (see Outcome 2, paragraphs 96 to 101). There is a significant body of legislation which supports such controls on land uses changes, including the Organic Law for the Environment (1976), the Organic Law for Territorial Land Use Planning (1983) and the Penal Environmental Law (1992) (see paragraph 52). The project will help to ensure that municipal governments and other local entities, as relevant, apply this regulation effectively, particularly in effectively avoiding the conversion of natural forest to coffee.
- Support to the development of schemes for compensation for the provision of environmental services from forests. It is proposed that such environmental service compensation schemes will actively favour forest over shade coffee. The two case studies presented in Table 16 and Table 17 show that if compensation under such schemes were directed exclusively at areas of forest areas rather than shade coffee, there would be a significant incentive for forest conservation (of $10 and $45/ha/year respectively), yet shade coffee would remain economically competitive in relation to less BD-friendly land uses.
- Support to the application of the above measures through monitoring, within the context of the project's M&E strategy, of whether natural forests are being affected by coffee production (project indicators at Objective level include the relative areas covered by forest and shade coffee).
- Oversight by UNDP of the project's environmental impacts, with the possibility that if expansion into natural forests is registered on a permanent basis, UNDP may use its prerogative to freeze project disbursements.

2) **Support for the maximization of canopy diversity.** In order to counteract the common tendency of farmers to progressively replace the original diverse forest cover of shade coffee plantations with limited numbers of sometimes exotic species, project activities promoting farmers' commercial use of timber species within their coffee plantations will be accompanied by technical support and advice enabling them to effectively replant with the same species once the original trees die or are felled.

3) **Emphasis on cost effectiveness**, by working in those productive areas of the Mérida Cordillera where land use changes with implications for biodiversity conservation and rural livelihoods (specifically the advance of the agricultural frontier into areas of shade coffee and primary forest) are most evident, and by focusing on pilot actions in a limited number of municipalities with supportive baseline operations, as a means of cost-effectively achieving replication throughout the target area.

4) **Focus on a *landscape/system wide approach***, rather than *sector-specific intervention*, recognizing that producers' decisions regarding land uses and resource management options are taken on the basis of interactions and comparisons between productive options in different sectors, and on considerations of livelihood security in general.

5) **Recognition of the importance of *small, internally diverse productive farm units*** organized into cohesive communities as a fundamental requisite for the sustainable use and conservation of biodiversity in the productive landscape.

6) **Consolidation of an existing network of organizations and institutions**, with diverse approaches and mandates but broadly shared goals, as a means of ensuring that initiatives aimed at integrating conservation and rural production share a coherent strategic direction.

7) **Focusing on niche coffee markets seeking both quality and certification.** While the market for quality Arabica coffees is highly competitive, demand for coffee which combines quality with organic and/or Fairtrade certification is steadily and significantly rising (see Figure 3). Given the

relatively limited extent of the Venezuelan Andes, the area is always going to be a relatively minor player in global terms, which means that it can focus on a particular niche market which has been shown to be robust. The key factor that will be used to establish a competitive edge over other sources of quality Arabicas will be the organic and Fairtrade certification of this coffee, in addition to its quality. Many of its potential competitors are likely to produce quality but uncertified coffee, or certified coffee without the quality of product and presentation that experiences to date (such as the Quebrada Azul cooperative) have demonstrated can be achieved in this area.

123. The project design presented here has been modified to some extent from that proposed in the PDFB document, on the basis of extensive analyses and consultations carried out during the project preparation phase. These modifications have principally affected the *means* originally identified to mainstream BD into the productive landscape, with major key aspects remaining unchanged. The project retains its focus on conserving BD within the productive landscape as a whole, rather than focusing exclusively on one particular sector. Coffee production is considered as one (albeit major) component of producers' farming systems, alongside other production systems and livelihood strategies. The 'coffee-producing farms' referred to as the basic planning unit in the project are in fact highly diverse units typically including (in addition to coffee) pasture, vegetables, staple grains and home gardens.

124. The project will address biological corridors as a theme of secondary importance. PDFB analyses clearly indicated that the major issues in the area in relation to BD threats were the processes occurring in the productive landscape. The project is expected to have benefits for protected area management as it will promote 'whole landscape' approaches to planning which will provide land use planners, resource users and protected area managers alike with the variety of tools and capacity skills required to promote the effective integration and critical balance required between protected areas and the productive landscape that surround them. These benefits may include reductions in potential encroachment and improved connectivity between protected areas. Within the productive landscape itself, the project will certainly improve local level connectivity (mini-corridors) between its component elements, particularly forest fragments.

125. The original project concept also proposed the establishment of 'set-aside' areas for conservation. Although not specifically designated as such, the proposal presented here will promote the conservation of existing forest areas within the productive landscape, through a combination of regulation, planning, awareness building and economic incentives.

Alternatives considered:

126. In the course of project design, a number of alternatives were considered and subsequently discarded on the basis of cost-effectiveness:

1) **Protected area focus**: it was decided to focus principally on a BD2 approach (mainstreaming of biodiversity considerations into *productive* sectors and systems) rather than a BD1 approach (protected areas) for a variety of reasons. The fact that over 50% of the montane habitat of the Merida Cordillera remains intact and that 60% of this habitat form parts of the existing or potentially productive landscape under no form of conservation-oriented land use, was decisive. In the same vein the Venezuelan Andes are flagged as one of the country's principal development axes with potentially significant implications for attendant biodiversity. Significant baseline operations and local development models offer strategic opportunities to mainstream BD goals into planning and productive sector activity thereby securing BD values in this rich productive landscape. The BD2 approach focusing on productive systems and land use management options allowed for the identification of productive options which contribute to conservation gains while at the same time resulting financially viable in their own right. Consideration was also given to whether the project should focus *exclusively* on BD2 or include a secondary element of BD1. It was decided to include BD1 as a secondary element, by

promoting connectivity between protected areas through actions in the productive landscape, as it is possible thereby to deliver additional BD benefits without jeopardizing the achievement of BD2 goals. This would largely be achieved through the appropriate selection of pilot areas and location of field level interventions in relation to protected areas.

2) **Focus on conserving natural shade or promoting planted shade for coffee.** There are significant areas of coffee in the project area which are managed without shade trees, in order to achieve high levels of production in the short term (see paragraph 8 and SECTION IV PART VII). The option existed for the project to invest in promoting the introduction of shade trees into these full-sun production systems. However the levels of specific and structural biodiversity typically found in coffee plantations with planted, rather than natural, shade are normally low, as the shade tends to be composed of a limited number of tree species with agronomically favourable characteristics, such as *Inga* spp. and *Gliricidia sepium.* The biodiversity benefit which would be achieved by this approach, per dollar invested, is therefore likely to be much lower than that achievable through the maintenance of existing, BD-friendly natural shade systems. The strategy of promoting planted shade was therefore discarded on grounds of cost-effectiveness.

3) **Sector-based approaches**: This would have entailed an increased focus on market issues within targeted sector(s) such as coffee. However project focus on one given sector would not have been cost-effective or practically viable in the long term, as it would have failed to address the multiplicity of highly interrelated factors affecting farmers/producers decisions within their productive farm units. Despite high levels of investment (for example in *solely* improving marketing and processing chains) it could have led to limited impacts as farmers could have refused to take advantage of the opportunities offered, as a result of broader livelihood and contextual considerations. The integrated farm/landscape approach adopted, by contrast, also pays attention to critical issues such as landscape and farm planning, the fundamental need to bolster and integrate BD conservation objectives into local planning frameworks and associated planning and monitoring tools, the auspicious opportunities offered by current baseline operations and government assistance programmes, and finally the maintenance of traditional cultural values associated with the smallholder coffee production system *as a whole*.

4) **Institutional arrangements:** the choice of the *Ministry of Popular Economy* (MINEP) as Executing Agency offers excellent cost-effectiveness as it constitutes the optimal option and institutional partner for effectively mainstreaming BD directly into rural assistance programmes, credit mechanisms for community based organizations, and productive sectors. In this regard the MINEP has the overarching mandate of coordinating and channeling technical and financial assistance at local levels to community based organization in a decentralized and efficient manner. As the lead government agency for the provision of financial and social support programmes, especially in terms of capacity building at local community level, the choice of MINEP also allows the project to be directly associated with very significant amounts of co-financing channeled through that ministry and the mainstreaming prospects it can easily deliver.

5) **Modality for micro-finance:** the two options considered were: a) that the project would transfer resources to rural savings and loans associations, which would then disburse them as loans to their member producers for BD-friendly productive practices, to be paid back with interest to the associations, and b) that resources would be transferred directly to the producers, and then progressively paid back by them to the savings and loans associations. Option b) was selected on the grounds that this model, which has been tried and tested by existing large-scale Government institutions and programmes such as MINEP/CIARA and Plancafé, and NGOs such as PAT, avoids overburdening savings and loans associations with large infusions of funds at a moment when their capacities for managing them are still incipient and in the process of

consolidation. Instead, the funds are distributed in relatively, small, manageable amounts (subject to approval by the Technical and Financial Committee described in paragraph 105) to a number of individual producers and producer organizations, and then progressively flow into the savings and loans associations through repayments by the producers of initial capital plus interest, at a rate which will match the progressive development of capacities in the associations. This arrangement is formalized under an agreement entered into between the project and the producers, wherein the producers agree to repay funds plus interest not to their original source (the project) but to the associations. The agreement clearly stipulates that funds repaid are on-lent only for BD-based businesses fully consistent with project objectives.

EXPECTED GLOBAL, NATIONAL AND LOCAL BENEFITS

127. The project will result in a "win-win" situation in which global, national and local benefits will be maximised.

128. At the *global level*, the project will result in the conservation of the habitat value of 19,750 km^2 of the productive landscape of the coffee/cattle rearing zone of the Mérida Cordillera (which includes 13,650 km^2 of montane forest and 3,624 km^2 of shade coffee stands, in addition to the matrix of non-forested area which lies between them). In particular, habitat value will be promoted by ensuring the maintenance of multi-level forest (both intact and with shade coffee) with its associated high levels of species diversity of insects, birds and epiphytes; and by promoting a small-scale landscape mosaic (with patches of coffee forest of around 3-5 ha alternating with pastures, fields and diverse home gardens). Within the project's direct area of influence, 641,700 ha of non-coffee forest outside of protected areas (includes forest of all conditions ranging from secondary fallow through to intact forest patches) will enjoy improved conservation. The project strategy is therefore one which seeks to stabilize and reverse current land conversion trends and their associated impact on the BD present in the productive landscape, with the target that the areas of forest and shade coffee will be the same at the end of the project as at the beginning. The strategies to ensure that the forest area (much of which is included within the same farms that contain shade coffee) and the *mosaic* it conforms are maintained, are multi-pronged and include: enhanced local land use planning instruments for an integrated farm and landscape-wide planning approach, regulatory capacities, economic incentives incorporated in baseline operations, diversification and economic sustainability of the shade coffee productive unit, and environmental education.

129. The high proportion of tree and forest cover in the landscape will also promote connectivity between protected areas, favouring mammals such as the mountain lion (*Puma concolor*), the little spotted cat (*Leopardus tigrinus*) and the little coati (*Nasuella olivacea*). This benefit will be furthered through the strategic location of productive corridors between protected areas. Globally important bird species such as the red siskin (*Carduelis cucullata*) and Nearctic migrants such as the Olive-sided Flycatcher (*Contopus cooperi*), for which the Venezuelan Andes constitute a vital link in their north-south flyway routes, will also benefit from these habitat conditions. This will constitute a significant contribution to the conservation of the Northern Andean (Tropical Andes) Bioregion, considered one of 25 global biodiversity hotspots by Conservation International. The project will not lead to coffee being established within existing natural forest (project strategies to ensure that this does not occur are set out in paragraph 122). The fact that significant areas of coffee (49,550 ha) are found within the buffer zones of National Parks in the project area (accounting for 9.8% of the total buffer zone area) increases the potential for the project to generate global benefits; shade coffee in these areas has the potential to be highly compatible with buffer zone objectives, as a stable, BD-friendly land use, buffering pressures which would otherwise affect the intact ecosystems within the protected areas.

130. It is possible that the originally diverse over-storey of shade coffee plantations, developed from native forest, will gradually become impoverished by replacement with limited numbers of sometimes exotic species. The fact remains that even when impoverished in this way, shade coffee plantations will

have higher BD value than the normal alternative, pasture. Additional BD gains will however be achieved by promoting the maintenance of the over-storey in a condition as close to that of the original forest as possible in terms of structure and species composition. The project will promote this by ensuring that its activities promoting farmers' commercial use of timber species within their coffee plantations are accompanied by technical support and advice encouraging them to replant with the same species once the original trees die or are felled.

131. At the *local level*, the project will result in social, productive and environmental benefits. Incomes, livelihoods and food security will be improved and diversified as a result of the increased viability of traditional productive activities and the adoption of additional new ones (by the end of the project, 10,500 rural families in the CCRZ, representing 30% of the total, will have increased their average annual income by 10%). Living conditions (for example access to water and sanitation) will be improved, as a direct result of the increased incomes resulting from the application of biodiversity-friendly activities, and also through the education and investment needed to achieve the minimum conditions required for rural tourism. Local inhabitants will experience reduced vulnerability of their food security and income generation capacity to extreme economic and environmental events, due to increases in productive diversity on farm, and increases amounts of tree material in the landscape, which will provide protection against soil degradation, mass movement and hydrological extremes. In particular (in addition to the benefits for coffee quality arising from the use of shade in coffee plantations), the adoption of a landscape-level approach to conservation may contribute to coffee productivity: it has been demonstrated that increases in bee diversity, resulting from the conservation of forest stands near to coffee plantations, significantly increases coffee fruit set (Klein et al 2003).

132. At the *sub-national and national levels*, the project will contribute to the sustainability of the development of an area which is of key national importance as part of the Western Development Axis. The environmental services which will result from the expected increases in soil cover and the number of woody perennials in the landscape (in the form of stream flow stabilization and the reduction of stream sediment load) will provide significant benefits to hydroelectric and irrigation schemes downstream which are of great regional and national importance. Increases in the social viability of small rural communities, due to support for diversified productive activities, will contribute to stabilizing demographic trends at national level. Finally, increases in the income resulting from coffee production, by virtue of the project's support to other Government initiatives in the coffee sector, will contribute to the national goal of diversification of production and exports.

133. In addition to the above benefits which are of direct relevance to biodiversity conservation, the project will have incidental benefits for other global values (however, given the specific focus of this project on biodiversity, these benefits will not be measured as indicators of project success). The promotion of tree-rich production systems will contribute to reducing the global problem of land degradation, which is currently one of the effects of the processes of deforestation and overgrazing occurring in the zone. Project impacts on the conservation status of the landscape mosaic as a whole will limit land degradation processes (associated with deforestation and subsequent grazing) on a total of 19,750 km^2. Increased amounts of woody perennials in the landscape will also contribute to reducing the global problem of climate change, as they will act as carbon sinks. The magnitude of this benefit is suggested by the fact that the project will ensure the maintenance of 10,041 km^2 of forest (including both shade coffee stands and natural forests). Finally, the promotion of organic production systems will reduce the extent of use of persistent organic pollutants (POPs).

COUNTRY OWNERSHIP

Country Eligibility

134. Venezuela ratified the **United Nations Convention on Biological Diversity** (UNCBD) on 13th September 1994. See Section IV for the endorsement letter by the national operational focal point.

Country Drivenness

135. The **National Biodiversity Strategy and Action Plan (2001)** recognizes the sub-Andean humid forests of the Andean bioregion as one of 8 most 'threatened ecosystems, at high risk due to the loss of biological diversity'[8] in the country. The priority accorded by Venezuela to the conservation of Andean biodiversity is further demonstrated by its participation in the formulation and implementation of the **Regional Biodiversity Strategy for Tropical Andean Countries (2002)**. In accordance with the thematic focus of the project on biodiversity conservation in productive landscapes, to be achieved by supporting the productive activities of small farming communities and local planning processes, the NBSAP recognizes the importance of conserving biodiversity outside of protected areas, including in already disturbed ecosystems, and of the involvement of landowners and local communities in the management of biodiversity. The NBSAP also provides for the promotion of the sustainable use of ecosystems and species[9], and minimum impact tourism[10], both of which are areas in which this project will work.

136. The policies and programmes of the Venezuelan Government are based on the principle of '**endogenous development**', which emphasizes locally-driven initiatives aimed at revitalizing the rural economy, in accordance with principles of environmental sustainability, and recognizing the value of social, cultural and productive heritage. This policy environment is highly conducive to the promotion of biodiversity conservation through the support of traditional production and livelihood support systems, characterized by diversity and sustainability (for example small farms including shade coffee), complemented by innovations (for example rural tourism), resulting in a 'win-win' situation with local benefits for rural economies and livelihoods and global benefits in terms of sustainable biodiversity conservation. Specifically, the commitment of the Government to supporting the coffee sector is demonstrated by its investment of around $410 million in the 5 year **National Coffee Plan** programme.

137. The project conceptualization and implementation strategy is in line with directives from national government regarding social inclusion policies: poverty reduction, social economy promotion and participation. The Government has declared poverty reduction to be a top country priority. Throughout the project area, poor rural and isolated communities will receive benefits from training, technical assistance and micro-credits to improve their productivity and incomes, thus contributing to reduce rural poverty. Privileged attention to youth population will ensure that the vicious cycle of poverty be minimized. Organization into cooperatives and networks is one of key results expected from the project, contributing in this way toward fulfilling directives from the new Constitution and derived laws regarding the setting up of a social economy model. These activities will be coordinated will national and local government institutions. Promotion of participation of local producers and community organizations in decision making, monitoring and evaluating activities of the project aligns it with the participatory policy promoted within the constitutional framework allowing for empowerment and integration of local communities. Close coordination with *Local Planning Councils* should avoid duplication of efforts and establish synergies between public policies and activities of the project.

Linkages with UNDP Country Programme

138. UNDP activities in Venezuela are executed according to the 2003-2007 Cooperation Program which adopted as cross-cutting concerns gender equity and human rights and proposed to concentrate activities in five thematic areas, within the framework of a human development approach: poverty

[8] NBSAP, p. 58
[9] NBSAP, p. 95
[10] NBSAP, p. 99

reduction, democratic governance, energy and environment, information and communication technologies and natural disaster prevention.

139. The proposed project adopts a gender equity perspective making special efforts to empower women by fostering organization and through access to training and promotion of economic activities geared toward this segment of population. Different activities of the project as well as its design rationale address all five thematic areas, with a more direct incidence in environmental conservation and poverty reduction. On the other hand, its emphasis in organizing producers and communities is in line with UNDP objectives of promoting democratic governance and dialogue between different actors. Additionally, the project design includes the establishment of a decentralized fund to enhance local economies and foster equity and participation by accessing to micro-credits.

140. A top priority for UNDP for the next decade is the framing of its assistance for contributing to the fulfillment of the Millennium Development Goals (MDG). Activities in the project contribute directly to Objective 1 of the MDG (through poverty reduction in rural areas), Objective 3 (Gender equity and empowering through training, credit and participation in decision making), Objective 7 (environmental sustainability through the promotion of BD friendly activities and water conservation) and Goal 18, Objective 8 (through promoting access of disadvantaged population to information and communication technologies) and indirectly to Objective 4 (reduction of infant mortality through upgrading of water and environmental conditions that contribute to it and by educating mothers and bettering incomes of poorer families) and Goal 16, Objective 8 (through providing opportunities for young people).

SUSTAINABILITY

141. Much of the project's actions will focus on capacity building and mainstreaming into baseline operations and will therefore be 'one-off' in nature; at the end of its 7 year period it is expected that BD considerations will have been fully mainstreamed into ongoing Government operations and lasting capacities will have been developed, making the targeted institutions and baseline activities more 'BD-friendly' without entailing proportional increases in their cost to the Government. Nevertheless, there will actually be a considerable decrease in GEF funding for demonstration activities (Activities 1 and 2) between the period Years 1-3 and the subsequent period which will focus on replication, accompanied by a significant increase in co-financing (GEF funding will fall from $2,862,500 in Year 1 to $291,150 in Year 7, while co-financing increases from $3,974,448 to $4,479,948 over the same period). **Financial sustainability** will be ensured by the promotion, with the full participation of local stakeholders, of production systems with proven financial viability. Actions to be taken through the project to ensure this financial sustainability will include the following:

i) Support to developing the capacities of producers to participate in and influence marketing and production chains, thereby reducing their long term dependence on outside support in order to access premium prices;

ii) Orientation of the technical support provided to producers, in order to ensure that they have access to the information required to enable them to exploit productive opportunities to the full;

iii) Promotion of the access by producers to the mainstream financial sector as a source of the credit required for biodiversity-friendly productive activities and, where necessary, support of the establishment of alternative sources of credit, paying strict attention to their sustainability through the setting of interest rates at appropriate levels and the definition of guarantee mechanisms which minimize the risk of default.

142. **Environmental sustainability** will be ensured by focusing on the promotion of biodiversity-friendly production systems such as shade coffee and ecotourism. These will have positive environmental impacts in terms of biodiversity and other environmental values such as the functioning of hydrological cycles.

143. **Productive sustainability** will be ensured by assisting producers to identify, develop and apply productive practices which respect the carrying capacity of the resources on which they depend. The promotion by the project of processes of participatory learning and investigation, in relation to productive practices, will further help to ensure that they are appropriate to local people's needs and capacities and therefore viable in the long term in productive terms.

144. **Social sustainability** will be ensured by promoting the application of BD-friendly activities within the context of consolidated community-based producer organizations, and by supporting the functioning of mechanisms to ensure community representation in the formulation and application of policies, programmes, plans and regulations. The continuity of the commitment to the outcomes of the project by members of local communities will be furthered ensured by the proposed investment in environmental education and awareness raising, and the promotion of the involvement by local people in the monitoring of biodiversity, through mechanisms to be developed by those involved themselves, with facilitation by the project.

145. **Institutional sustainability** will be promoted by way of a capacity enhancement programme primarily geared at the Municipal level, and further ensured by supporting the consolidation of a network of well-established existing institutions and organizations, to coordinate and harmonize the development and replication of pilot level experiences in the long term. This network will be funded by contributions from these institutions and organizations themselves.

REPLICABILITY

146. A basic feature of project design is the concentration of activities on seven pilot municipalities, experiences gained in which will subsequently be replicated elsewhere in the Mérida Cordillera. The target area for the replication of practical experiences with BD-friendly productive activities will be 19,750km^2 of coffee/cattle rearing zone throughout the Mérida Cordillera (see Map 7). The target area for the initial replication of pilot municipality experiences in strengthening capacities for environmental planning, management and regulation in local communities and institutions will be 13 municipalities distributed throughout the Mérida Cordillera, the area of which (within the Mérida Cordillera) covers a total of 9,287km^2 (see Map 7).

147. The project's strategic approach to the replication of experiences within the Mérida Cordillera has a number of key characteristics:

1) Selection of pilot municipalities on the basis of objective criteria including, (i)existence of concrete demonstrable experiences to date, (ii) stakeholder receptivity and commitment levels; (iii) geographical dispersion and access, (iv) level of Government investment in coffee (i.e. supportive baseline), (v) human development levels, and (vi) potential for the implementation of schemes for the compensation of environmental services (see Table 18).

2) The facilitation of institutional learning among agencies, such as CIARA, which carry out extension and other support to producers in both the pilot municipalities and the target area for replication. In this way such agencies will function as channels for replication.

3) Facilitation of the 'endogenous' development of technologies and practices in the target area. Rather than experiences witnessed in the pilot area being directly copied by producers in the target area, this approach places emphasis on producers learning from these pilot experiences and using them in developing technologies and practices appropriate to their own needs and conditions.

PART III Management Arrangements

IMPLEMENTATION/EXECUTION ARRANGEMENTS

Institutional arrangements

148. The project will be implemented through UNDP under the **National Execution** modality (NEX) and will build on existing institutional structures and capacities. The **Ministry for the Popular Economy (MINEP)** will be responsible for the project through the **Foundation for Training and Innovation for Rural Development (CIARA)**. The **National Project Director** (NPD) will be the General Director of the CIARA Foundation, who will be responsible for ensuring the project is executed following the consulted and approved project's logical framework and in conformity with the norms and procedures established in the Management Manual for UNDP's Technical Cooperation Projects, which are part of this Project Document.

149. *At the operational level*, a **Technical and Operational Coordination Unit (TOCU)**, headed by a **Project Coordinator (PC)** based in the city of Mérida due to its strategic location for institutional and logistical operations in the context of the Mérida Cordillera. The TOCU will ensure that the decentralized and participatory structure and nature of the institution in charge is fully maintained and will technically guide and coordinate the execution of project's activities in a time-effective and operationally agile manner. The TOCU will be staffed by competitive processes, considering the required managerial, technical, administrative, legal and logistical capacities needed for quality implementation, and will count on co-execution support to be provided by civil society organizations and community based organizations at local and regional level, to further enhance the quality of its work and project related performance.

150. In each of the seven pilot municipalities, a **Local Project Unit (LPU)** will be based in the Local Council for Local Planning's Technical Secretariat (CLPP). These LPU, to be staffed by technicians from MINEP, MARN and MAT on a service commission basis during the project duration, will operate under the TOCU's guidance and will be linked with the Local Authority (Municipality).

151. The **Project Coordinator (PC)**, to be hired through the project, will be responsible for overseeing the implementation of the project, supervising the project's **Thematic Technical Coordinators (TTC)** and financial, legal and logistical assistants, facilitating operational procedures with UNDP and the CIARA Foundation at central level, coordinating with other funding sources at the regional level, ensuring that project implementation is complemented and in conformity with National Programmes and Policies, monitoring project progress and periodically reporting on this to the NPD. To facilitate the flow of resources between the national and regional levels of the CIARA Foundation Administrative Unit, both the NPD and the Project Coordinator will have signatures registered with the UNDP along with details on specific disbursement levels to be authorised by each level.

152. ***Thematic Technical Coordinator*s** will be responsible for setting-up, supervising and coordinating daily implementation of project activities related with the thematic area of their responsibility, including the development of annual operational plans and progress reports, as well as ensuring that recommendations of the Project Coordinator and the Regional Steering Committee are incorporated into project implementation.

153. ***Local Coordination Committees (LCC)*** will be established within the context of the Technical Local Panels already in place. These LCC will provide the platform for direct participation of the project's beneficiaries at the ***pilot*** municipality level, ensuring that their views and needs are fully taken into account during its implementation, ensuring participative and adaptive management.

154. A ***Regional Steering Committee (RSC)*** will be formed to provide guidance and general oversight for project implementation, provide strategic advice and select the Project Coordinator who will act as the

committee's Technical Secretary. This RSC will meet at least twice a year and include the NPD and the Project Coordinator, and representatives from MINEP, MAT, MARN, co-executors, producers state associations and development and conservation NGOs.

155. A ***Technical Monitoring and Evaluation Committee (TMEC)*** will be established in order to provide strategic technical advice and recommendations/suggestions on how to overcome technical problems related to monitoring and evaluation during project implementation. This committee will meet according to the M&E work plan and will be composed by representatives of regional universities (ULA and UNELLEZ) and a GEF M&E specialist.

156. To ensure that project activities are undertaken in a coordinated and complementary manner with other MINEP/CIARA Foundation programmes and projects (e.g. PRODECOP, Misión Vuelvan Caras), periodic meetings, to be chaired by the Project Coordinator, will be held between the technical area of the CIARA Foundation and the project's technical team.

157. Finally, UNDP Venezuela will provide support, as required, related to the technical aspects of the project, in particular in the preparation of the TORs and in the creation of committees for the selection of technical staff, both individual and companies, to be hired with the resources of the project, and as a part of an Ad Hoc Committee to advise on the application of the financial mechanisms to be established with GEF resources (see Output 2.4).

158. In relation to the general management of the project, the arrangements are as follows:

159. The CIARA Foundation will be responsible for:

- Ensuring the co-financing of the project in order to achieve the project's objective and expected results and to report co-financing disbursements to UNDP when required and with the correspondent financial statements.
- Identifying, selecting, hiring and evaluating national and international consultants and consultancy services, following the norms and procedures established in UNDP's Management Manual.
- Defining and elaborating the technical specifications and carry out the procurement process, including the selection and elaboration of purchase orders for the acquisition of equipment and other goods required for the functioning of the project at local and regional levels. Additionally, it will be responsible for establishing and maintaining the property documents of the non-fungible equipments acquired with project funding.

160. UNDP Venezuela will be responsible for the project's mandatory annual audit, which will be carried out by a private consultant firm aiming to verify that project's management compiles with the established norms and procedures. Specifically, the audit will verify:

- The financial disbursements had been done according with the registry and programmed activities, and are supported by the corresponded documentation.
- The administrative structures, internal controls and registry systems had been followed, and,
- The requirements for acquisition, control and registry of non-fungible equipments had been followed.

Provisions for payment.

161. UNDP, as Implementing Agency, will disburse GEF funds to the CIARA Foundation, as Executing Agency, through periodic advances according to a programme to be agreed by the two parties prior to project start up. Salaries of project staff and other payments will then be made by the CIARA Foundation.

162. If it is agreed that the payment will be made in a currency other than US dollars, its value will be determined applying the United Nations operational exchange rate applying on the date of payment. In the case of a variation in the United Nations operational exchange rate prior to UNDP having fully used the contribution, the value of the funds remaining unused up to the moment will be adjusted in consequence.

163. In order to accord proper acknowledgement to GEF for providing funding, a GEF logo should appear on all relevant GEF project publications, including among others, project hardware and vehicles purchased with GEF funds. Any citation on publications regarding projects funded by GEF should also accord proper acknowledgment to GEF. The UNDP logo should be more prominent -- and separated a bit from the GEF logo if possible as, with non-UN logos, there can be security issues for staff.

CONSULTATION, COORDINATION AND COLLABORATION BETWEEN IAS AND IAS AND EXAS

164. The project will be closely coordinated with the UNEP-GEF regional project '*Conservation of the Biodiversity of the Páramo in the Northern and Central Andes*', which covers Colombia, Ecuador, Venezuela and Peru. In the Mérida Cordillera, the upper altitudinal limit of the present project corresponds with the lower altitudinal limit of the Páramo project. This boundary is porous in social and productive terms and as a result the two projects share some stakeholders, and their success is to some extent mutually interdependent. Specifically, producers from the *páramo* zone are involved in the production of market vegetables in the upper part of the zone covered by this project, on land rented from local communities, leading to significant negative environmental impacts in terms of deforestation of montane forests and land degradation. Conversely, some producers from the coffee/cattle rearing zone covered by this project seasonally pasture their cattle in the páramo. In addition, much of the population living in the area of influence of this project is dependent on drinking water which originates in the *páramo*. These processes may therefore be affected, either negatively or positively, by the actions taken by the *páramo* project.

165. Representatives from the *páramo* project (both project team and affected stakeholders) have been involved on an on-going basis in the development and design of this project. They have participated in the diverse project design exercises conducted during project development and contributed to ensuring the necessary complementarities between both projects are delivered in a practical and cost-effective fashion. Both UNDP and UNEP PDFB teams have respectively relied on similar local expertise in the definition of threats and the most effective means to address them in a complementary and integrated fashion. Both projects will formally participate in corresponding inception events and subsequently in coordination meetings to take place every six months between both projects. An excellent rapport has been developed between representatives of the two projects during preparation work, further complemented by the on-going exchanges and collaboration present between UNDP and UNEP at regional Office levels.

166. There will also be a flow of benefits between the project and the UNDP-GEF OP15 project '*Combating Land Degradation in the Arid and Semi-Arid Zones of Falcón and Lara States*', which is currently at the concept stage. Some urban populations in the project area of the OP15 project are dependent on water supplied by montane forests in the area of influence of this project. In addition, the area foreseen to be covered by the OP15 project includes the Quíbor valley, where irrigated agriculture is due to undergo major expansion in coming years, using water piped from a reservoir in the Yacambú catchment which is largely dependent on the hydrological services provided by the productive landscape to be covered by this project. It is foreseen that the OP15 project will include an element of promotion of schemes for the payment of environmental services, and it is probable that some of the producers to be included in this project will participate in the same schemes, as producers of the environmental services. Coordination between the two projects will be limited to the theme of the establishment of schemes for the payment of environmental services.

167. Also of relevance to this project is the recently approved GEF/UNDP/Rainforest Alliance regional project "*Biodiversity Conservation in Coffee: transforming productive practices in the coffee sector by increasing market demand for certified sustainable coffee*", which will work in Brazil, Colombia, El Salvador, Guatemala, Honduras and Peru. That project will help increase demand for Rainforest Alliance certified coffee in all countries, not just the six project countries which will directly participate, and will thereby contribute to market access by the producers in this project. There will also be significant opportunities for lessons learnt in the regional project to be applied to the present project; and, given the emphasis of the regional project on working with coffee roasters, traders, and specialty coffee importers, for the institutions and organizations participating in this project to learn lessons on 'upstream' issues not specifically targeted by this project, and to benefit from the replication of experiences from that project.

168. Additionally, the project will coordinate with the WB-GEF medium-size project *"Conservation and Sustainable Use of Biodiversity in the Llanos Ecoregion,"* implemented locally by the Fundación Defensa de la Naturaleza (FUDENA), which covers mainly grassland ecosystems in the areas to the north of the Orinoco river and corresponds to the traditional lands of the Pumé and the Hiwi indigenous peoples. This project operates in an area in which established national parks overlap with ancestral indigenous lands. While the focus, strategy and stakeholders and quite different in both projects, the application of relevant lessons learned will be determined during project inception.

169. UNDP's contribution to the project is best expressed through its on-going involvement with municipal authorities, strengthening their capacities to operationalize and implement their development agendas, and establishing participatory decision-making structures and oversight mechanisms. This on-going support will be particularly beneficial to the project in relation to Outcomes #2 and #3 in which BD supportive planning frameworks and incentive systems will be established at the municipal level. In addition, the UNDP Country Office has played a very active role throughout preparation work in leveraging the sizeable co-financing mobilized by the project and supporting the definition of the project's institutional arrangements.

170. An exchange of information and experiences will be initiated with the Common Code for the Coffee Community Initiative (the "4C Initiative"), supported and facilitated by European Coffee Federation 4C Group, the Swiss State Secretariat for Economic Affairs (SECO) and the German Development Cooperation (GTZ), whose objective is to foster **sustainability** in the mainstream green coffee chain and to increase the quantities of coffee meeting basic sustainability criteria. This exchange will allow duplication of work to be avoided and benefits to be gained from lessons learned.

PART IV Monitoring and Evaluation Plan and Budget

MONITORING AND EVALUATION PROCEDURES

171. Project monitoring and evaluation will be conducted in accordance with established UNDP and GEF procedures and will be provided by the project team and the UNDP Country Office (UNDP-CO) with support from UNDP/GEF. The Logical Framework Matrix in SECTION II PART II provides *performance* and *impact* indicators for project implementation along with their corresponding *means of verification*. These will form the basis on which the project's Monitoring and Evaluation system will be built.

172. The following sections outline the principle components of the Monitoring and Evaluation Plan and indicative cost estimates related to M&E activities. The project's *Monitoring and Evaluation Plan* will be finalized and presented in the *Project's Inception Report* following a collective fine-tuning of indicators, means of verification, and the full definition of project staff M&E responsibilities.

1. MONITORING AND REPORTING

1.1. Project Inception Phase

173. A Project Inception Workshop (IW) will be conducted with the full project team, relevant government counterparts, co-financing partners, the UNDP-CO and representation from the UNDP-GEF Regional Coordinating Unit, as well as UNDP-GEF (HQs) as appropriate.

174. A fundamental objective of the *Inception Workshop* will be to assist the project team to understand and take ownership of the project's goals and objectives, as well as finalize preparation of the project's first *Annual Work Plan* (AWP) on the basis of the project's logframe matrix. This will include reviewing the logframe (indicators, means of verification, assumptions), imparting additional detail as needed, and on the basis of this exercise finalize the *Annual Work Plan* with precise and measurable performance indicators, in a manner fully consistent with expected project outcomes and established mid-term and end of the project indicator targets, as depicted in the logframe.

175. Additionally, the purpose and objective of the Inception Workshop will be to: (i) introduce project staff with the UNDP-GEF *expanded team* which will support the project during its implementation, namely the CO and responsible Regional Coordinating Unit (RCU) staff; (ii) detail the roles, support services and complementary responsibilities of UNDP-CO and RCU staff vis à vis the project team; (iii) provide a detailed overview of UNDP-GEF reporting and monitoring and evaluation (M&E) requirements, with particular emphasis on the Annual Project Implementation Reviews (PIRs) and related documentation, the Annual Project Report (APR), Tripartite Review Meetings, as well as mid-term and final evaluations. Equally, the IW will provide an opportunity to inform the project team on UNDP project related budgetary planning, budget reviews, and mandatory budget rephasings.

176. The IW will also provide an opportunity for all parties to understand their roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and project-based conflict resolution mechanisms. The Terms of Reference for project staff and decision-making structures will be discussed again, as needed, in order to clarify for all, each party's responsibilities and expected deliverables during the project's implementation phase.

1.2. Monitoring responsibilities and events

177. A detailed schedule of project reviews meetings will be developed by the project management, in consultation with project implementation partners and stakeholder representatives and incorporated in the *Project Inception Report*. Such a schedule will include: (i) tentative time frames for Tripartite Reviews,

Steering Committee Meetings, (or relevant advisory and/or coordination mechanisms) and (ii) project related Monitoring and Evaluation activities.

178. *Day to day monitoring of implementation progress* will be the responsibility of the Project Coordinator, Director or CTA (depending on the established project structure) based on the project's Annual Work Plan and its indicators. The Project Team will inform the UNDP-CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion.

179. The Project *Coordinator* will fine-tune the progress and performance/impact indicators of the project in consultation with the full project team at the Inception Workshop with support from UNDP-CO and assisted by the UNDP-GEF Regional Coordinating Unit. Specific targets for implementation progress indicators in year one, together with their means of verification, will be developed at this Workshop. These will be used to assess whether implementation is proceeding at the intended pace and in the right direction and will form part of the Annual Work Plan. The local implementing agencies will also take part in the Inception Workshop in which a common vision of overall project goals will be established. Targets and indicators for subsequent years are to be defined annually as part of the internal evaluation and planning processes undertaken by the project team.

180. Measurement of impact indicators related to global benefits will occur according to the schedules defined in the Inception Workshop and tentatively outlined in the indicative *Impact Measurement Template* at the end of this Annex. The measurement, of these will be undertaken through subcontracts or retainers with relevant institutions or individual specialized expertise (e.g. vegetation cover via analysis of satellite imagery, or populations of key species through inventories) or through specific studies that are to form part of the projects activities.

181. *Periodic monitoring of implementation progress* will be undertaken by the UNDP-CO through quarterly meetings with the project proponent, or more frequently as deemed necessary. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.

182. UNDP Country Office, and the UNDP-GEF RCU as appropriate, will conduct yearly visits to projects that have field sites, or more often based on an agreed upon scheduled to be detailed in the project's Inception Report/Annual Work Plan to assess first hand project progress. Any other member of the Steering Committee (SC) can also accompany, as decided by the SC. A Field Visit Report will be prepared by the CO and circulated no less than one month after the visit to the project team, all SC members, and UNDP-GEF.

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

184. The APR will be used as one of the basic documents for discussions in the TPR meeting. The project proponent will present the APR to the TPR, highlighting policy issues and recommendations for the decision of the TPR participants. The project proponent also informs the participants of any agreement reached by stakeholders during the APR preparation on how to resolve operational issues. Separate reviews of each project component may also be conducted if necessary.

Terminal Tripartite Review (TTR)

185. The terminal tripartite review is held in the last month of project operations. The project proponent is responsible for preparing the Terminal Report and submitting it to UNDP-CO and LAC-GEF's Regional Coordinating Unit (RCU). It shall be prepared in draft at least two months in advance of the

TTR in order to allow review, and will serve as the basis for discussions in the TTR. The terminal tripartite review considers the implementation of the project as a whole, paying particular attention to whether the project has achieved its stated objectives and contributed to the broader environmental objective. It decides whether any actions are still necessary, particularly in relation to sustainability of project results, and acts as a vehicle through which lessons learnt can be captured to feed into other projects under implementation of formulation.

186. The TPR has the authority to suspend disbursement if project performance benchmarks are not met. Benchmarks will be developed at the Inception Workshop, based on delivery rates, and qualitative assessments of achievements of outputs.

1.3. Project Monitoring Reporting

187. The Project Coordinator in conjunction with the UNDP-GEF extended team will be responsible for the preparation and submission of the following reports that form part of the monitoring process. Items (a) through (f) are mandatory and strictly related to monitoring, while (g) through (h) have a broader function and the frequency and nature is project specific to be defined throughout implementation.

(a) Inception Report (IR)

188. A Project Inception Report will be prepared immediately by the project team following the Inception Workshop. It will include a detailed First Year/ Annual Work Plan divided in quarterly time-frames detailing the activities and progress indicators that will guide implementation during the first year of the project. This Annual Work Plan would include the dates of specific field visits, support missions from the UNDP-CO or the Regional Coordinating Unit (RCU) or consultants, as well as time-frames for meetings of the project's decision making structures. The Report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan, and including any monitoring and evaluation requirements to effectively measure project performance during the targeted 12 months time-frame.

189. The Inception Report (IR) will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners, in complement to those stated in the Project Document, as needed. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may effect project implementation.

190. When finalized, the IR will be circulated to project partners who will be given a period of one calendar month in which to respond with comments or queries. Prior to this circulation of the IR, the UNDP Country Office and UNDP-GEF's Regional Coordinating Unit will review the document.

***(b)* Annual Project Report (APR)**

191. The APR is a UNDP requirement and part of UNDP's Country Office central oversight, monitoring and project management. It is a self -assessment report by project management to the CO and provides input to the country office reporting process and the ROAR, as well as forming a key input to the Tripartite Project Review. An APR will be prepared on an annual basis by the project team prior to the Tripartite Project Review, to reflect progress achieved in meeting the project's Annual Work Plan and assess performance of the project in contributing to intended outcomes through outputs and partnership work.

192. The format of the APR is flexible but should include the following:

- An analysis of project performance over the reporting period, including outputs produced and, where possible, information on the status of the outcome
- The constraints experienced in the progress towards results and the reasons for these
- The three (at most) major constraints to achievement of results
- AWP, CAE and other expenditure reports (ERP generated)
- Lessons learned

- Clear recommendations for future orientation in addressing key problems in lack of progress

(c) **Project Implementation Review (PIR)**

193. The PIR is an annual monitoring process mandated by the GEF. It has become an essential management and monitoring tool for project managers and offers the main vehicle for extracting lessons from ongoing projects. Once the project has been under implementation for a year, a Project Implementation Report must be completed by the project team. The PIR can be prepared any time during the year (July-June) and ideally prior to the TPR. The PIR should then be discussed in the TPR so that the result would be a PIR that has been agreed upon by the project, the executing agency, UNDP CO and the concerned RCU staff member.

194. The individual PIRs are collected, reviewed and analysed by the RCU prior to sending them to the focal area clusters at the UNDP/GEF headquarters. The focal area clusters supported by the UNDP/GEF M&E Unit analyse the PIRs by focal area, theme and region for common issues/results and lessons. The TAs and PTAs play a key role in this consolidating analysis.

195. The focal area PIRs are then discussed in the GEF Interagency Focal Area Task Forces in or around November each year and consolidated reports by focal area are collated by the GEF Independent M&E Unit based on the Task Force findings.

196. The GEF M&E Unit provides the scope and content of the PIR. In light of the similarities of both APR and PIR, UNDP/GEF has prepared a harmonized format for reference, to avoid duplication of efforts.

(d) ***Quarterly Progress Reports***

197. Short reports (100 words) outlining main updates in project progress will be provided quarterly to the local UNDP Country Office and the UNDP-GEF regional office by the project team. See format attached.

(e) ***Periodic Thematic Reports***

198. As and when called for by the Implementing Partner, UNDP or UNDP-GEF, the project team will prepare Specific Thematic Reports, focusing on specific issues or areas of activity. The request for a Thematic Report will be provided to the project team in written form by UNDP and will clearly state the issue or activities that need to be reported on. These reports can be used as a form of lessons learnt exercise, specific oversight in key areas, or as troubleshooting exercises to evaluate and overcome obstacles and difficulties encountered.

(f) ***Project Terminal Report***

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

(g) ***Technical Reports*** (project specific- optional)

200. Technical Reports are detailed documents covering specific areas of analysis or scientific specializations within the overall project. As part of the Inception Report, the project team will prepare a draft Reports List, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the Project, and tentative due dates. Where necessary this Reports List will be revised and updated, and included in subsequent APRs. Technical Reports may also be prepared by external consultants and should be comprehensive, specialized analyses of clearly defined areas of research within the framework of the project and its sites. These technical reports will represent, as

appropriate, the project's substantive contribution to specific areas, and will be used in efforts to disseminate relevant information and best practices at local, national and international levels.

(h) Project Publications (project specific- optional)

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

2. INDEPENDENT EVALUATION

202. The project will be subjected to at least two independent external evaluations as follows:-

(i) Mid-term Evaluation

203. An independent Mid-Term Evaluation will be undertaken at the end of the third year of implementation. The Mid-Term Evaluation will determine progress being made towards the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF and the established standards reflected in UNDP-GEF's Programming Manual.

(ii) Final Evaluation

204. An independent Final Evaluation will take place three months prior to the terminal tripartite review meeting, and will focus on the same issues as the mid-term evaluation. The final evaluation will also look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

<u>*Audit Clause*</u>

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

3. LEARNING AND KNOWLEDGE SHARING

206. Results from the project will be disseminated within and beyond the project intervention zone through a number of existing information sharing networks and forums. In addition:

- The project will participate, as relevant and appropriate, in UNDP/GEF sponsored networks, organized for Senior Personnel working on projects that share common characteristics. UNDP/GEF shall establish a number of networks, such as Integrated Ecosystem Management, eco-tourism, co-management, etc, that will largely function on the basis of an electronic platform.
- The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned.

207. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Identify and analyzing lessons learned is an on- going process, and the need to communicate such lessons as one of the project's central contributions is a requirement to be delivered not less frequently than once every 12 months. UNDP/GEF shall provide a format and assist the project team in categorizing, documenting and reporting on lessons learned. To this end a percentage of project resources will need to be allocated for these activities.

Table 1. Indicative Monitoring and Evaluation Work Plan and Corresponding Budget

Type of M&E activity	Responsible Parties	Budget US$ *Excluding project team Staff time*	Time frame
Inception Workshop *(There will be a series of inception workshops in the different municipalities and duly tailored to the different stakeholder groups)*	▪ Project Coordinator ▪ UNDP CO ▪ UNDP GEF	7,500	Within first two months of project start up
Inception Report	▪ Project Team ▪ UNDP CO	None	Immediately following IW
Measurement of Means of Verification for Project Purpose Indicators	▪ Project Coordinator will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members	To be determined in Inception Phase and Workshop. Total indicative cost 112,500	Start, mid and end of project
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	▪ Oversight by Project Coordinator - CO and RCU ▪ Measurements project team staff, or when so warranted specialized expertise/institutions	To be determined as part of the Annual Work Plan's preparation. Indicative cost 11,250 per year = 78,750	Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	▪ Project Team ▪ UNDP-CO ▪ UNDP-GEF (RCU/HQ)	None	Annually
TPR and TPR report	▪ Government Counterparts ▪ UNDP CO ▪ Project team ▪ UNDP-GEF Regional Coordinating Unit	None	Every year, upon receipt of APR
Steering Committee Meetings	▪ Project Coordinator ▪ UNDP CO	None	Following Project IW and subsequently at least once a year
Periodic status reports	▪ Project team	3,750	To be determined by Project team and UNDP CO
Technical reports	▪ Project team	52,500	To be determined by

	▪ Hired consultants as needed		Project Team and UNDP-CO
Mid-term External Evaluation	▪ Project team ▪ UNDP- CO ▪ UNDP-GEF Regional Coordinating Unit ▪ External Consultants (i.e. evaluation team)	52,500	At the mid-point of project implementation.
Final External Evaluation	▪ Project team, ▪ UNDP-CO ▪ UNDP-GEF Regional Coordinating Unit ▪ External Consultants (i.e. evaluation team)	75,000	At the end of project implementation
Terminal Report	▪ Project team ▪ UNDP-CO ▪ External Consultant	None	At least one month before the end of the project
Lessons learned	▪ Project team ▪ UNDP-GEF Regional Coordinating Unit ▪ Specialized partners/institutions	52,500 (average 7,500 per year)	Yearly
Audit	▪ UNDP-CO ▪ Project team	26,250 (average $3,750 per year)	Yearly
Visits to field sites (UNDP staff travel costs to be charged to IA fees)	▪ UNDP Country Office ▪ UNDP-GEF Regional Coordinating Unit (as appropriate) ▪ Government representatives	15,750 (average one visit per year)	Yearly
TOTAL INDICATIVE COST *Excluding project team staff time and UNDP staff and travel expenses*		US$ 477,000	

Table 2. Impact Measurement Template

Key Impact Indicator	Target (Year 7)	Means of Verification	Sampling frequency	Location
Hectares of shade coffee in the landscape are maintained at current levels.	362,400 ha	Satellite imagery	Mid term and end	Coffee/cattle rearing zone of Mérida Cordillera
Hectares of non-coffee forest cover (including fallows) in the productive landscape are maintained at current levels.	641,700 ha	Satellite imagery	Mid term and end	Coffee/cattle rearing zone of Mérida Cordillera
Non-coffee forest throughout the CCRZ do not suffer increased	299,400 km^2 without disturbance 492,300 km^2 slightly	Satellite imagery	Mid term and end	Coffee/cattle rearing zone of Mérida

Key Impact Indicator	Target (Year 7)	Means of Verification	Sampling frequency	Location
disturbance	disturbed 291,100 km^2 moderately disturbed 268,100 km^2 highly disturbed			Cordillera
The areas of forest (coffee and non-coffee), in key areas for connectivity between protected areas do not decrease	74,987 ha of shade coffee 183,046 ha of non-coffee forest	Satellite imagery	Mid term and end	Key areas for connectivity between protected areas in the coffee/cattle rearing zone
The areas of forest (coffee and non-coffee), in key areas for connectivity between protected areas do not decrease	74,987 ha of shade coffee 183,046 ha of non-coffee forest	Satellite imagery	Mid term and end	Key areas for connectivity between protected areas in the coffee/cattle rearing zone
Vegetation patches in key areas for connectivity between protected areas do not suffer increased fragmentation	78 patches (42 less than 1,000 ha, 29 between 1,000 and 9,999 ha and 7 greater than 10,000 ha)	Satellite imagery	Mid term and end	Key areas for connectivity between protected areas in the coffee/cattle rearing zone
Non-coffee forest in key areas for connectivity between protected areas does not suffer increased disturbance	29,759 ha without disturbance 81,242 ha slightly disturbed 33,862 ha moderately disturbed 38,235 ha highly disturbed	Satellite imagery	Mid term and end	Key areas for connectivity between protected areas in the coffee/cattle rearing zone
Number of farming families within the pilot area of the coffee/cattle rearing zone applying BD-friendly productive practices	35,000 families	Household surveys	Mid term and end	Pilot area of coffee/cattle rearing zone

LEGAL CONTEXT

208. The present Project Document will be the instrument referred to under Article 1, paragraph 1 of the Basic Model Agreement of Assistance between the Government of Venezuela and the United Nations Development Program (UNDP), signed by both parties on 19th January 1995 and ratified by the Congress of the Republic of Venezuela on 11th April 1997, as published in the Official Gazette No. 36.183. For the purposes of the Basic Model Agreement of Assistance, the Government executing organism is understood as the executing organisms of the host country described in the Agreement.

209. The following types of revisions of the Project Document may be carried out under authorization by the UNDP Resident Representative only, so long as the said Representative is certain that the other signatories of the Project Document have no objections to the proposed changes:

a. Revisions of any of the annexes of the Project Document or additions to the same;

b. Revisions which do not imply significant changes to the immediate objectives, results or activities of the project, and which are due to a redistribution of the inputs already agreed or to increases in costs due to inflation.

c. Obligatory annual revisions through which the delivery of financial inputs, increases in experts and other costs are adjusted, due to inflation or costs considered by the project executing agency.

SECTION II Strategic Results Framework and GEF Increment

PART I Incremental Cost Analysis (please see Annex A of the Executive Summary for the IC Matrix)

Project background

210. This 7 year project seeks to maintain the biodiversity value of farmers' production systems in the coffee/cattle-rearing zone of the Mérida Cordillera, a 30,732 km^2 area in the west of Venezuela. Currently, shade coffee plantations, which are important as habitat for biodiversity, are undergoing high rates of conversion to cattle pasture, due to the low and variable profitability of coffee production relative to other sectors such as livestock and vegetable growing. This project will contribute to the Venezuelan Government's initiatives in support of endogenous development, which stress the recuperation of traditional productive systems and the protection of environmental values.

Incremental cost assessment

Baseline

211. There are very significant **baseline activities** in the areas of endogenous development and biodiversity conservation in the Mérida Cordillera. The most significant are the Missions of the Venezuelan Government, particularly the Vuelvan Caras Mission, through which the Government pursues the goal of endogenous development, which stresses the relationship between local communities and their territories, rooted in productive, cultural and historical traditions, and the realization of the capacity of natural resources to generate productive activities, subject to considerations of respect for the environment. In particular, the *CIARA Foundation* of the *Ministry of Popular Economy* provides credit and technical support to farmers, including, through the 2004-2007 *National Coffee Plan*, to small and medium scale coffee producers. The *National Coffee Plan* represents significant Government baseline support to principles of conservation. Its objectives specifically include reference to the importance of shade coffee for the protection of hydrological catchment areas, and specific provision is made for support to organic coffee.

212. Through its *Programme for the Development of Rural Communities* (PRODECOP), CIARA also promotes and organizes cooperatives in rural municipalities. The *Ministry of Agriculture and Lands* (MAT), through its *Fund for the Development of Agricultural, Livestock, Fishery, Forestry* and other Sectors (FONDAFA), is promoting and financing projects aimed at developing production and productivity in agriculture, livestock, fisheries and other sectors, and channels resources for the finance of social programmes. The *Ministry of Environment and Natural Resources* (MARN) also supports producers through its *Programme for Conservationist Social Infrastructure*, which promotes the substitution of unsustainable natural resource management activities by others which are compatible with social and environmental goals. At the local level, the *Municipal Agricultural and Livestock Directorates* also carry out technical support activities in the areas of agricultural and livestock production among local farmers. The non-government organization *CODESU*, meanwhile, is providing support to cooperative members in *Andres Bello* municipality in organization and the production, processing and export of organic coffee and associated products from shade coffee stands.

213. A number of institutions and organizations are providing support in the area of tourism. These include MARN, through the *National Institute of Parks* (INPARQUES); the *Ministry of Production and Commerce,* through the *National Tourism Institute* (INATUR), which promotes tourism destinations and trains tourism operators and, through the Mixed Tourism Fund, provides financial support to small and medium scale tourism operators; State level Tourism Corporations, which support tourism promotion

campaigns; and the non-governmental organizations *Conservation International* and the *Tropical Andes Programme (PAT),* which provide technical and financial support to community-level tourism.

214. MARN (through the *Yacambú Quibor* Hydraulic System and *Hidrolara*), the Uribante Caparo Anonymous Development Company, and the Ministry of Planning and Development through its regional Andes Development Corporation (CORPOANDES) and Southwest Development Corporation (CORPOSUROESTE) are all carrying out reforestation activities in various parts of the project area, including the establishment and renovation of shade coffee stands.

215. The *Yacambú Quibor* Hydraulic System and *INPARQUES*, both dependencies of MARN, are carrying out environmental education activities in the area. INPARQUES, within the context of the National System for Environmental Vigilance and Control, also is responsible for protection and regulation in protected areas. INPARQUES, together with local universities and PAT, is formulating a proposal for a Páramo Biosphere Reserve, which would cover a significant area of the Merida Mountain Cordillera, both within and outside the *páramos* themselves.

216. The *Ministry of Agriculture and Lands*, through the *National Institute of Lands* (INTI) is investing in the titling and agrarian registry of the lands of farmers in the zone. *Municipal authorities* carry out planning of municipal development activities and also maintain fiscal registries. *Regional Councils for the Planning and Coordination of Public Policy* also contribute to planning by guaranteeing that State level development plans are articulated with regional plans, while *State Councils for Planning and Coordination of Public Policy* act as consultative, advisory, coordinating and technical support body in relation the public administration of the states that make up the area.

217. Under the **baseline scenario**, the degree to which biodiversity conservation goals are mainstreamed into productive systems will continue to be limited. The Government will make significant investments in promoting sustainable coffee production, emphasizing production systems which favour the protection of hydrological catchments (i.e. shade coffee rather than sun coffee). However for many farmers shade coffee and other BD-friendly productive systems will continue to have limited financial attractiveness compared to available alternatives such as dairy farming, due to the dispersed and disconnected nature of pilot initiatives to date aimed at accessing niche markets and obtaining benefits from other goods and services provided by such systems (such as timber, non-timber forest products and environmental services). Due to the inadequacy of the tools available to land use planners and managers, the land use systems applied by local producers in accordance with plans and ordinances will not necessarily correspond to the considerations of land use potential, biodiversity and environmental vulnerability. In consequence, there will be a continued loss of the biodiversity value of the landscape, and local farmers will fail to realize the full potential of the natural resources which they manage to contribute in a sustainable manner to their livelihoods. In addition, key water catchment areas are likely to suffer continued degradation, resulting in the loss of hydrological services currently provided to downstream users.

Global environmental objective

218. The project seeks to maintain the value for biodiversity of the landscape mosaic in the coffee/cattle rearing zone of the Mérida Cordillera. This will contribute to the biodiversity conservation value of the productive landscape of the Mérida Cordillera as a whole.

Alternative

219. **GEF incremental support** will focus on supporting and coordinating pilot initiatives of BD-friendly production, organization and planning, in seven key municipalities, leading to their eventual replication throughout the project's target area. A network of public, civil society and community-based institutions and organizations in the area will be consolidated, enabling their respective initiatives to be coherent, coordinated and complementary.

220. Under **the GEF alternative**, a critical mass of farmers will have access to an increased range of productive practices and systems which are favourable for biodiversity compared to the current alternatives, and increased opportunities to integrate different productive options effectively. This will be the result of a combination of GEF support and key initiatives co-financed through MINEP/CIARA, which is the Government institution which will be most directly involved at field level in the support of smallholder production systems based on shade coffee. MINEP/CIARA will co-finance the project through three of its initiatives: its programme for agricultural extension and support to poor rural communities in pilot municipalities (PRODECOP); its participation in the National Coffee Plan/*Plan Café*, which will focus on technical assistance and extension; and its provision of financial support to coffee production through rural banks (*cajas rurales*). These investments by MINEP/CIARA currently form part of the baseline scenario thereby demonstrating the projects consistency with Government priorities and its high level of commitment to BD-friendly productive systems. It is important to note however that under the GEF alternative a sizeable portion of this baseline programming will be *redirected* as co-financing, given that it is considered essential for the success of the project.

221. The resulting **global benefit** will be the conservation of the habitat value of 19,750 km^2 of the productive landscape of the coffee/cattle rearing zone of the Mérida Cordillera, thereby contributing to the conservation of the Northern Andean Bioregion (see paragraph 128). Additional, incidental global benefits will include reduced land degradation, increased carbon storage and reduced application of persistent organic pollutants (see paragraph 133). **Local benefits** will be social, productive and environmental in nature: incomes will be improved and diversified as a result of the increased viability of traditional productive activities and the adoption of additional new ones, local people will have increased access to basic services and food security, and their vulnerability to extreme economic and environmental events will be reduced (see paragraph 131). **Sub-national and national benefits** will include increased sustainability of the regional development of this area, protected hydrological services for hydroelectric and irrigation schemes, increased stability of demographic patterns, and increased diversification of production and exports (see paragraph 132).

222. Under the GEF alternative, farmers will have increased access to opportunities and motivation (such as premium certified markets with environmental criteria) which will ensure that the support to shade coffee provided by the National Coffee Plan does not lead to the expansion of shade coffee within natural forests. This risk will further be minimized by additional strategies set out in paragraph 122).

Co-financing

223. Details of co-financing sources are provided in the Co-Financing Table (Table 1 of the Executive Summary) and in the Incremental Cost Analysis (Table 2 of the Executive Summary).

224. A breakdown of co-financing by project Outcome is presented in Tables 1 and 2 of the Executive Summary). The $29,545,061 co-financing to be provided by MINEP/CIARA will be *redirected* in direct support to project objectives (notably Outcomes 1, 2 and 3), as a result of negotiations held during the PDF-B phase in which MINEP/CIARA defined specific activities which it would be willing to co-finance. In addition to this openness on the part of MINEP/CIARA, the timing of project preparation was opportune as the National Coffee Plan (which accounts for a large proportion of the MINEP/CIARA co-financing) is still currently in its final stages of formulation (it has been approved by the Executive and broad lines of action have been identified, but there still remains auspicious flexibility at the activity level). This co-financing will be channeled under three separate initiatives of MINEP/CIARA: the programme for agricultural extension and support to poor rural communities, technical assistance and extension through the National Coffee Plan/*Plan Café* and the provision of financial support to coffee production (maintenance and harvest) through rural banks (*cajas rurales*).

225. The provision by MINEP/CIARA of agricultural extension and support and technical assistance will directly contribute to, and be essential for, the achievement of Outcome 1 (*Producers in pilot area have the organizational and technical capacities to maintain and diversify BD-friendly productive*

systems) in the 7 pilot municipalities and for its replication in 13 other municipalities (under Outcome 3). This co-financing directly complements a number of project activities, for example the provision of training to producer organizations in relation to technical, organizational and managerial issues, the provision of legal support, the design and monitoring of financial and coordination mechanisms by producer groups, participation in markets through Government social programmes (e.g. Red Mercal), the creation of Local Coffee Fairs and the establishment of schemes for participatory definition, measurement and management of environmental indicators.

226. The co-financed financial support to coffee production (maintenance and harvest) to be provided by MINEP/CIARA through rural banks (*cajas rurales*) will directly contribute to *Outcome 2* of the project, and specifically to Output 2.4 (*Economic incentives are developed and financial mechanisms established allowing producers in pilot municipalities to apply BD-friendly productive practices*) in the 7 pilot municipalities, and to the replication of this in the 13 other municipalities.

Systems boundary

227. The project will have a geographical, rather than exclusively sector-based focus. This is justified by the fact that the processes which are currently leading to the loss of the habitat value of the area are not specific to the dynamics of one particular sector, but are rather the product of complex interactions between a range of sectors within the context of smallholder farming economies.

228. The principal geographical area of intervention of the project, for the promotion of BD-friendly productive practices, will be the coffee/cattle rearing zone of the Mérida Cordillera. This is defined as the area including all shade coffee stands in the Cordillera, plus a 5km wide band surrounding them, where the dairy production which represents the principal threat to shade coffee is concentrated (Map 5). This is the zone within the Cordillera where dynamics of habitat loss are most pronounced (see paragraph 5).

229. The actions of the project related to the support of planning and capacity building at municipal level will take as their system boundary the political limits of the 7 pilot municipalities in question; the boundary of the replication area of these activities will be the political limits of 13 target municipalities, including only that part of their area which falls within the Mérida Cordillera (Map 9).

230. The area covered by the Project Goal is the Mérida Cordillera as a whole, minus the *páramo* zone (above 3000 m.a.s.l.) which is covered by the regional GEF project '*Conservation of the Biodiversity of the Páramo in the Northern and Central Andes*' (see paragraph 164).

Summary of Costs

209. The cost of the Full project is $36,896,961, of which $7,351,900 is requested from GEF, and $29,545,061 will be provided by co-financing.

PART II Logical Framework Analysis

Project strategy	Indicators				
Goal: *To maintain the value for biodiversity of the mosaic of land uses in the productive landscape of the Mérida Cordillera*					
	INDICATORS	**Baseline**	**Targets**	**Sources of verification**	**Assumptions**
OBJECTIVE: *Farmers' systems in the coffee/cattle-rearing zone of the Mérida Cordillera remain BD friendly.*	Hectares of shade coffee throughout the zone which are not converted to less BD-friendly land uses.	**362,400 ha**, representing 18.3% of the area	**362,400 ha** at mid term and **362,400 ha** at project end	Satellite imagery	• Continued receptivity on the part of actors in the "target area for replication" to participate in replication of pilot experiences • Continued Government commitment to the smallholder sector
	Hectares of non-coffee forest cover (including fallows) throughout the zone, which are not converted to other uses.	**641,700 ha**, representing 32.5% of the total	**641,700 ha** at mid term and **641,700 ha** at project end	Satellite imagery	
	Non-coffee forests throughout the CCRZ do not suffer increased disturbance	299,400 km^2 without disturbance 492,300 km^2 slightly disturbed 291,100 km^2 moderately disturbed 268,100 km^2 highly disturbed	299,400 km^2 without disturbance 492,300 km^2 slightly disturbed 291,100 km^2 moderately disturbed 268,100 km^2 highly disturbed	Satellite imagery	
	The structural and species diversity in forest (coffee and non-coffee) throughout the project area does not decrease	*To be determined through participatory measurements at project start-up*	*Targets to be set once baseline values are established*	Participatory measurements by local stakeholders	
	The areas of forest (coffee and non-coffee), in key areas for connectivity between protected areas do not decrease	74,987 ha of shade coffee 183,046 ha of non-coffee forest	74,987 ha of shade coffee 183,046 ha of non-coffee forest	Satellite imagery	

	Vegetation patches in key areas for connectivity between protected areas do not suffer increased fragmentation	78 patches (42 less than 1,000 ha, 29 between 1,000 and 9,999 ha and 7 greater than 10,000 ha)	No more than 78 patches (42 less than 1,000 ha, 29 between 1,000 and 9,999 ha and 7 greater than 10,000 ha)	Satellite imagery	
	Non-coffee forest in key areas for connectivity between protected areas does not suffer increased disturbance	29,759 ha without disturbance 81,242 ha slightly disturbed 33,862 ha moderately disturbed 38,235 ha highly disturbed	29,759 ha without disturbance 81,242 ha slightly disturbed 33,862 ha moderately disturbed 38,235 ha highly disturbed	Satellite imagery	
	Number of families (by socioeconomic level and gender of family head) with access to water supply, sanitation, electricity, credit and food security, as a result of BD-friendly productive activities	*To be determined through household surveys at project start-up*	*Targets to be set once baseline values are established*	Household surveys	
Outcome 1: Producers in pilot area have the necessary capacities to carry out BD-friendly productive systems	Number of farming families within the pilot area of the coffee/cattle rearing zone applying BD-friendly productive practices as a result of skill enhancement programme	**35,000 farming families** with shade coffee (*this baseline figure will be broken down by farm size, and area of shade coffee in household survey at project start-up*)	**35,000 farms** with shade coffee at mid-term and **35,000 farms** at project end (*targets to be broken down by farm size and area of shade coffee once baseline values are established*)	Household surveys	• National and international prices of BD-based products are not subject to major downward fluctuations • Government

	Number of farms within the pilot area of the coffee/cattle rearing zone with certified coffee, by type of certification (shaded, Fairtrade, bird-friendly, organic)	**41 member farm families** of the Quebrada Azul cooperative have organic certification. **450 producers** in COOPALAR cooperative and 350 in CROCAF producing Fairtrade (non-organic) coffee **Zero farm families** with Bird-friendly certification. *Additional information on shaded, Fairtrade and Bird-friendly coffee will be obtained at project start-up*	**200 families** with organic certification at mid-term and a total of **400 families** at project end. *Goals for other forms of certification to be set once baseline values are confirmed*	Certification registers	policies on coffee exports permit producers to meet commitments to purchasers • Extreme fluctuations in exchange and interest rates do not occur • Certification costs remain within reasonable limits • BD-friendly crops are not affected by major pests or diseases • Venezuela continues to be a viable and attractive tourist destination
	Number of local farm families within the pilot area of the coffee/cattle rearing zone (with a monthly income <$200) investing in eco-tourism	**64 farm families** (0.2% of the total)	**1,000 farm families** (3% of the total) at mid-term and **3,500 farm families** (10% of the total) at project end	Registers of participation in support programmes Visitation registry	
	Number of farm families within the pilot area of the coffee/cattle rearing zone with 10% increase in annual income due to the application of BD-friendly productive practices	On average shade coffee contributes around $425 per year to family incomes *(to be corroborated and related to overall family incomes by household survey at project start-up)*	**3,500 farm families** (10% of the total) at project mid-term, and **10,500 farm families** (30% of the total) at project end	Household surveys	

	Value received by producers within the pilot area of the coffee/cattle rearing zone from BD-friendly products traded (shade coffee and rural tourism)	Typical annual net income from smallholders' shade coffee is around $425 per household (a total of $14,875,000 among 35,000 producer families). Typical annual net income from rural tourism is around $1560 per household (a total of $99,840 among 64 participant families at present) *Figures to be corroborated by household survey at project start-up*	**3,500 farm families (10% of the total)** with net income from shade coffee increased to $1,700/ha/year at mid term and **10,500 (30% of the total)** at project end **1000 farm families** receiving $1560 per year at mid term (**a total value of $1,560,000**) and **3,500** at project end (**a total value of $5,460,000**)	Household surveys	
	Number of families within the pilot area of the coffee/cattle rearing zone with one or more additional sources of family income due to the incorporation of BD-friendly productive practices	**None at project start-up**	**7,000 farm families** (20% of the total) and **17,500 farm families** (50% of the total) at project end	Household surveys	

	Number of producer organizations within the pilot area of the coffee/cattle rearing zone, participating in BD-friendly productive practices, which are operating in a consolidated manner	- Quebrada Azul certified coffee cooperative (**41 member families**) - ASOBAP rural tourism association, which has **85 member families** in the CCRZ. **- 450 producers** in COOPALAR cooperative and **350 producers** in CROCAF producing Fairtrade (non-organic) coffee.	7 consolidated shade coffee organizations (with a total of 500 members) and 7 rural tourism associations (with a total of 525 member families at mid-term and 1050 at project end)	Producer surveys	
	Number of bird and mammal species observed in transects in shade coffee, non-coffee forest and agricultural/pasture land, by species conservation priority	*To be determined through participatory measurements at project start-up*	*Targets to be set once baseline values are established*	Participatory measurements by local stakeholders	
	Hectares of productive landscape in the pilot area of the coffee/cattle rearing zone covered by environmental service compensation schemes	**None**	**84,000 ha (17.5% of the total)** at project mid-term and **168,000 ha (35% of the total)** at project end (Dos Cerritos, Boconó-Tucupido and Yacambú Quíbor catchments)	Registers of environmental service compensation schemes	
Output 1.1: Producers' organizations are consolidated and fully functional.					
Output 1.2: A Capacity Building Programme is developed and delivered for the application of BD-friendly productive practices, certification standards, marketing know-how for BD based businesses and environmental service payment schemes					
Output 1.3: An awareness raising programme on the contribution of BD to livelihood improvement is developed and delivered in pilot municipalities					
Output 1.4: An information management system is developed and operational to strengthen links between producers in pilot municipalities and					

consumers.					
Outcome 2: Enabling policy, planning, and regulatory frameworks support BD-friendly productive systems in pilot municipalities	Numbers of municipalities where declarations of land management categories take into account considerations of BD conservation (connectivity, vulnerability and potential for sustainable use)	**None at project start**	**50%** at mid-term and **100%** at project end	Review of planning tools and land management systems	• The overall Government policy framework remains supportive of BD-friendly participatory planning
	Number and value of financing instruments and economic incentives available for BD-friendly productive systems in pilot municipalities, by type of scheme and productive system	CIARA will provide credit for shade coffee through rural banks (*cajas rurales*) worth $291,627 in 2006.	CIARA support through *cajas rurales* will be $309,478 per year at mid-term and $328,420 per year at project end.	Review of finance and incentive schemes Credit records	
Output 2.1: Mechanisms are established for participatory decision-making in land use planning, zoning and management in accordance with BD conservation principles					
Output 2.2: A capacity building programme is developed for Municipal Offices, to support planning and management of the productive landscape in accordance with BD conservation and sustainable use principles					
Output 2.3: Technical guidelines are developed and orient the incorporation of BD principles into planning tools and land management systems					
Output 2.4: Economic incentives are developed and financial mechanisms established allowing producers in pilot municipalities to apply BD-friendly productive practices					

Outcome 3: Pilot municipalities operate as platforms for the interchange, dissemination and replication of experiences on best practices and lessons learnt	Number of municipal authorities and producer organizations in the replication municipalities with key representatives aware of best practice and lessons learnt on BD friendly strategies in pilot municipalities	**None**	**13 municipal authorities** and **19 producer organizations** (with a total of 450 members at mid term and 950 at project end).	Interviews with representatives	• Continued commitment to collaboration among public, civil society and community-level entities
	Number of bird and mammal species observed in transects in shade coffee, non-coffee forest and agricultural/pasture land in replication municipalities, by species conservation priority	*To be determined through participatory measurements at project start-up*	*Targets to be set once baseline values are established*	Participatory measurements by local stakeholders	
	Hectares of shade coffee in the target area for replication of the coffee/cattle rearing zone with, or in process of obtaining, certification (organic, Bird friendly or Fairtrade)	**Zero** hectares at project start-up.	8,750 ha (10% of total area of coffee) at project mid term and 17,500 ha (20% of total area) at project end.	Satellite imagery	
	Hectares of non-coffee forest in the target area for replication of the coffee/cattle rearing zone	**339,400 km^2** of non-coffee forest cover (including fallows)	**339,400 km^2** at project mid-term and **339,400 km^2** at project end	Satellite imagery	

	Number of local farm families in the target area for replication of the coffee/cattle rearing zone (with a monthly income <$200) investing in ecotourism	**536 farm families** (1% of total)	**1,500 farm families** (3% of total) at mid-term and **3,000** (6% of total) at project end	Registers of participation in support programmes	
	Hectares of productive landscape in the target area for replication of the coffee/cattle rearing zone covered by environmental service compensation schemes	**205,400 ha** (Uribante river watershed), equivalent to 12.7% of the area	**280,975 ha** (14.2% of the total) at project mid-term and **311,550 ha** (15.8% of the total) at project end	Interviews with scheme administrators	
	Number of target municipalities for replication effectively covered by planning tools, land management systems and appropriately applied policies incorporating BD principles	**None**	**6 municipalities** at project mid-term and **13 municipalities** at project end.	Review of policies, programmes, plans and regulations	• The overall Government policy framework remains supportive of BD-friendly participatory planning
Output 3.1: Experiences and methodologies documented on mainstreaming BD principles into productive systems					
Output 3.2: A Knowledge Dissemination Strategy is developed and tailored to different groups					
Output 3.3: A consolidated network of public, civil society and community-level entities, coordinating and harmonizing the development and replication of pilot level experiences in the long term					
Outcome 4: Adaptive management principles supported by monitoring and	Numbers of annual work plans and budgets which adequately take into account the results of monitoring and evaluation	**None**	**100%** of annual work plans and budgets	Review of annual work plans and budgets	

evaluation tools guide project implementation and management functions	Numbers of documents on lessons learnt produced and disseminated within the GEF system	**None**	**One** per year.	Review of documentation.	
Output 4.1: A monitoring and evaluation strategy and financing plan developed and applied facilitating effective adaptive project management					
Output 4.2: Methodologies developed and applied for documentation of lessons learnt, enabling effective feedback into GEF programming					
Output 4.3: Project management					

Table 3. Indicative Outputs, Activities and quarterly workplan

Output	Activities	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7	
		S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14
Output 1.1: Producers' organizations are consolidated and fully functional	1. Training workshops for producer organizations		x	x	x	x									
	2. Legal support to producer organizations.			x	x	x									
	3. Design and monitoring of coordination mechanisms					x									
	4 . Design and implementation of financial mechanisms for producer organizations			x	x										
	5. Legal and fiscal registers of producer organizations				x	x									
	6. Production of promotion materials for producer organizations					x									
	7. Establishment of quality control tools.		x	x											
	8. Training in management and negotiation for leaders of organizations.						x								
	9. Creation of an umbrella organization of producer groups							x	x	x					
	10. Creation of product brands							x	x	x	x				
	11. Negotiation of marketing arrangements through Government social programmes (e.g. Red Mercal)					x	x								
	12. Creation of Local Coffee Fair.									x	x				
Output 1.2: A capacity building programme is developed and delivered for the application of BD-friendly productive practices, environmental service payment schemes and the realization of the full value of ecosystem	1. Training in activities related to BD-friendly production, product certification, rural tourism and handicraft products.		x	x	x	x	x	x	x	x	x				
	2. Establishment of a network of pilot initiatives				x	x	x	x	x	x	x	x	x		
	3. Training of technicians in CIARA and other institutions on exploration and promotion of BD-friendly productive practices.		x	x		x		x		x					
	4. Training and advice on environmental service			x	x	x	x	x							

Output	Activities	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7	
		S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14
goods and services	compensation schemes.														
	5. Creation and maintenance of a web site on project-related themes		x	x	x	x	x	x	x	x	x	x	x	x	
	6. Development and implementation of short e-learning courses related to new productive activities.			x	x	x	x								
Output 1.3: An awareness raising programme on the contribution of BD to livelihood improvement is developed and delivered in pilot municipalities.	1. Participatory appraisal and planning workshops on BD and BD-friendly practices.		x		x						x				
	2. Workshops on BD in pre-school, primary and secondary education centres			x	x	x	x	x	x	x	x				
	3. Production of posters and educational materials on BD and BD-friendly practices for schools		x								x				
	4. Radio programmes and newsletters related to local problems affecting BD .		x	x	x	x	x	x	x	x	x	x	x	x	x
	5. Support to local environmental groups.		x				x				x				
	6. Establishment of schemes for participatory definition, measurement and management of environmental indicators.			x	x										
Output 1.4: Information management system developed to strengthen links between producers in pilot municipalities and consumers.	1. Design and implementation of systems for collection and management of information on production and markets.		x	x	x										
Output 2.1: Mechanisms are established for participatory decision-making in land use planning, zoning and management in accordance with BD conservation principles	1. Installation of web tools for consultation of information on environmental planning and management by local actors.				x	x									
	2. Establishment of GIS tools for use by municipal and local planning committees						x	x	x	x					
	3.Creation and training of Geographical Information Units in producer organizations				x	x	x	x	x	x					
Output 2.2: A capacity building programme is developed for Municipal Offices, to support planning and management of the productive landscape in accordance with BD principles	1. Workshops and field trips by functionaries to practical experiences with planning and BD-friendly practices .			x	x										
	2. Follow-up and systematization of experiences of mainstreaming BD into plans and programmes.			x	x	x	x	x	x	x	x				
	3. Creation of technical support committee														
	4. Seminars on relation between BD and endogenous development in policies, programmes, plans and regulations		x				x				x				
	5. Inventories of geographical information for each pilot municipality		x												
	6. Assessment of institutional capacities in municipal governments and local dependencies of		x	x											

Output	Activities	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7	
		S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14
	ministries														
	7. Design of interconnected GIS between pilot municipalities and ministerial dependencies.			x	x										
	8. Training of municipal and local ministerial personnel in GIS				x	x									
	9. Provision of technical equipment to municipal and local ministerial offices for interconnected GIS				x	x									
	10. Compilation of available information and construction of database and cartography for pilot municipalities				x	x									
	11. Facilitate the formulation and application of financial mechanisms (environmental taxes) to support the environmental operations of municipal offices over the long-term.		x	x	x										
Output 2.3: Technical guidelines orientate the incorporation of BD principles into planning tools and land management systems	1. Production, validation and dissemination of technical guidelines		x	x	x										
	2. Training of municipal and local ministerial staff in interpretation of results of GIS analyses and formulation of legal instruments ensuring BD mainstreaming.				x			x			x				
Output 2.4: Economic incentives are developed and financial mechanisms established which allow producers in pilot municipalities to apply BD-friendly productive activities	1. Establishment of mechanisms for creation and maintenance of a guarantee fund for credits for BD-friendly practices.			x											
	2. Legal and technical support to producer organizations in relation to land tenure.			x	x										
	3. Creation of financial tools to support activities related to certification and production branding, rural tourism, livestock intensification and handicrafts		x												
	4. Formulation and evaluation of system for compensation of environmental services.		x	x	x	x									
	5. Facilitation of negotiations between producers and consumers of environmental services.			x	x	x									
	6. Organizational and administrative support for the establishment of environmental service compensation schemes.				x	x									
	7. Establishment of systems for the monitoring of environmental services.					x									
Output 3.1: Experiences and methodologies documented on mainstreaming BD principles into productive systems	1. Production of printed materials and videos in support of replication	x								x	x				
	2. Maintenance of a web page on advances, methodologies, techniques and technical support materials		x	x	x	x	x	x	x	x	x	x	x	x	x

Output	Activities	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7	
		S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14
	3. Local seminars on experiences and methodologies				x				x		x		x		
Output 3.2: Knowledge dissemination strategy is developed and tailored to different groups	1. Creation of a commonwealth of municipalities in the Sierra de Portuguesa.									x	x				
	2. Consolidation of a leadership group and super-municipal networks for interchange of experiences .									x	x				
	3. Itinerant leadership programme to promote interchanges between community leaders.							x	x	x	x	x	x	x	x
	4. Visits to pilot municipalities by actors in replication target area.											x	x	x	
Output 3.3: A consolidated network of public, civil society and community-level entities, coordinating and harmonizing the development and replication of pilot level experiences in the long term	1. Formation and organization of the network.									x	x				
	2. Development of self-financing mechanisms for the network .										x				

PART III Tracking tools

I. Project General Information

1. Project name:
Biodiversity conservation in the productive landscape of the Venezuelan Andes

2. Country:
Venezuela

National Project :___X____ Regional Project:_____ Global Project:_____

3. Name of reviewers completing tracking tool and completion dates:

	Name	Title	Agency
Work Program Inclusion			
Project Mid-term			
Final Evaluation/project completion			

4. Funding information

GEF support: $7,699,400
Co-financing: $29,545,061
Total Funding: $37,244,461

5. Project duration: ***Planned*** ____7___ years ***Actual*** _____ years

6. a. GEF Agency: x UNDP □ UNEP □ World Bank □ ADB □ AfDB □ IADB □ EBRD □ FAO □ IFAD □ UNIDO

b. Lead Project Executing Agency (ies):
CIARA Foundation (Ministry of Popular Economy).

7. GEF Operational Program:
□ drylands (OP 1)
□ coastal, marine, freshwater (OP 2)
x forests (OP 3)
x mountains (OP 4)
□ agro-biodiversity (OP 13)
□ integrated ecosystem management (OP 12)
□ sustainable land management (OP 15)

Other Operational Program not listed above:_____

8. Project Summary:

The Mérida Cordillera is a mountain range covering an area of 30,732km^2 in western Venezuela, with high levels of species and ecosystem diversity. The latter is currently threatened by the loss of biodiversity-friendly productive systems such as shade coffee which have predominated in this productive landscape for over two centuries. This 7 year project, to be executed by the CIARA Foundation of Venezuela's Ministry of Popular Economy (MINEP), will address a variety of key barriers impeding the effective mainstreaming of biodiversity into this biodiversity rich productive landscape and arrest current trends affecting the BD value of this landscape mosaic. The objective of the project is that farmers' systems remain BD-friendly, as a result of the following outcomes i) increased capacities among producers to apply BD-friendly practices; ii) enabling policy, planning and regulatory frameworks and iii) replication processes from pilot areas. Principal co-financing will be provided through MINEP's National Coffee Plan.

9. Project Development Objective:

To increase the biodiversity value of the productive landscape of the Mérida Cordillera.

10. Project Purpose/Immediate Objective:

Farmers' systems in the coffee/cattle-rearing zone of the Mérida Cordillera remain BD friendly

11. Expected Outcomes (GEF-related):

1. Producers in the pilot area have the necessary capacities to carry out BD-friendly productive systems
2. Enabling policy, planning, and regulatory frameworks support BD-friendly productive systems in pilot municipalities
3. Pilot municipalities operate as platforms for the interchange, dissemination and replication of experiences on best practices and lessons learnt
4. Adaptive management principles supported by monitoring and evaluation tools guide project implementation and management functions.

12. Production sectors and/or ecosystem services directly targeted by project:

a. Please identify the main production sectors involved in the project. Please put "**P**" for sectors that are primarily and directly targeted by the project, and "**S**" for those that are secondary or incidentally affected by the project.

Agriculture ___P_____
Fisheries_____
Forestry_____
Tourism _____P_____
Mining_____
Oil_____
Transportation_____
Other (please specify)_____

12. b. For projects that are targeting the conservation or sustainable use of ecosystems goods and services, please specify the goods or services that are being targeted, for example, water, genetic resources, recreational, etc

1. Water
2. Biodiversity
3. Carbon
4. Landscape

II. Project Landscape/Seascape Coverage

13. a. Extent of the landscape where the project will directly and indirectly contribute to biodiversity conservation or the sustainable use of its components

Targets and Timeframe **Project Coverage**	**Foreseen at project start**	**Achievement at Mid-term Evaluation of Project**	**Achievement at Final Evaluation of Project**
Landscape area directly covered by the project (ha)	**480,200 ha of coffee/cattle rearing zone** where pilot activities in support of BD-friendly production systems will be carried out, and **604,100 ha making up 7 municipalities** where pilot activities of municipal strengthening and planning will take place.		
Landscape area indirectly covered by the project (ha)	**1,494,810 ha of coffee/cattle rearing zone** where pilot activities in support of BD-friendly production systems will be replicated, and **928,710 ha, making up 13 municipalities** where pilot activities of municipal strengthening and planning will be initially replicated		

13. b. Protected Areas within the landscape covered by the project

	Name of Protected Areas	IUCN and/or national category of PA	Extent in hectares of PA in project area	Total area of PA (ha)
1.	Sierra Nevada	National Park	110,650	276,446
2.	Sierra La Culata	National Park	36,285	200,400
3.	Tapo-Caparo	National Park	117,130	139,000
4.	Juan Pablo Peñalosa (Páramos Batallón y La Negra)	National Park	15,967	75,200
5.	Yacambú	National Park	7,723	14,580
6.	Dinira	National Park	10,690	45,328
7.	Guache	National Park	12,200	12,200
8.	Chorro del Indio	National Park	2,129	17,000
9.	Terepaima	National Park	9,867	18,650
10.	El Tama	National Park	56,990	139,000
11.	Gral. Cruz Carrillo (Guaramacal)	National Park	21,000	21,000

III. Management Practices Applied

Targets and Timeframe Specific management practices that integrate BD	Area of coverage foreseen at start of project	Achievement at Mid-term Evaluation of Project	Achievement at Final Evaluation of Project
1. Shade-grown coffee production (agroforestry)	362,400	362,400 *As the project seeks to maintain current levels of shade coffee production and associated products in the productive landscape*	362,400 *As the project seeks to maintain current levels of shade coffee production and associated products in the productive landscape*
2. Rural tourism	52	286	520

14. b. Is the project promoting the conservation and sustainable use of wild species or landraces?

____Yes __X__ No

If yes, please list the wild species (WS) or landraces (L):

Species (*Genus sp*., and common name)	Wild Species (please check if this is a wild species)	Landrace (please check if this is a landrace)
N/A	N/A	N/A

14. c. For the species identified above, ***or other target species of the project not included in the list above (E.g., domesticated species)***, please list the species, check the boxes as appropriate regarding the application of a certification system, and identify the certification system being used in the project, if any. An example is provided in the table below.

Certification **Species**	A certification system is being used	A certification system will be used	Name of certification system if being used	A certification system will not be used
N/A				

14. d. Is carbon sequestration an objective of the project?

□ Yes X No

If yes, the estimated amount of carbon sequestered is: _____

IV. Market Transformation and Mainstreaming Biodiversity

15. a. ***For those projects that have identified market transformation as a project objective****, please describe the project's ability to integrate biodiversity considerations into the mainstream economy by measuring the market changes to which the project contributed. The sectors and subsectors and measures of impact in the table below* ***are illustrative examples, only****. Please complete per the objectives and specifics of the project.*

Name of the market that the project seeks to affect (sector and sub-sector)	**Unit of measure of market impact**	**Market condition at the start of the project**	**Market condition at midterm evaluation of project**	**Market condition at final evaluation of the project**
N/A				

15. b. Please also note which (if any) market changes were directly caused by the project.

V. Improved Livelihoods

16. For those projects that have identified improving the livelihoods of a beneficiary population based on sustainable use /harvesting as a project objective*,* please list the targets identified in the logframe and record progress at the mid-term and final evaluation. An example is provided in the table below

Improved Livelihood Measure	**Number of targeted beneficiaries (if known)**	**Please identify local or indigenous communities project is working with**	**Improvement Foreseen at project start**	**Achievement at Mid-term Evaluation of Project**	**Achievement at Final Evaluation of Project**

1. Increased incomes	10,500	Small scale coffee producers	10% increase in incomes		

VI. Project Replication Strategy

17. a . Does the project specify budget, activities, and outputs for implementing the replication strategy? Yes _X_ No___

17. b. Is the replication strategy promoting incentive measures & instruments (e.g. trust funds, payments for environmental services, certification) within and beyond project boundaries?
Yes _X_ No___

If yes, please list the incentive measures or instruments being promoted:
Payment for environmental services

17. c. For all projects, please complete box below. Two examples are provided.

Replication Quantification Measure	**Replication Target Foreseen at project start**	**Achievement at Mid-term Evaluation of Project**	**Achievement at Final Evaluation of Project**
1. Number of producers in ZCG producing certified shade coffee	17,500		
2. Number of families in ZCG participating in rural tourism	3,000		
3. Hectares of productive landscape covered by environmental service compensation schemes	**280,975 ha** (14.2% of the total) at project mid-term and **311,550 ha** (15.8% of the total) at project end		
4. Number of target municipalities effectively covered by planning tools, land management systems and appropriately applied policies incorporating BD principles	13		

VII. Enabling Environment

For those projects that have identified addressing policy, legislation, regulations, and their implementation as project objectives, please complete the following series of questions: 18a, 18b, 18c.

18. a. Please complete this table at **work program inclusion for each sector** that is a primary or a secondary focus of the project.
Please answer YES or NO to each statement under the sectors that are a focus of the project.

N/A

Sector Statement: Please answer YES or NO for each sector that is a focus of the project.	Agriculture	Fisheries	Forestry	Tourism	Other (please specify)	Other (please specify)
Biodiversity considerations are mentioned in sector policy	N/A	N/A	N/A	N/A	N/A	N/A
Biodiversity considerations are mentioned in sector policy through specific legislation	N/A	N/A	N/A	N/A	N/A	N/A
Regulations are in place to implement the legislation	N/A	N/A	N/A	N/A	N/A	N/A
The regulations are under implementation	N/A	N/A	N/A	N/A	N/A	N/A
The implementation of regulations is enforced	N/A	N/A	N/A	N/A	N/A	N/A
Enforcement of regulations is monitored	N/A	N/A	N/A	N/A	N/A	N/A

18. b . Please complete this table at **the project mid-term for each sector** that is a primary or a secondary focus of the project.
Please answer YES or NO to each statement under the sectors that are a focus of the project.

N/A

Sector Statement: Please answer YES or NO for each sector that is a focus of the project.	Agriculture	Fisheries	Forestry	Tourism	Other (please specify)	Other (please specify)
Biodiversity considerations are mentioned in sector policy						
Biodiversity considerations are mentioned in sector policy through specific legislation						
Regulations are in place to implement the legislation						
The regulations are under implementation						

The implementation of regulations is enforced						
Enforcement of regulations is monitored						

18. c. Please complete this table at **project closure for each sector** that is a primary or a secondary focus of the project.
Please answer YES or NO to each statement under the sectors that are a focus of the project.

N/A

Sector **Statement: Please answer YES or NO for each sector that is a focus of the project.**	**Agriculture**	**Fisheries**	**Forestry**	**Tourism**	**Other (please specify)**	**Other (please specify)**
Biodiversity considerations are mentioned in sector policy						
Biodiversity considerations are mentioned in sector policy through specific legislation						
Regulations are in place to implement the legislation						
The regulations are under implementation						
The implementation of regulations is enforced						
Enforcement of regulations is monitored						

All projects please complete this question at the project mid-term evaluation and at the final evaluation, if relevant:

18. d. Within the scope and objectives of the project, has the private sector undertaken **voluntary** measures to incorporate biodiversity considerations in production? If yes, please provide brief explanation and specifically mention the sectors involved.

An *example* of this could be a mining company minimizing the impacts on biodiversity by using low-impact exploration techniques and by developing plans for restoration of biodiversity after exploration as part of the site management plan.

_____
_____
_____
_____
_____

VIII. Mainstreaming biodiversity into the GEF Implementing Agencies' Programs

19. At each time juncture of the project (work program inclusion, mid-term evaluation, and final evaluation), please check the box that depicts the status of mainstreaming biodiversity through the implementation of this project with on-going GEF Implementing Agencies' development assistance, sector, lending, or other technical assistance programs.

Time Frame Status of Mainstreaming	Work Program Inclusion	Mid-Term Evaluation	Final Evaluation
The project is not linked to IA development assistance, sector, lending programs, or other technical assistance programs.			
The project is indirectly linked to IAs development assistance, sector, lending programs or other technical assistance programs.	X	X	X
The project has direct links to IAs development assistance, sector, lending programs or other technical assistance programs.			
The project is demonstrating strong and sustained complementarity with on-going planned programs.			

IX. Other Impacts

20. Please briefly summarize other impacts that the project has had on mainstreaming biodiversity that have not been recorded above.

_____
_____
_____
_____

SECTION III Total Budget and Workplan

Award: 00044022

Award Title: PIMS 2734 BD FSP: Biodiversity Conservation in the Productive Landscape of the Venezuelan Andes

Project ID: 00051604

Project Objective (Atlas Output/Project): *Farmers' systems in the coffee/cattle-rearing zone of the Mérida Cordillera remain BD friendly*

GEF Outcome/Atlas Activity	Responsible party	Source of funds	Atlas Budgetary Account Code	ERP/ATLAS Budget Description/ Input	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Total
					US$	US$	US$	US$	US$	US$	US$	US$
1. Producers in pilot area have the necessary capacities to carry out BD-friendly productive systems	MINEP/CIARA	GEF	Contractual Services - Individ	71400	2,045	7,184	1,035	1,040	1,035	5,249	-	17,587
			Contractual Services-Companies	72100	379,980	424,579	288,436	233,170	286,917	154,001	6,054	1,773,137
			Equipment and Furniture	72200	153,341	-	-	-	-	-	-	153,341
			Supplies	72500	7,667	7,697	7,762	7,800	7,763	7,873	-	46,563
			Professional Services	74100	134,327	134,855	135,990	136,657	136,006	137,939	-	815,776
			Miscellaneous Expenses	74500	11,040	11,085	11,177	11,233	11,179	11,338	16,346	83,396
	Total Outcome Cost				688,400	585,400	444,400	389,900	442,900	316,400	22,400	2,889,800
2. Enabling policy, planning, and regulatory frameworks support BD-friendly productive systems in pilot municipalities	MINEP/CIARA	GEF	Contractual Services-Companies	72100	317,500	408,000	233,000	68,000	3,000	3,000	-	1,032,500
			Grants	72600	1,380,000	-	-	-	-	-	-	1,380,000
			Information Technology Equipmt	72800	80,000	50,000	50,000	-	-	-	-	180,000
	Total Outcome Cost				1,777,500	458,000	283,000	68,000	3,000	3,000	-	2,592,500
3. Pilot municipalities operate as platforms for the interchange, dissemination and replication of experiences on best practices and lessons learnt	MINEP/CIARA	GEF	Travel	71600	-	-	2,500	2,500	2,500	2,500	-	10,000
			Contractual Services-Companies	72100	6,000	26,500	26,500	26,500	16,500	1,500	1,500	105,000
			Grants	72600	-	-	40,000	-	-	-	-	40,000
			Audio Visual&Print Prod Costs	74200	-	-	-	115,000	-	-	-	115,000
	Total				6,000	26,500	69,000	144,000	19,000	4,000	1,500	270,000
4. Adaptive management principles supported by monitoring and	MINEP/CIARA	GEF	International Consultants	71200	-	-	-	49,699	-	-	69,221	118,920
			Local Consultants	71300	-	-	-	2,889	-	-	5,768	8,658
			Travel	71600	9,253	7,354	7,354	12,540	7,458	7,468	13,671	65,097
			Contractual Services-	72100	77,912	37,083	37,083	77,439	37,610	37,657	77,297	381,179

evaluation tools guide project implementation and management functions			Companies									
			Equipment and Furniture	72200	190,037	-	-	-	-	-	-	190,037
			Supplies	72500	5,540	6,285	6,285	5,779	6,375	6,383	5,768	42,415
			Rental & Maintenance-Premises	73100	9,308	10,559	10,559	9,709	10,709	10,723	9,691	71,258
			Professional Services	74100	93,079	105,591	105,591	97,087	95,618	95,738	75,451	668,155
			Audio Visual&Print Prod Costs	74200	1,385	1,571	1,571	1,445	1,594	638	577	8,781
			Miscellaneous Expenses	74500	4,986	5,657	5,657	7,513	5,736	5,743	9,806	45,100
	Total				390,600	174,100	174,100	264,100	165,100	164,350	267,250	1,599,600
			Totals by financing source	GEF	2,862,500	1,244,000	970,500	866,000	630,000	487,750	291,150	7,351,900
				GoV	3,974,448	4,056,537	4,129,469	4,223,257	4,297,922	4,383,480	4,479,948	29,545,061
				GRAND TOTALS	**6,836,948**	**5,300,537**	**5,099,969**	**5,089,257**	**4,927,922**	**4,871,230**	**4,771,098**	**36,896,961**

SECTION IV Additional Information

PART I Other agreements

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Once the GEF Council has approved the project, letter(s) of financial commitment, MOUs with executing agency if relevant, and other official agreements will be added.

PART II Organigram of Project

To be completed once the GEF Council has approved the project.

PART III Terms of References for key project staff and main sub-contracts

(See Separate File)

PART IV Stakeholder Involvement Plan

Summary of consultations and stakeholder participation during PDF-B project preparation

During the PDF-B Phase priority was given to obtaining inputs, guidance and support for project objectives from a wide range of stakeholders, through different mechanisms and in different stages of the Preparation Phase. The following activities were conducted in order to achieve information dissemination, consultation and participation.

- **Meetings with national authorities and one-on-one meetings with agency executives:** Numerous preparatory activities/consultations have taken place including a workshop in June, 2002 in Mérida in which MARN, INPARQUES, several NGOs, academic institutions and UNDP participated to conceptualize the project idea. The concept was subsequently presented to the Board of Directors of MARN, at which time the GEF Focal Point in Venezuela indicated his support for the concept. Prior to preparatory funds approval, several coordination meeting among MARN, PAT, CI and UNDP took place. During the implementation of the preparatory phase, several meeting with local, regional and national authorities have taken place, particularly representatives from MARN, MAT and MINEP/CIARA Foundation.
- **Project Design Workshops**: on two occasions (December and February), early into the PDFB Preparation Phase, meetings that assembled the technical teams responsible for different studies, regional and local institutions and government representatives were held. These fulfilled several functions. On the one hand it was possible in an efficient way to inform stakeholder groups on advances in project preparation work as well as to obtain needed feedback from relevant authorities on institutional arrangements and coordination requirements for the resulting FSP. On the other hand, institutional stakeholder feedback provided an opportunity for enhancing coordination during the PDFB preparation phase, sharing up to date information as inputs to the different PDFB studies/consultancies, and further corroborating and informing project baseline sections and co-financing prospects.
- **Meetings with local institutions/stakeholders**: Throughout the Preparation Phase teams responsible for baseline studies and assessments conducted numerous meetings with regional, state and local institutions with potential or demonstrated interest in the project. The objective of these meetings was to obtain information about their current programs and approaches relating to BD, institutional strengths and weakness, as well as interest and capacities for participating in the project. Coffee grower cooperatives and associations, livestock producer associations and community based organizations were also interviewed and consulted about their activities, perceptions and interests in the project. From these meetings emerged a catalog or baseline of projects being successfully executed and /or well rated by local producers in each area, a set of lessons learnt from failed projects, as well as a list of potential partners and a clearer idea of needs and interests of local institutions and stakeholders, all of which were subsequently fed back into project outcomes, outputs and projected activities.
- **Structured interviews**: Several structured forms of consultation were applied for obtaining specific information in areas such as institutional capacities (for public institutions representing potential partners in the project), crops production and exploitation level (producer associations and cooperatives), techniques applied (producer associations, technical assistance institutions), BD knowledge and application (producer associations, technical assistance institutions), cost structures (producer associations), socio-economic conditions and services available (local social service providers).

- **Workshops with local stakeholders**. During the final stage of the Preparation Phase, a series of six structured workshops (1 to 2 days) and one informal meeting with producers in a very poor community of coffee growers were held in pilot municipalities. Total attendance reached 229 people, ranging from local governments, national and regional agencies with branches at local level, representatives of new government sponsored social programs ("misiones"), cooperatives and other organizations involving producers, as well as individual coffee growers, community based organizations and local NGOs. The objectives of workshops were to characterize problems stemming from the interaction between social and economic conditions and natural resources in each zone, define in a participatory way activities to tackle problems, identify interest groups and their perceptions and expectations of the project. These workshops permitted to consolidate understanding of local realities in order to complete pilot sites profiles and producers stratification and to update and permeate the existing logical framework with local problems and perceptions. The knowledge obtained from these workshops has been extraordinarily useful to provide input into the design of the project and the setting up of realistic institutional arrangements at the local level. Brief reports on the workshops (including basic information about the project approach, problems and solutions identified by participants and photos) were distributed to each participant.
- **Dissemination of information**. In order to promote transparency and facilitate participation, a Communication Plan for the Preparatory Phase was put in place aimed at dissemination of information about the project rationale and objectives. As part of this plan a web page was designed (www.terrandina.org) where reports and other material produced during the Preparation Phase were made available to the general public. A brochure with basic information on the project and targeted to general and local audiences was also produced (2.500 copies) and distributed.

Table 4. Summary of stakeholder groups and potential involvement in project implementation

Stakeholder	Role	Relevance / Interest in project	Participation in project/ potential impact
Private Institutions. National level			
Federación Nacional de Caficultores de Venezuela (FEDECAVE)	Federates coffee farmers from Táchira y Trujillo states (provinces) A member of Junta Nacional de Café	In Trujillo state is located one of pilot areas (Boconó municipality) Principally integrated by medium farmers	Member of Steering Committee Potential member of network to be set up by program
Asociación Nacional de Caficultores (ANACAF)	New institutions that integrate coffee growers from Lara y Portuguesa states A member of Junta Nacional de Café	Pilot municipalities located in both states (Sucre, Morán and Andrés Eloy Blanco) Principally production oriented	Member of Steering Committee Potential member of network to be set up by program
Asociación Nacional de Industriales del Café (ANICAF)	Integrated by more than twenty processing enterprises of national scope A member of Junta Nacional de Café	Important role in the coffee circuit at national level. For thirty years it represented processing industries vis a vis public authorities. May be concerned that their interests may be negatively affected by the project (due to using of alternative commercialization circuits).	Member of Advisory Committee
Asociación Venezolana de Industriales del Café (AVIC)	Recently created institutions with similar role as ANICAF but for smaller processing firms A member of Junta Nacional de Café	Important role in the coffee circuit at national level. May be concerned that their interests may be negatively affected by the project (due to using of alternative commercialization circuits).	Member of Advisory Committee
Public / Private institutions			
National Coffee Council (Junta Nacional del Café)	Integrated by trade associations in the coffee sector and public authorities for coordination of coffee productive circuit	Recently created institution.	Member of Steering Committee
Government institutions with presence in the ZCG			
Ministry of Agriculture and Lands (Ministerio de Agricultura y Tierras/**MAT**)	Formulation and coordination of the execution and follow-up of policies which promote food security, promotion of the development of agro-productive circuits and agro/food systems, and ensure the distribution and correct use of land.	Maximum authority for agricultural planning and projects. Responsible at national level for Plan Café, an important source of baseline activities for this project. Lacks BD – friendly approach in the formulation and execution of its	Member of Steering Committee Recipient of technical assistance to incorporate BD friendly approach in its programs. Recipient of institutional strengthening

Stakeholder	Role	Relevance / Interest in project	Participation in project/ potential impact
		plans	
State Level Units of MAT (**UEMAT**)	In Mérida, the UEMAT coordinates with other bodies through an Inter-institutional Technical Panel with 22 members. Currently planning and defining specific criteria for Plan Café in the state. In alliance with FUNDACITE–Mérida, it is developing an automatized registry of lands, agricultural production, prices of products and inputs etc.	Responsible at the regional level for Plan Café, an important source of baseline activities for this project Poorly staffed for the needs of producers and local authorities. Limitations for technical assistance	Member of Steering Committee (local) Coordination with project activities in order to enhance impacts. Recipient of institutional strengthening and support to incorporate BD approach
Agricultural and Livestock Quarantine Service (Servicio Autónomo de Sanidad Agropecuaria/**SASA**), a dependency of MAT	Provision of plant and animal health services.	Technical assistance on coffee disease control with good prestige among coffee growers Lacks physical and financial resources to broaden the scope of its activities	Partner in technical assistance programs at local level
Fund for the Development of Agricultural, Livestock, Fishery, Forestry and other Sectors (Fondo de Desarrollo Agropecuario, Pesquero, Forestal y Afines/**FONDAFA**), a dependency of MAT	Promotes and finances projects aimed at developing production and productivity in agriculture, livestock, fisheries and other sectors and channels resources for the finance of social programs.	Baseline activities in credit and technical assistance for coffee growers (the most important source of funding for coffee growers in the area of interest) Provides technical assistance to credit recipient principally production oriented	Member of Steering Committee Recipient of technical assistance to strengthen BD friendly approach Partner for credit and technical assistance activities in the project.
Microfinance Development Fund (Fondo de Desarrollo del Sistema Microfinanciera FONDEMI). Autonomous institution dependent from the Ministre of Finance	In charge of creating micro-banks to serve executing agencies of Microcredits Program. (tourism, agriculture, crafts)	Scarce development in the Project area due to its recent creation but will be important in the near future	Potential partner in financing alternative activities.
National Institute of Lands (Instituto Nacional de Tierras/**INTI**), a dependency of MAT	Transformation of rural lands into productive units, determining whether lands are being productively used, assigning land grants and carrying out an agrarian registry.	Lack of land titles is one of problems producers confront in order to secure a credit I n Andres Bello municipality this institution offered to participate in project, conditioning granting of land to conservation compromises	Its activities remove an important barrier producers confront to develop more productive alternatives Potential partner in Conservation promotion in some areas. Member of Advisory Committee
Ministry of Environment and Natural Resources	Coordination of activities for the promotion, conservation, defense,	Lead agent in this project Technical and physical limitations to	Co-Chair of Steering Committee (with MAT).

Stakeholder	Role	Relevance / Interest in project	Participation in project/ potential impact
(Ministerio del Ambiente y los Recursos Naturales /**MARN**)	restoration and improvement of the environment; promotion of land use planning; implementation of control measures to prevent possible environmental damage. Includes the Program for Conservationist Social Infrastructure, which promotes the substitution of natural resource management activities, and has established the National System for Environmental Vigilance and Control.	fulfill its functions. Focal Point for GEF in Venezuela	Partner in project implementation. Recipient of institutional strengthening
State level directorates of MARNR	Processing and deciding on applications for use and occupation of land and natural resources, promotion of cooperation between other public and private entities and MARNR, ensuring the fulfillment of the Plan for Environmental Conservation, Defense and Improvement, the Territorial Land Use Plan and other Natural Resource Plans, and administration of ABRAEs.	At local level implements programs of water preservation such as Programa de Infraestructura Social Conservacionista (Conservation Oriented Social Infrastructure Program) whereas peasant organizations apply for funds to undertake conservation practices in plantations such as coffee, cocoa, blueberries. Technical and physical limitations to fulfil its functions.	Member of Local Coordination Units of Project. Partner in execution of community based conservation projects. Recipient of institutional strengthening
Hydrological companies attached to MARNR (HidroLara and HidroAndes)	Provision of water supply services, and promotion of the transfer of services to municipalities, through the organization of the necessary institutional entities.	Needs technical assistance to implement PSA approaches to pilot areas and to be able to replicate them in other areas under their control	Partner for implementation of water conservation educational programs Recipient of technical assistance. Partner in implementation of PSA activities
National Parks Institute (Instituto Nacional de Parques/**INPARQUES**), a dependency of MARNR	Conservation, administration and management of parks and natural monuments.	Part of area of interest of Project is under INPARQUES regulation, been areas under special administration regime (protected areas) In Andres Bello pilot area Local office showed interest in participating by coordinating workshops for training ad-honorem rangers	Partner in training activities with BD approach Participant (observers) in training activities for replication purposes
Latin American Forestry Institute (Instituto Forestal Latinoamericano/**IFLA**)	Promotion of research into forests and plantations to provide a technical basis which will effectively contribute to the	Has experience in the economic valuation of forest products.	Partner for technical assistance on alternative activities (forestry)

Stakeholder	Role	Relevance / Interest in project	Participation in project/ potential impact
	development of forest resources and the commercialization of forest products		
Foundation for Training and Innovation for Rural Development (Fundacion de Capacitacion e Innovacion para el Desarrollo Rural/**CIARA**) a dependency of the Ministry for the Popular Economy (Ministerio para la Economia Popular/MINEP) and is attached to the National Institute for Rural Development (Instituto Nacional de Desarrollo Rural/INDER)	Seeks the organized participation of rural communities with the objective of improving the quality of life of rural workers, through the generation and transfer of technologies, organization and participation. And the Program for the Development of Rural Communities (**PRODECOP**), aimed at promoting and organizing cooperatives in rural municipalities. Responsible for the National Coffee Plan (**Plan Café**), the **Program for the Support of Endogenous Development**, important government initiatives in line with proposals in this project.	Currently very active but not receiving the full benefit of lessons learnt in relation to BD-friendly practices and systems throughout the project area.	Executing Agency and recipient of lessons learnt through specific training and institutional strengthening
National Institute for Agricultural Research (Instituto Nacional de Investigaciones Agrícolas/**INIA**), a dependency of the Ministry of Science and Technology (Ministerio de Ciencia y Tecnología/MCT)	Advises the Executive on phytosanitary issues and carries out research activities and services for the rural sector.	Research activities on new coffee seeds varieties and fight against diseases	Potential partner in research and development for the Andean coffee sector
Intergovernment Fund for Descentralization (Fondo Intergubernamental para la Descentralización-FIDES)	Provides funds to municipalities and communities for projects, through community participation with special incentives in co-financing to productive sustainable development investment projects	FIDES has among its mandates financing small conservation projects and community initiatives in line with project plans. Could benefit of lessons learnt regarding BD	Potential partner in financing conservation through productive activities projects Beneficiary of information support in relation to BD considerations
University of the Andes (Universidad de los Andes/**ULA**), Ezequiel Zamora National Experimental University (Universidad Nacional Experimental Ezequiel Zamora/**UNELLEZ**), La	Educational institutions with training programs in matters of interest They administer several research centers dedicated to agriculture and environment Branches in several "estados" (provinces) in the Project area.	Some of the centers dependent from these universities participated in studies carried out during preparation phase (BIOCENTRO, ICAE, CIIAL, CIDIAT)	Members of Advisory Committees Partners for studies to be carried out during the implementation phase, for monitoring and evaluation activities and for training programs

Stakeholder	Role	Relevance / Interest in project	Participation in project/ potential impact
Salle University Institute (Instituto Universitario La Salle)			
Regional Government Institutions			
Uribante Caparo Anonymous Development Company (Compañía Anónima de Desarrollo del Uribante Caparo/**DESURCA**)	Responsible for the Uribante-Caparo hydroelectric complex, and has operative units responsible for construction works and watershed conservation. Its technicians provide technical assistance to rural producers, in particular in the restoration of coffee plantations and associated vegetation.	Provides technical assistance to coffee grower associations and community savings banks Limited scope due to lack of resources (staff and finance)	Partner in PSA services programs Recipient of lessons learnt through training and institutional strengthening
Regional Corporations (Corporación de los Andes/**CORPOANDES, FUDECO/ CORPOLLANOS**), dependencies of the Ministry of Planning and Development (Ministerio de Planificación y Desarrollo)	Each one covers several "estados" (provinces). Responsible for elaborating regional plans, in coordination with state governors' offices and municipalities, and the provision of technical support and advice in planning at these levels.	Indirect stakeholders through assistance to State Council for Planning and regional governments. Providers of studies and information about socio economic issues in the project areas. CORPOANDES currently under restructuring	Member of Advisory Committee Participants (observers) in training activities for replication purposes Sources of data about the project area.
Fund for the Development of Special Zones (Fondo para el Desarrollo de las Zonas Especiales/**FONZEDES**)	Delegates to the MPD and thence to CORPOANDES the execution and follow-up of a development plan including double-purpose livestock and short-cycle vegetable crops.	CORPOANDES currently under restructuring	Observer in training activities for replication purposes
State Level Government Institutions			
State Council for Planning and Coordination of Public Policy (Consejo Estadal de Planificación y Coordinación de Políticas Públicas/**CEPCPP**)	Consultative, advisory, coordinating and technical support body in relation the public administration of the states that make up the area.	Coordinating body with backing of government at national and regional level and broad representation of stakeholders at state level. As a new institution has limited institutional strength	Channel for transmitting information about the project and coordinating resources and activities Recipient of technical assistance Member of Steering Committees at local level
Technical Coordination Panel (Mesa Técnica Interinstitucional)	Coordinating body in similar functions to the above mentioned. In some states and/or municipalities participation is restricted to government institutions	Coordinating body with backing of government at national and regional level and broad representation of stakeholders at state level. As a new institution has limited institutional strength	Channel for transmitting information about the project and coordinating resources and activities Recipient of technical assistance Member of Steering Committees at local level

Stakeholder	Role	Relevance / Interest in project	Participation in project/ potential impact
Mérida Institute for Rural Development (Instituto Merideño de Desarrollo Rural/**IMDERURAL**) a dependency of Merida State government	Offers technical assistance and training to agricultural producers, and formulates and executes rural infrastructure projects (irrigation and electrification). Collaborates with MARN in testing water sources, with SASA in the management of coffee diseases and with MAT, INIA and ACEM in checking the origin and destiny of coffee	Good record in coordinating assistance from various government agencies at local level. Could benefit from lessons learnt regarding BD friendly approach	Partner in coordinating technical assistance and training projects from various sources Recipient of technical assistance
Foundation for Science and Technology (Fundación para la Ciencia y la Tecnología/**FUNDACITE**) of Mérida an Lara State, dependencies of the Ministry of Science and Technology (MCT)	Promotion of science and technology, development of technology transfer programs Has implemented technical assistance and technology transfer projects aimed at agricultural producers	Responsible for statewide Communication Network reaching rural areas Co-financing of BD friendly small projects in the project area	Member of Advisory Committee Partner in setting up of communication network for the project Partner in BD projects
Merida Fund for Sustainable Economic development (Fondo Merideño de Desarrollo Económico Sustentable FOMDES), Dependent from state government	Promoting and consolidating tourism, agriculture and micro enterprises. Provides technical assistance and financing for small and medium enterprises in agriculture. Coffee is one of its declared priorities	Principally production oriented	Beneficiary of information support regarding BD considerations Potential partner in credit and technical assistance
Fund for the Development of Portuguesa Stare (Fondo Único para el Desarrollo de Portuguesa/**FUNDESPORT**)	Financial institution dependent of the Portuguesa state government dedicated to centralizing all government funds for productive activities.	Principally production oriented	Potential partner in credit programs Beneficiary of information support regarding BD considerations
Robinson Literacy Program (Misión Robinson) dependent from central government	Massive literacy program with presence throughout the project area	Has not yet reached some of the more isolated rural areas in the interest area	Member of Advisory Committees Coordination with Project Unit for setting up activities in areas of interest to the project
Vuelvan Caras Program (Misión "Vuelvan Caras")	Training and Employment Generation Program. Acts in six "fronts" including tourism and agriculture (training, credit, land adjudication, machinery and technical assistance) through setting up of cooperative enterprises.	Plan Café will direct part of its financing to beneficiaries of this program for founding new coffee farms. CIARA is partner for setting up of cooperatives for this program Principally production oriented	Member of Advisory Committee Partner in youth training and employment programs Beneficiary of information support regarding BD considerations
State Level Trade Organizations			

Stakeholder	Role	Relevance / Interest in project	Participation in project/ potential impact
Asociación de Cafetaleros del Estado Mérida (ACEM)	Statewide coffee growers association constituted in order to receive credits and technical assistance from public programs	Recipient of special credits for coffee plantations renovation, they have not been able to repay	Member of Steering Committee Potential partner in project activities Member of network to be promoted by project
Municipal Level Government Institutions			
Municipal authorities	The highest authority at local level. Broad responsibilities in planning, regulation and technical assistance in production, processing and commercialization of local goods and in organization of cooperatives. Responsibilities in promoting economic development, territorial and environment matters and provision of basic services.	Currently planning and technical assistance functions are under-resourced and do not receive the full potential benefit of lessons learnt.	Member of Coordinating Unit Participation in local orientation of project and recipients of lessons learnt and technical/physical resources for planning,
Municipal Agricultural and Livestock Development Directorates (Direcciones de Desarrollo Agrícola y Pecuario de los Municipios)	Recently created units in the process of setting up plans and programs in agriculture and livestock sector They act as linkage with national financing institutions at the local level and are establishing programs in a participatory way (producers, local institutions)	Ministries of Agriculture and Land and of Planning and Development consider them as principal partners to develop producers support programs. Highly regarded by farmers as partner in developing support programs Been a new institution, could benefit of institutional strengthening Principally production oriented	Member of Coordinating Unit Beneficiary of institutional strengthening. The project foresees equipping them with new technologies and training programs to facilitate the application of BD approach to its activities
Municipal Local or Rural Development Directorates or Institutes (Direcciones o Institutos de Desarrollo Local o Desarrollo Rural)	With presence in some municipalities, these units have broader functions relating to provision of basic services to rural areas and/or territorial and economic activities (industry, tourism, commercialization) promotion and regulation	Units in charge of local development plans and projects, with interest in project participation. In some municipalities showed interest in coordinating activities.	Member of Steering committees Partner in project activities
Technical Agriculture Traning Institute (Escuela Granja Azulita)	Youth training in agriculture, including coffee. Participants come from several states	Active in training for future coffee growers currently not receiving the full benefit of lessons learnt in relation to BD-friendly practices and systems. During workshop demonstrated interest in serving as a host institution for the project	Potential replication effects throughout the coffee production zone. Member of Steering Committee Partner in project training activities
Local Councils for Public Planning (Consejos Locales de Planificación	Consultative, advisory, coordinating and technical support body in relation the public administration of the states that make up the	Wide representation of stakeholders at local level makes them an ideal forum for integrating local concerns.	Member of Steering Committee

Stakeholder	Role	Relevance / Interest in project	Participation in project/ potential impact
Pública/**CLPP**)	area, responsible for design and monitoring. Integrated by mayors, municipal council members, community and neighborhood associations, producers associations and NGOs	Significant component of national planning system	
Producer Organizations			
PACCAS	Coffee commercialization semi official entities integrated by government and producers representatives.	Almost all PACCAs have suffered from administrative problems and lack of funding in recent years and many of them have disappeared. PACCA La Azulita was reactivated through the formation of a new board of directors. 700 members. Good relations with national, regional and local government.	Recipient of technical and financial assistance Member of Steering Committee Participants in networks to be set up by project
Coffee grower cooperatives	They evolved from Peasant Enterprises under the 60s Agrarian Reform Program. Many of them disappeared due to lack of capital, or administrative shortcomings or have reduced scale of operation.	In the area of interest there are successful examples from which lessons could be learnt. Some of them apply BD friendly approaches and export to fair trade markets.	Successful cooperatives as partners in training programs as "best practices" from which lessons could be learnt. Other cooperatives recipients of technical assistance and participants in networks
Coffee Grower Unions Uniones de Productores de Café (UPROCAS)	Local organizations with similar functions to the above mentioned but of more recent creation, they exist in some areas of interest (particularly Yacambú) Some of them have processing units	Cash flow problems affect their operations. Without public financing they are prone to failure Not all of them apply BD practices and systems	Participants in networks to be set up by project in order to benefit of lessons learnt
Rancher organizations For instance, Asociación de Ganaderos de Calderas (ASOGACAL),	Integrated by livestock producers in each area.	May have concerns that their interests will be negatively affected by project. But some of them showed interest in applying BD friendly practices during workshops and in participating in reforestation programs	Members of Steering Committees Partners in projects. Members of networks
Community-based organizations			
Environment conservation organizations (Fundación Defensa Ambiental, Comité conservacionistas in several communities, Asociación de	With presence in all pilot areas under different legal forms, their activities include educational projects, small reforestation projects, advocacy, promotion of ecotourism, among others.	Enthusiastic groups mainly integrated by young people, they often lack resources to develop their initiatives and act in isolation from government programs	Member of steering committees Recipient of technical and financial assistance Partners in educational campaigns and small conservation projects

Stakeholder	Role	Relevance / Interest in project	Participation in project/ potential impact
Guías de Barinas-ASOGUIA)			Member of networks
Neighborhood associations	A common form of organization in rural communities whose main activities are demanding social services	Usually showing high women´ participation they are an important target group and a significant channel for receiving information about communities' needs and interests and transmitting information and training.	Member of Steering Committees Recipient of training and technical assistance. Partner in project activities Member of networks promoted by project
Paramo´s Guides and Lodgers Association (Asociación de Baquianos y Posaderos del Páramo-ASOBAP)	Cooperative integrated by participants in community based ecotourism program promoted by Tropical Andes Programme.	Successful organization that apply a BD friendly approach to its activities. A source of lessons learnt in promoting alternative economic activities for coffee growers and in applying BD practices.	Member of networks promoted by project. Member of Itinerant Leadership Program
Rural Saving Associations (Cajas Rurales)	Small saving and credit community associations promoted by PRODECOP and other public institutions and programs	Most of them show good records and act as encouragement factor for organization. A source of lessons learnt in organization	Member of networks promoted by project Partners in training projects.
Non-Governmental Organizations			
Programa Andes Tropicales Foundation	Identifies, promotes and executes projects related to sustainable productive alternatives and rural tourism . Also works in GIS and micro-credit.	Responsible for PDF-B work. Carrying out pilot experiences of thematic relevance to the project.	Execution of rural tourism component, land use planning, remote sensing and GIS.
CODESU	Designs and executes projects related to agronomical improvement, community organization and product certification.	Carrying out pilot experiences of thematic relevance to the project.	Execution of certification component of the project. Technical support in the area of agronomy and producer organization.
Conservación Internacional de Venezuela	Biodiversity conservation initiatives at national level. Has contributed technically and financially to the PDF-B work.	Has important data on biodiversity and productive systems of the Andean region. Co-finances conservation and rural tourism projects of thematic relevance to the project.	Measurement of indicators and provision of information and methodologies.
Local population			
Infra-subsistence farmers	The poorer growers in the interest area they are not able to dedicate major efforts to own agricultural activities. Own up to 0,5 has of land who grow coffee for self sufficiency , minor sales or for interchange	Located in the most isolated areas Highly dependent on off-farm income for subsistence. Plots are generally without any technical attention, under shade.	Recipient of leveling up training and organization activities. Recipient of training programs and workshops and of technical assistance for introducing new low impact techniques

Stakeholder	Role	Relevance / Interest in project	Participation in project/ potential impact
		Illiteracy or low educational levels and isolation barriers to incorporating more efficient and BD oriented practices.	to improve productivity and to diversify production for obtaining additional income .
Subsistence farmers	Small farmers owning and working areas between 1 and 5 ha (sometimes up to 10ha) and where a certain balance is observed between what is produced for self sufficiency and for the market, generating financial income that covers basic needs of the family other then foodstuff. Basic income is from coffee sales and where possible, milk.	Typically manage low-input, diverse shade coffee stands. Livelihoods and production systems are highly vulnerable to economic trends. Many have converted shade coffee stands to pasture but in some cases seek to re-establish coffee production due to currently high prices	Principal target group for technical, organizational and marketing support by project. Recipient of technical assistance for organization and for applying BD friendly practices. Participants in networks promoted by project, study trips and Itinerant Leadership Program
Semi-commercial farmers	These farmers generally dedicate most efforts to the market with minor investments into self sufficiency. Own between 5 and 50 ha. They have permanent and temporary hired labour and participation of family labour is minimal.	Gives major importance to animal husbandry generally often with double goals. Growers maintain a certain "campesino" tradition and culture and many continue the coffee growing tradition though on a reduced scale.	Less likely to benefit from project Recipient of technical assistance for organization and for applying BD friendly practices. Participants in networks promoted by project, study trips and Itinerant Leadership Program
Commercial farmers	Exploits areas of + 50 ha, generally dedicated to intensive animal husbandry (milk , meat , reproduction) and economically high yielding crops (leek , potatoes , flowers-in green houses- , intensive vegetable production…)	In many cases the owners do not live in the area and delegate to farm managers or supervisors. Some estates which are into exports of organic certified specialty coffee at above normal market conditions	In general, not a target group for this project since they provide themselves with technical assistance when needed. Exporters of organic certified coffee may participate in networks as "best practices sources". Members of advisory committees
Water consumers	Consume water issuing from the project area	Often not aware of value of resource and of consequences to BD loss. May be concerned that their interests may be threatened by project	Recipient of technical assistance on BD practices and PSA programs Participants in PSA programs
Processors and distributors of coffee (2 brand monopolize the national market)	Buy and sell coffee nationally.	One of the companies has expressed interest and openness regarding the project. May have concerns that their interests will be affected by the project.	Possible involvement in supporting commercialization of BD-friendly coffee under their own brands.
Páramo-based vegetable producers	Hire land from local farmers in the 1800-3000m zone for high input vegetable	Increase pressures on montane ecosystems in the project area.	Consultation and possible recipients of technical assistance.

Stakeholder	Role	Relevance / Interest in project	Participation in project/ potential impact
	production, typically leading to severe land contamination and degradation and placing pressure on montane forests.	Shared stakeholder group with GEF *páramo* project.	

Mechanisms and Strategies for Promoting Stakeholder Participation

A. Approach and Principles

The participatory approach is an integral part of the project's implementation strategy , as as has been the case during the Preparation Phase. A participatory approach to activities design is built in all stages of the project cycle, including monitoring and evaluation, and will be refined during the inception phase.

1. *Information, as a prerequisite to participation*. Successful participation requires transparency and full and fair access to information. The project has devised a communication strategy to ensure that the flow of information is continuous and targeted to all audiences, with particular emphasis on the poorer and more isolated producers, women and youth. Several mechanisms will be put to practice throughout the project to ensure that all stakeholders (government, producers, communities) are informed about activities and overall advances and progress in implementation. These mechanisms will be tailored to different audiences , taking into account different experiences, previous knowledge and interests and priorities of these groups.

2. *Promote organization.* Since studies carried out during the preparation phase indicated that only about 10% of coffee growers are organized either in cooperatives or in producer associations, incipient and ineffective organizational structures were identified as a significant barrier to applying a participatory approach to the project. As a pre-requisite for successful implementation, the project stresses the development of leadership abilities and the promotion of organization of producers and communities (see outcome 1), as well as training partners in execution (i.e. technical assistance agencies) in the application of a participatory approach to theirs activities.

3. *Participatory "action learning" Approach*: Building on lessons learnt from several programs active in the area of interest such as the Programa Andes Tropicales (PAT) community based tourism program and the CODESU technical assistance to coffee growers for certification project, a participatory "action learning" approach will be emphasized and the formation of networks of farmers will be promoted (see below), which will facilitate best practices replication, BD awareness, as well as facilitating technology transfer and interchange. To this end workshops and demonstration and study tours are planned to ensure that the lessons learnt are shared and replicated elsewhere.

4. *Leveling the playing field and promoting inclusion*: During the Preparation Phase marked differences in access to knowledge (including basic problems such as illiteracy) and productive assets were identified among producers and among different members of household. In order to get a clear sense of existing gaps, early into project implementation, facilitated workshops and meetings will be undertaken to identify individuals that would require skills development, as well as the level and the type of skills development needed. Based on this knowledge, the project will include the participatory development of an Integrated Communication Strategy. The communication strategy will ensure that difficulties of accessibility associated with isolation, gender, access to technology and literacy be directly addressed. Materials will be developed according to these needs.

5. *Sustainability through shaping the next generation* One of the major concerns of producers regarding their future livelihoods is migration of youth. Stressing participation of young people in leadership training and productive activities development will contribute to preparing the next generation to assume a role in organizations and to develop attitudes and skills that will enable them to innovate, making production units more profitable and BD friendly.

6. *Sustainability through capacity building in local state institutions.* The project will target especially the institutions operating at the community level to enable them to actively participate in developing and implementing activities to ensure continuity and replicability once the project is finalized.

7. *Flexibility.* In a context where participation is not sufficiently rooted and widespread it will be necessary to adopt a flexible approach regarding participatory structures and mechanisms. Success of participation will be ensured by implementing a variety of forms through "trial and error" during the life of the project, as participatory evaluations suggest the need to update them.

B. Formal Mechanisms of participation

Participation will be achieved through multiple layers culminating in *steering committees*. These arrangements will be validated during the inception phase of the project following additional consultation with potential members. As institutional development vary by pilot areas, flexibility will allow for profiting on the higher levels of social capital and institutional capacity of public authorities in some areas.

1. *At the national level*, formal participation in the project will be achieved through the broad based *National Steering Committee* made up of the National Director of the Project (President of CIARA Foundation) Ministries, grower federations of associations, and NGOs.
2. *At the local level*, the project management structure and the implementation strategy have been designed to facilitate participation at the community and zone levels culminating in a formal structure with functions of "steering committee" represented by the existing Local Panels and/or Local Planning Councils (involving public institutions and community organizations). These structures already function as a channeling mechanism for the needs and projects of communities and will provide the project with a platform for dialogue about implementation matters without creating a new instance. In order to achieve this result it will be necessary to establish a formal agreement between the Local Unit of Implementation of the project (at the municipality) and the local structure of coordination already in place.
3. *An Advisory Committee at the local level* convened twice a year will allow broader participation, better coordination and ensure the flux of information, especially to those that might feel "threatened" by the project such as sector trade associations and trade unions, professional associations tourism entrepreneurs, or could contribute to bettering life conditions such as school boards, health services, and other social programs not directly involved in the project.
4. An autonomous self sustained network of public, civil society and community-level entities, coordinating and harmonizing the development and replication of pilot level experiences. This been a long term objective, throughout the life of the project steps will be taken to create the formal structure, supply the initial equipment and training, develop self financing mechanisms.

C. Specific activities and participatory mechanisms

The participatory approach is built into the design of the project and as such do not reflect itself in a restricted set of activities. Nevertheless some activities have a direct aim at fostering participation:

1. Training for the development of alternative craft productive activities will be specially targeted to women in farm household in order to empower them by enhancing their economic autonomy.
2. A network of demonstration initiatives will be put in place in order to integrate producers and facilitate the learning process.

3. A web page containing different topics relating to the project will be created and maintained (activities, directory of organizations, biodiversity, market information, achievements of the project, best practices, methodologies, technical support materials for transfer of technologies, reports) and access to it will be facilitated through training at Infocentros.
4. Facilitated participatory appraisal and planning workshops on biodiversity and BD friendly practices will be held throughout the life of the project.
5. Interactive radio programming will be established to allow communities to discuss local issues and problems affecting biodiversity.
6. Establishment of a participatory system for local managing and interpretation of environment indicators by local community members.
7. Information managing system developed to strengthen links between producers in pilot municipalities and consumers.
8. Design and operation of collection and management systems of geo referenced information on production, supply, commercialization routes, markets, prices, inputs.
9. Establishing of mechanisms for participatory decision-making in land use planning, zoning and management in accordance with BD conservation principles. Through installation of consulting web tools on planning and environmental management accessible to communities, organizations and local government.
10. Creation of a Technical Support Committee integrated by consultants, experts, community leaders that allows information and brokerage with government institutions on suitability of public sector activities to objectives of social and environmental sustainability of development.
11. Facilitating negotiations between producers and consumers of environmental services.
12. Local and regional seminaries designed to share methodologies, experiences and lessons learnt.
13. For Sierra de Portuguesa municipalities a commonwealth will be put in place to allow for integration of sustainable methods and techniques in coffee productive systems.
14. Leadership groups and networks integrating municipalities will be created and consolidated for the exchange of knowledge and practices.
15. Establishment of “Itinerant leadership program” and study trips to best practices sites as a way to achieve exchange between community leaders in different regions.

PART V Characteristics of farming systems in the coffee/cattle zone

Table 5. Spatial characteristics of farms and productive systems in the Mérida Cordillera

State	Farm units	Total area of coffee (ha)	Average area of coffee per farm (ha)	Total area of other crops (ha)	Average area of other crops per farm (ha)
Mérida	17,592	15,805	0.9	28,681	1.6
Táchira	16,230	12,444	0.8	25,994	1.6
Trujillo	18,545	14,284	0.8	25,842	1.4
Barinas	4,363	3,251	0.7	5,108	1.2
Lara	14,089	24,901	1.8	19,928	1.4
Portuguesa	14,344	33,593	2.3	19,115	1.3

Source: Agricultural Census of 1997 and the National Coffee Plan 2004-2007

Table 6. Farm economics

	$/month
Requirements	
Total basic income requirement for subsistence for family of 5 (food, education, clothing, transport, recreation, medical care, services etc.)	**662**
Income requirement for food	225-302
Income	
Typical value of subsistence food crop production	160
Typical income from dairy products (3 cows producing 10-12.5 litres/day)	392
Typical income from coffee	425
Total income	**977**
BALANCE	**315**

Table 7. Balance sheet for typical semi-commercial dairy producers

Income:

Cattle in production	2 head/ha	
Milk production	17.5 litres/head/day	
	37 litres/ha/day	
	13,414 litres/ha/year	
Milk price	Bs745/litre	$0.35/litre
Total income from milk sales	Bs9,993,244/ha/year	$4,648/ha/year
Reproduction rate	3 calves/ha/year	
Male calves (65% of total)	1.95 calves/ha/year	
Value of male calves	Bs400,000/calf	$186.05/calf
Income from sale of male calves	Bs780,000/ha/year	S363/ha/year
Female calves (35% of total)	1.05 calves/ha/year	
Value of female calves	Bs1,500,000/calf	$381/calf
Total income from sale of calves	Bs2,280,000/ha/year	$744/ha/year
TOTAL INCOME	**Bs12,273,244/ha/year**	**$5,708/ha/year**

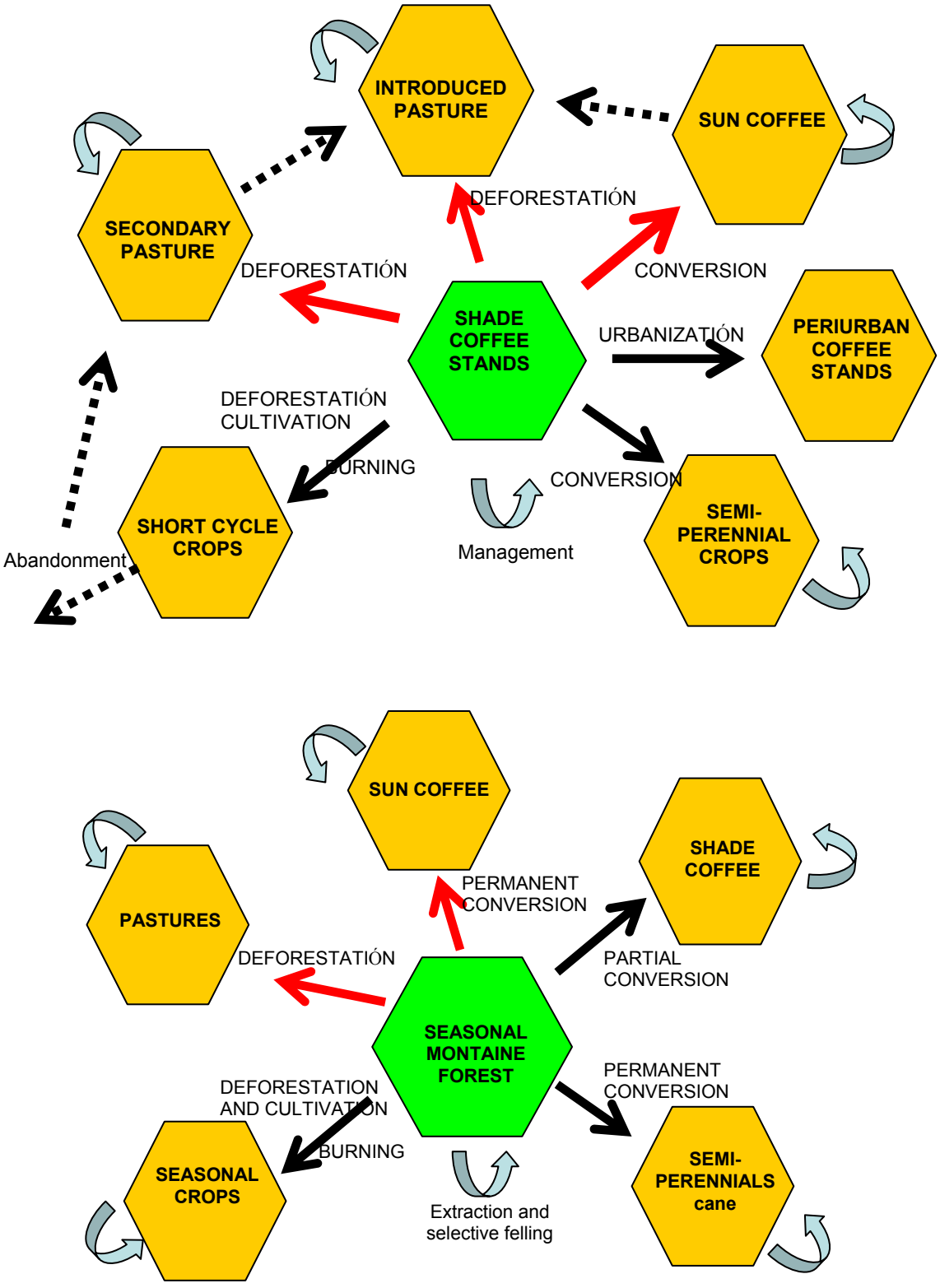
Costs[11]:

Cattle in production	2 head/ha	
Feed for cattle in production	8kg/head/day	
	2,920kg/head/year	
	6,132kg/ha/year	
Price of feed	Bs622/kg	$0.29/kg
Feed cost for cattle in production	**Bs3,814,104/ha/year**	**$1,774/ha/year**
Calves	2 calves/ha	
Feed for calves	2kg/calves/day	
	730 kg/calf/year	
	1,460 kg/ha/year	
Feed cost for calves	**Bs 908,120/ha/year**	**$ 422/ha/year**
Weeding materials	**Bs 1,800,000/ha/year**	**$ 837/ha/year**
Medicines and miscellaneous	**Bs 2,400,000/ha/year**	**$ 1,116/ha/year**
TOTAL COSTS	**Bs 8,922,224/ha/year**	**$ 4,150/ha/year**

NET INCOME:	**Bs 3,351,020/ha/year**	**$ 1,559/ha/year**

[11] Labour is assumed to be family-based and therefore is not costed financially.

Figure 1. Dynamics of shade coffee clearance and forest removal in relation to farming systems in the coffee/cattle production zone



PART VI Socioeconomic Conditions in the Pilot Municipalities

Table 8. Population Density

STATE/MUNICIPALITY	POPULATION 2001	SURFACE AREA (KM^2)	POPULATION DENSITY (PERSONS/KM^2)
1. BOLÍVAR, BARINAS	39.779	1.103	36,08
2. ANDRÉS BELLO, MÉRIDA	11.652	398	29,28
3. ARICAGUA, MÉRIDA	4.383	790	5,55
4. ANDRÉS ELOY BLANCO, LARA	42.067	708	59,42
5. MORÁN, LARA	112.484	2.231	50,42
6. SUCRE, PORTUGUESA	37.233	400	93,08
7. BOCONÓ, TRUJILLO	79.710	1.365	60,80

Table 9. Gender

STATE/MUNICIPALITY	MASCULINITY INDEX[12] (100 = PARITY)	JUVENILE DEPENDENCY INDEX[13]	Nº OF CHILDREN/WOMAN
1. BOLÍVAR, BARINAS	102,71	74,02	2,86
2. ANDRÉS BELLO, MÉRIDA	107,55	62,43	3.01
3. ARICAGUA, MÉRIDA	115,81	83,99	3,66
4. ANDRÉS ELOY BLANCO, LARA	113,14	74,27	3,18
5. MORÁN, LARA	106,83	61,96	2,84
6. SUCRE, PORTUGUESA	103,9	69,76	3,16
7. BOCONÓ, TRUJILLO	99,33	56,75	2,83

Table 10. Living Conditions

MUNICIPALITY	HUMAN DEVELOPMENT INDEX	% IN EXTREME POVERTY	% IN POVERTY
1. BOLÍVAR, BARINAS	0,5605 (MEDIUM-LOW)	4,95	25,17
2. ANDRÉS BELLO, MÉRIDA	0,4692 (LOW)	4,60	26,74
3. ARICAGUA, MÉRIDA	0,4024 (LOW)	14,43	45,96
4. ANDRÉS ELOY BLANCO, LARA	0,4123 (LOW)	17,27	45,09
5. MORÁN, LARA	0,5117 (MEDIUM-LOW)	12,30	39,02
6. SUCRE, PORTUGUESA	0,5026 (MEDIUM-LOW)	11,42	28,90
7. BOCONÓ, TRUJILLO	0,5143 (MEDIUM-LOW)	6,42	-

Table 11. Housing and services

MUNICIPALITY	% OF HOUSES IN POOR CONDITION	% OF HOUSES WITHOUT DRINKING WATER AND	% OF HOUSES WITHOUT ELECTRICITY

[12] Masculinity Index = [(Number of men/Number of women)*100].
[13] Juvenile dependency index = [(Number of people \<15 years/Number of people 15-64 years old) x 100]

		SANITATION	
1. BOLÍVAR, BARINAS	23,63	22,68	17,24
2. ANDRÉS BELLO, MÉRIDA	15,94	23,71	10,81
3. ARICAGUA, MÉRIDA	91,45	71,62	70,0
4. ANDRÉS ELOY BLANCO, LARA	63,89	63,94	50,02
5. MORÁN, LARA	54,38	51,17	28,00
6. SUCRE, PORTUGUESA	43,23	49,23	39,2
7. BOCONÓ, TRUJILLO	39,01	42,83	27,00

Table 12. Health and education

MUNICIPALITY	POTENTIAL LIFE YEARS LOST[14]	EDUCATION MEDIAN[15]
1. BOLÍVAR, BARINAS	28,67	6 YEARS
2. ANDRÉS BELLO, MÉRIDA	30,75	5 YEARS
3. ARICAGUA, MÉRIDA	39,03	3 YEARS
4. ANDRÉS ELOY BLANCO, LARA	38,72	3 YEARS
5. MORÁN, LARA	35,37	5 YEARS
6. SUCRE, PORTUGUESA	33,00	5 YEARS
7. BOCONÓ, TRUJILLO	31,34	5 YEARS

[14] The average of the difference between the average life expectancy and 70 years, excluding infant mortality and mortality of those older than 70 years.
[15] The number of years of schooling not exceeded by half of the population (now aged >24 years) (e.g. half of the population in Bolívar has not had more than 6 years schooling).

PART VII Coffee in the Mérida Cordillera in the National Context

1. Production Systems

There are three main categories of coffee production systems in the Mérida Cordillera (see also Table 15):

i) **Traditional, small scale coffee production systems, for domestic markets**
This type of coffee plantation is typically established by the planting of coffee into pre-existing natural shade. These plantations are either 'passive organic' (no chemical inputs are made, not due to active preference by the farmer but rather due to a lack of resources) or involve occasional low levels of chemical inputs.

ii) **Technified small and medium scale coffee production systems for domestic markets**
In these plantations, the original shade is either heavily modified (through the selective elimination of trees without good shade characteristics and their replacement with preferred species such as *Inga* spp.) or completely removed. Levels of artificial inputs vary, reaching a maximum in the case of 'sun coffee'.

iii) **Small and medium scale commercial polycultures with organic and Fair Trade certification, for export.**
In these plantations, farmers have taken the active decision not to apply artificial inputs, relying on diverse shade and expecting to gain price premiums through organic certification or Fairtrade certification.

2. Factors affecting productivity and costs

Productivity and production costs are influenced by a number of factors:

a. **Topography**: the more abrupt, the more intensive and demanding in labour. Topography also influences the spacing (planting density) and these will influence final yields.

b. **The biannual production character of coffee**: one year the plant invests in vegetative growth, with low yields, and the following year in reproduction with high yields. Variations can be between 40% as much as 70%.

c. **Climate**: after harvest coffee needs a two to three months resting period and hydrological stress (dry season) followed by an abundant precipitation in order to induce flowering. Alterations in total quantities and distribution of rainfall can impact negatively on quantity and quality of harvest: this can influence up to 70% a "normal" yield.

d. **Pest and diseases**: Leaf rust can wipe out a total plantation's production in less then 3 weeks: severe broca (berry borer) infestation can undermine the quality (and final weight) by up to 75%, while anthracnosis will influence the quality of the coffee bean etc…

e. **Administrative efficiency and negotiating capacity in case of collective commercializing organizations.** Several analyzed cases indicate that export costs can vary between $0.14 and $0.21/lb, depending on exported volumes, currency exchange rate, insurance rates, transport, customs, legal costs and tax, office expenses etc.

f. **Export volumes produced**: economies of scale mean that the higher the production volumes (for the same fixed costs), the lower these costs per weight unit.

g. **Specific quality requirements by importers and specialty markets** generally increase the production costs as special care needs to be taken to avoid specific plagues and diseases during the formation of the cherry, the harvest must be selective, special attention needs to be given to post harvest labour (de-pulping, fermentation, washing, drying, hulling, final selection, bagging

and transport). The demands on up and downward traceability by certain certification schemes add additional logistic and administrative costs.

h. **Choice of varieties**: yields vary between varieties. In combination with spacing, soil quality, climatology, technical management, altitude and pruning techniques, yields can vary between a few quintal sacks/ha and + 70 quintales/ha. Also the variety and density of associated crops as well as the variety and density of shade trees will influence density of coffee planting and yields.

i. **Inflation**: Venezuela, during the latest years has suffered yearly inflation rates of about 25%. The legal minimal monthly wage is currently $180; a proposed increase of this to $200/month will increase labour costs, which constitute the main cost in coffee production and vary between 45 and 80% depending on the production model and producer type.

j. **Currency exchange rate**: currency devaluation and the existence of a parallel market impacts on the costs of transport (for example imported spare parts) and certain tools and agricultural input as many fabricants use the parallel market value of the US$ as the reference in calculating there production costs.

k. **Fixed costs:** these vary greatly according to the producer type and production model, and are estimated at between 5 and 20% of total costs.

3. Marketing and Processing Chains

A number of steps are involved in delivering processed coffee to consumers or export markets (see Figure 2).

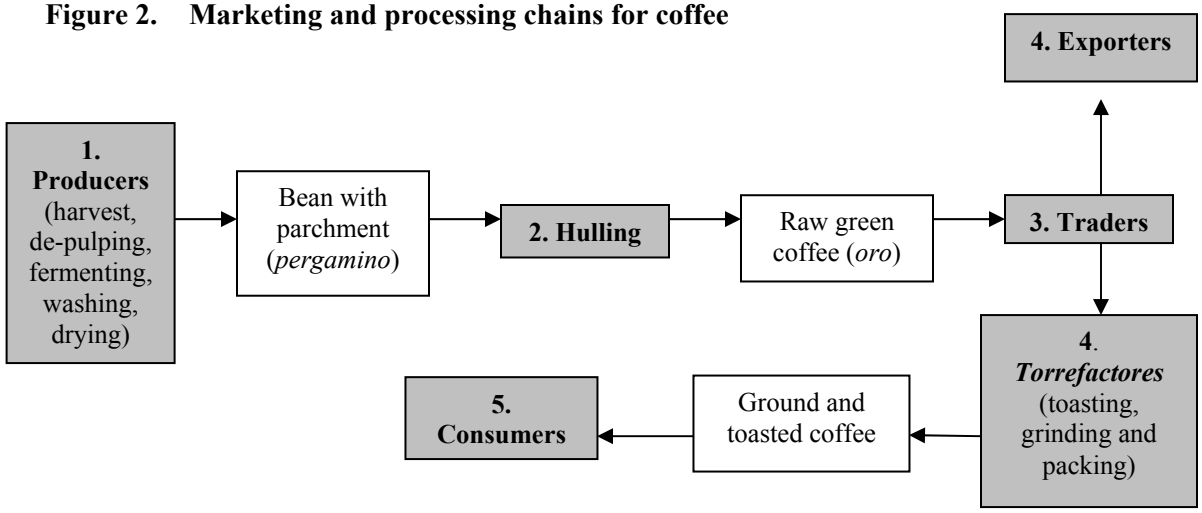
i) Most small **farmers** typically carry out initial post-harvest processing, involving de-pulping, fermenting, washing and drying. In some cases coffee is delivered as "wet parchment" for artificial drying by external service providers.

ii) **Hulling** is normally then carried out by external service providers, resulting in "raw gree coffee" (*café oro*).

iii) **Traders** then deal in the *café oro*, selling it either to the processing industry (*torrefactores*) or to exporters.

iv) **Torrefactores** then carry out toasting, grinding and packing prior to the coffee being supplied to consumers.

Figure 2. Marketing and processing chains for coffee

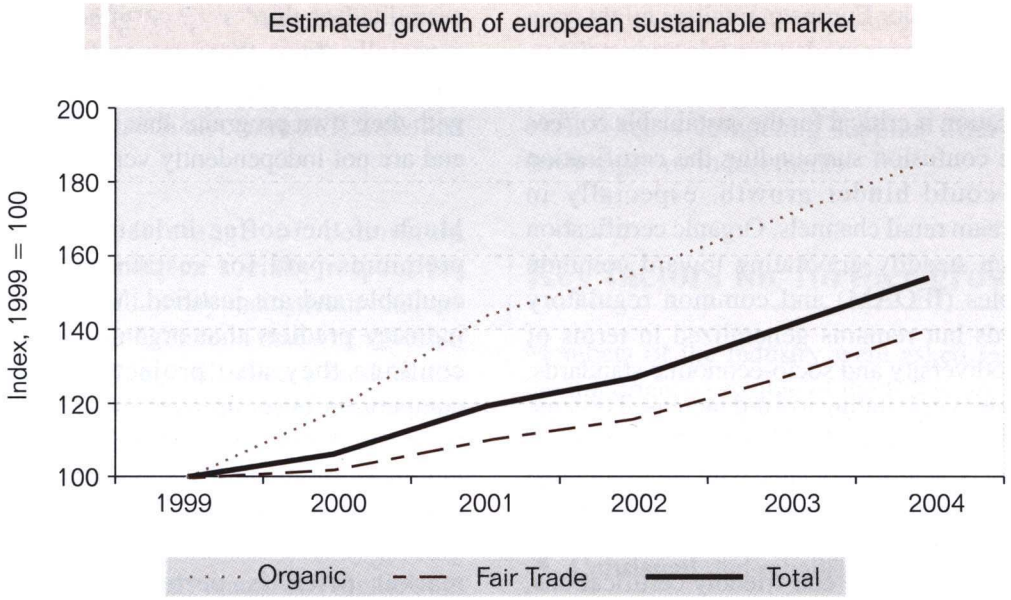


In some cases, such as the Quebrada Azul Cooperative in Andres Bello Municipality, producers also carry out hulling and (with external support) marketing, toasting, grinding and packing.

4. Global markets

Demand for certified (organic and Fairtrade) coffees in Europe grew by around 50% over the 1999-2004 period (see Figure 3). This growth has been steady and there are no indications of any levelling off of this trend.

Figure 3. Growth in European demand for certified coffee



5. Prices

Global prices of coffee are notoriously variable (Figure 4), largely as a result of trends in global supply and demand. The prices received by producers on the domestic market in Venezuela have also been subject to significant fluctuations over the last 20 years, due partly to global trends but also, significantly, to national trends in supply and demand. The Government has to some extent buffered these fluctuations by establishing reference prices; however their application in practice has been limited by the willingness of the industry to pay these prices. Over the past 20 years, New York stock exchange prices have been on average around 45% higher than domestic prices have; however at times domestic prices have exceeded New York prices, due to domestic scarcity. The domestic market is currently very favourable, as prices have risen significantly in the last two years (see Figure 4) reaching a current level of around US$1.15/lb. (compared to a New York price of around US$0.65/lb).

Figure 4. Trends in prices for coffee on the New York (washed Arabica coffee) and domestic markets [16]

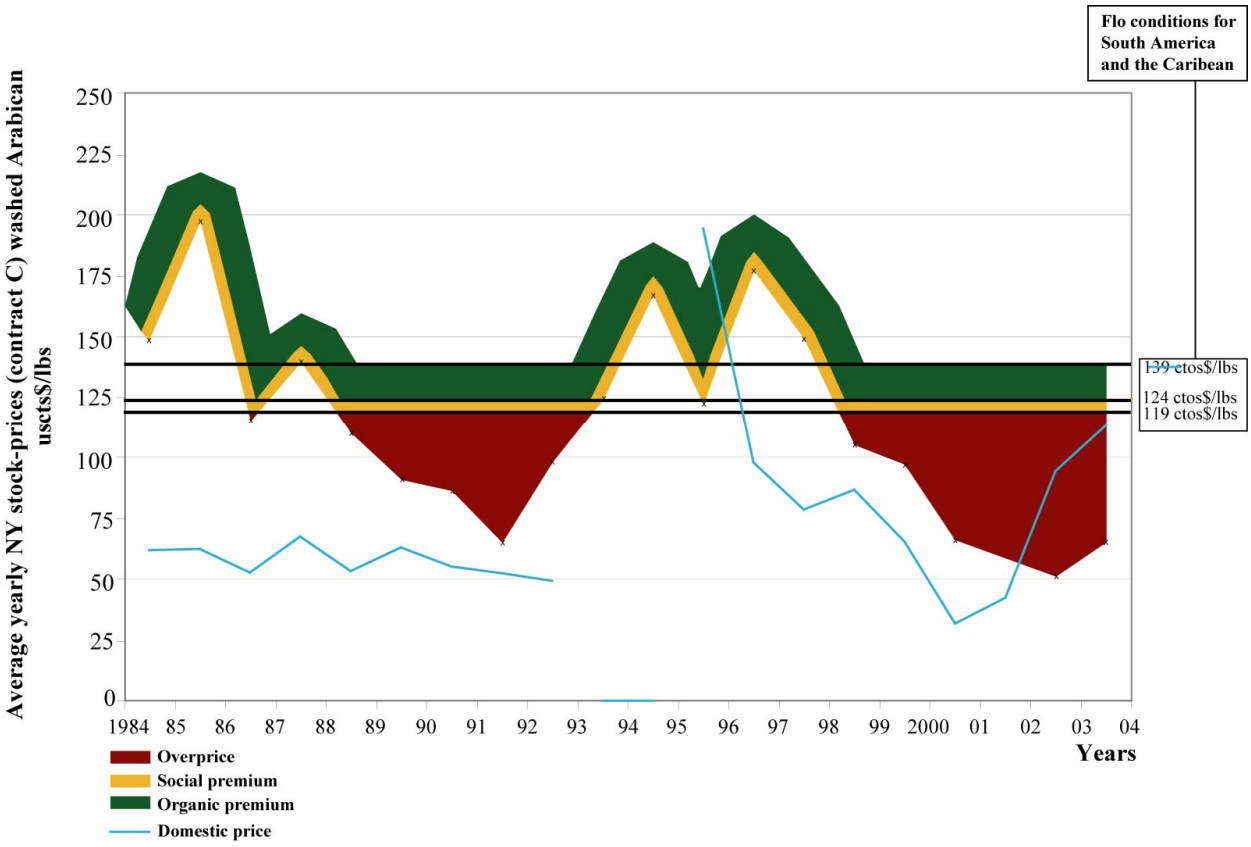


Figure 4 also shows the prices available for coffee in niche (certified) export markets. While prices for non-certified coffee on the New York Stock Exchange have ranged from highs of almost $2/lb to $0.50/lb, coffee certified by Fairtrade Labelling Organizations (FLO) is buffered against extreme dips in prices by a guaranteed minimum price of $1.24/lb (the target group of the project, smallholder producers, are eligible for Fairtrade certification. Organic certification gives an additional price premium of $0.15/lb. Under current conditions, the price of a pound of Fairtrade organic coffee is worth $1.39, compared to uncertified coffee which currently fetches $0.65 (a price advantage of 114%).

It typically costs around $0.15-0.23/lb more to place certified coffee on the export market than to produce uncertified coffee for the national market, and production levels are typically lower than high input non-shade coffee (see Table 15). However even when these additional costs are taken into account (at the higher level of $0.23/lb), the net income from certified coffee is significantly greater (applying the price premiums currently available to the variability in export and domestic prices which the market has shown over the last 20 years, the price of certified coffee comes out as, on average, 100% higher).

Producers typically receive around 50% of the price paid by consumers (see Table 13 and Figure 5), due to their limited participation in processing and market chains (see Figure 2). If the number of intermediary actors is reduced, by producers themselves carrying out hulling, marketing, toasting, grinding and/or packing, the prices and also the net incomes which they receive for their coffee are significantly increased.

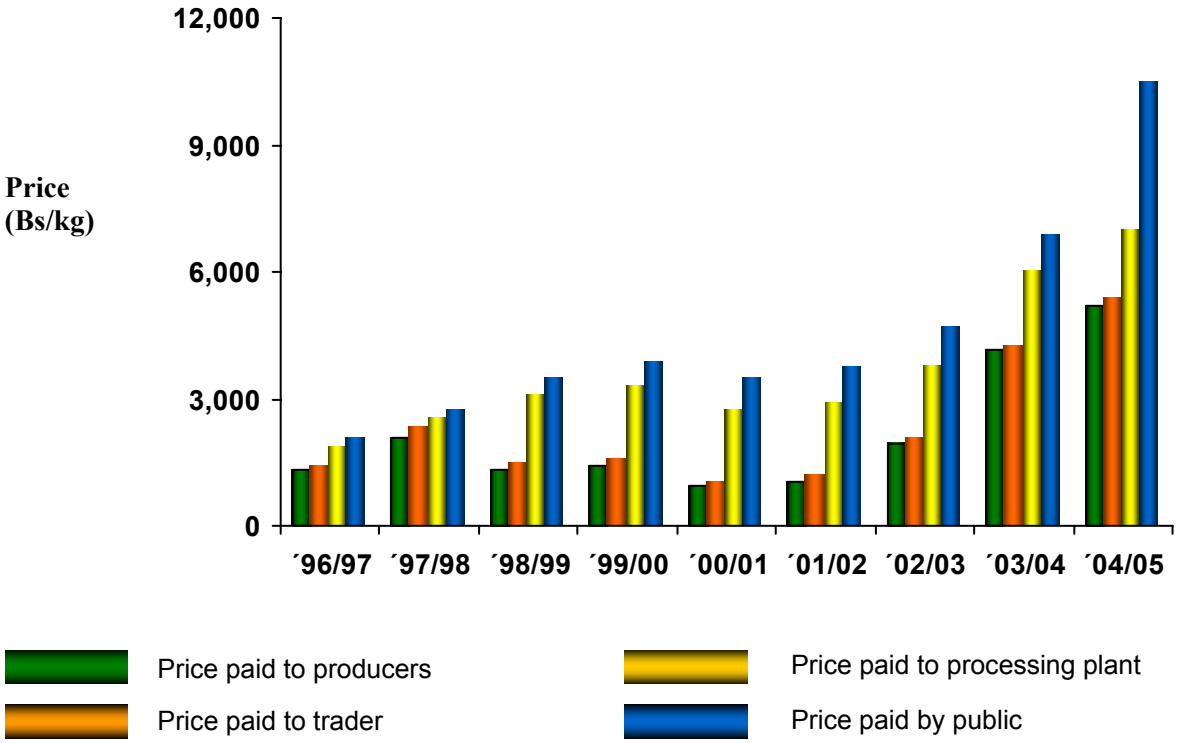
[16] Note: no data are available on domestic coffee prices between 1993 and 1995.

Table 13. Comparison of prices paid by national consumers and prices paid to producers, years 2002/3-2004/5.

Year	Price paid by Venezuelan consumers ($/lb)	Price received by Venezuelan producers ($/lb)	Proportion received by producers (%)
2002/3	1.77	0.43	24.1
2003/4	2.13	0.96	44.9
2004/5	2.83	1.15	40.6

Source: www.fedeagro.org.

Figure 5. Price losses in the domestic marketing chain

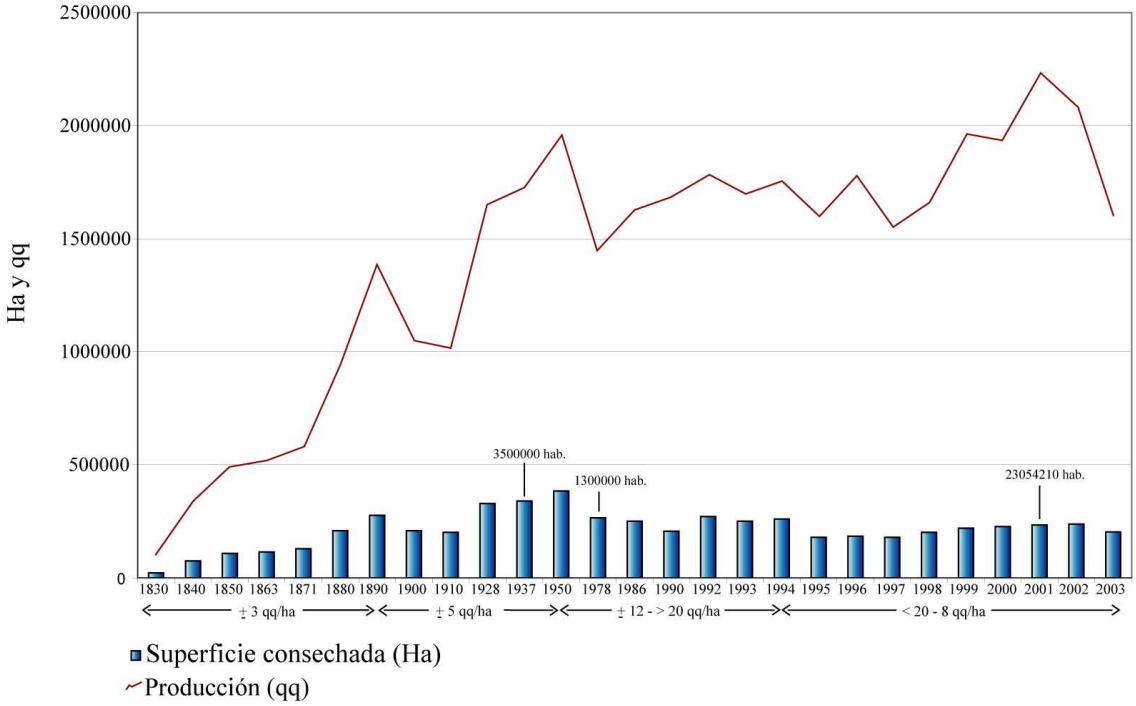


Source: Plan Café, MINEP/CIARA

6. Trends in Coffee Production

Levels of coffee production are highly sensitive to prices. Figure 6 shows how the slump in domestic prices between 1999 and 2002 (see Figure 4) was accompanied by a significant reduction in levels of both production and the area of coffee plantations.

Figure 6. Relation between cultivated areas (ha) and coffee production (qq) in Venezuela from 1830 until 2003

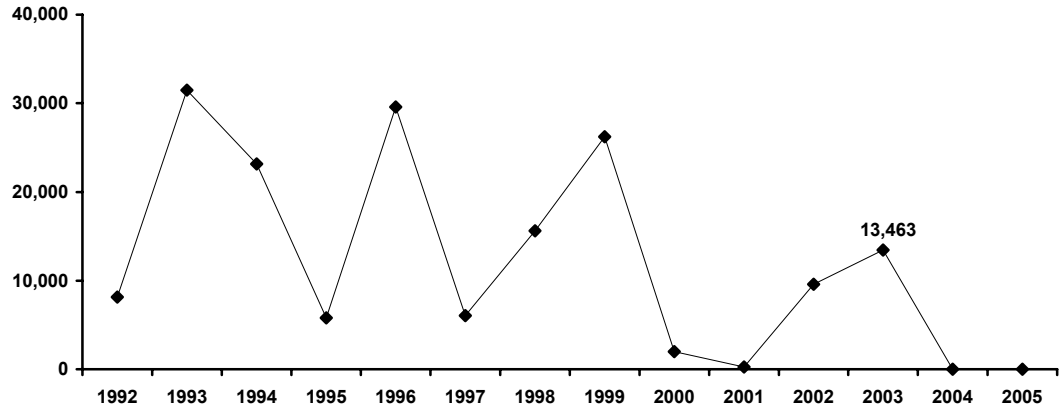


7. Exports

The principal destination of exports is the United States, which in 2003 accounted for 84% of the 13,463 tons exported. The value and competitiveness of these exports are negatively affected by two factors: 1) the coffee exported has little or no value added (in 2003, 99.9% of the coffee exported had not received any prior toasting in the country) and 2) production costs are among the highest, and productivity levels among the lowest, of the international market. Costa Rica, Colombia and Guatemala have higher production costs (US $0.65-0.83/lb) but these are compensated by their higher production (15-17 qq/ha) compared to Venezuela where production costs average US $0.63/lb and average productivity is around 7 qq/ha.

The quantities of coffee exported by Venezuela have been subject to extreme annual variations over the last decade (see Figure 7). Venezuelan coffee exports have also been slow to respond to fluctuations in international prices. A contributing factor has been the periodic prohibition of exports of 'green' coffee, in order to ensure adequate levels of supply on the national market; a ban on exports from 2004 to date means that producers are not able to take advantage of increased international demand. Export bans have also made it difficult for exporters to maintain the continuity of supply necessary to develop overseas niche markets. Groups with Fairtrade and organic certification have however managed to obtain special authorization for export.

Figure 7. Venezuelan Coffee Exports 1992-2005 (metric tonnes)



Source: DGMA/MAT

8. Producer Organizations

In response to the problem of a large proportion of the sale price of coffee being concentrated in the hands of intermediaries, in 1974 the Government established the National Coffee Fund (FONCAFE) as the sole organization entitled to buy and sell coffee nationally and internationally; in return for this monopoly FONCAFE subsidized coffee prices and input costs. This situation was made operative at local level through the establishment of organizations of Associated Coffee Producers (PACCAs) at local level. This situation persisted until 1983, when the collapse of world market prices made it impossible for the Government to continue guaranteeing prices and subsidies. In 1992, the monopoly of FONCAFE was abolished and PACCAs, cooperatives and individual producers were allowed to market coffee nationally and internationally. The results were mixed: many PACCAs and producers had serious difficulty competing with commercial intermediaries and the processing (*torrefacción*) industry which is dominated by a limited number of large commercial concerns (a situation which continues to the present day).

The 2002 Agricultural Marketing Law established the creation of National Boards to coordinate the agricultural/productive chains for different products, with the aim of avoiding practices or private agreements which limit the production, circulation, distribution or marketing of prices on the national market, and fix prices for each product. The National Coffee Board is new and its success is as yet difficult to gauge.

There are currently a large number of producer organizations in the project area. However these vary widely in their scale, level of organizational consolidation and commercial success. While many PACCAs have failed in recent years, that in La Azulita was reactivated through the formation of a new board of directors and now has 700 members. There exist in addition a large number of cooperatives (many of which have their origins in the Peasant Enterprises established under the Agrarian Reform Program of the 1960s). With possibly the only exception of the Quebrada Azul cooperative in Andres Bello Municipality, these producer groups are aimed at the national coffee market and have little capacity to access niche export markets or otherwise to add value to their products. The most common causes for this limited access to markets and premium prices are inadequate organizational and managerial capacities, which make it difficult for them to guarantee that quotas can be filled and quality standards can be met, and to investigate and negotiate markets; and inadequate access to information on potential market opportunities.

9. Credit

Smallholder coffee producers are typically affected by severe periodic cash flow crises. Their level of indebtedness at the time of harvest is typically such that they are obliged to sell their coffee to the first comer, without the possibility of seeking favourable markets or waiting for peaks in price trends. These producers typically have limited access to the formal financial sector. The Government's National Coffee Plan (PlanCafé) seeks to redress this situation and thereby increase the attractiveness of coffee production by offering credit under favourable terms to small producers. The credit offered by PlanCafé is shown in Table 14.

Table 14. Credit offered under PlanCafé

Activity	Credit (Bs/ha)	Credit ($/ha @ $1=Bs. 2145)	Conditions
Total renovation or establishment of new coffee plantations	9,635,652	4,492	4 year grace period, 4 year payback period, 3% annual interest
Rehabilitation of existing coffee plantations	5,649,190	2,634	3 year grace period, 3 year payback period, 3% annual interest
Maintenance of existing coffee plantations	4,070,498	1,898	1 year grace period, 1 year payback period, 9% annual interest

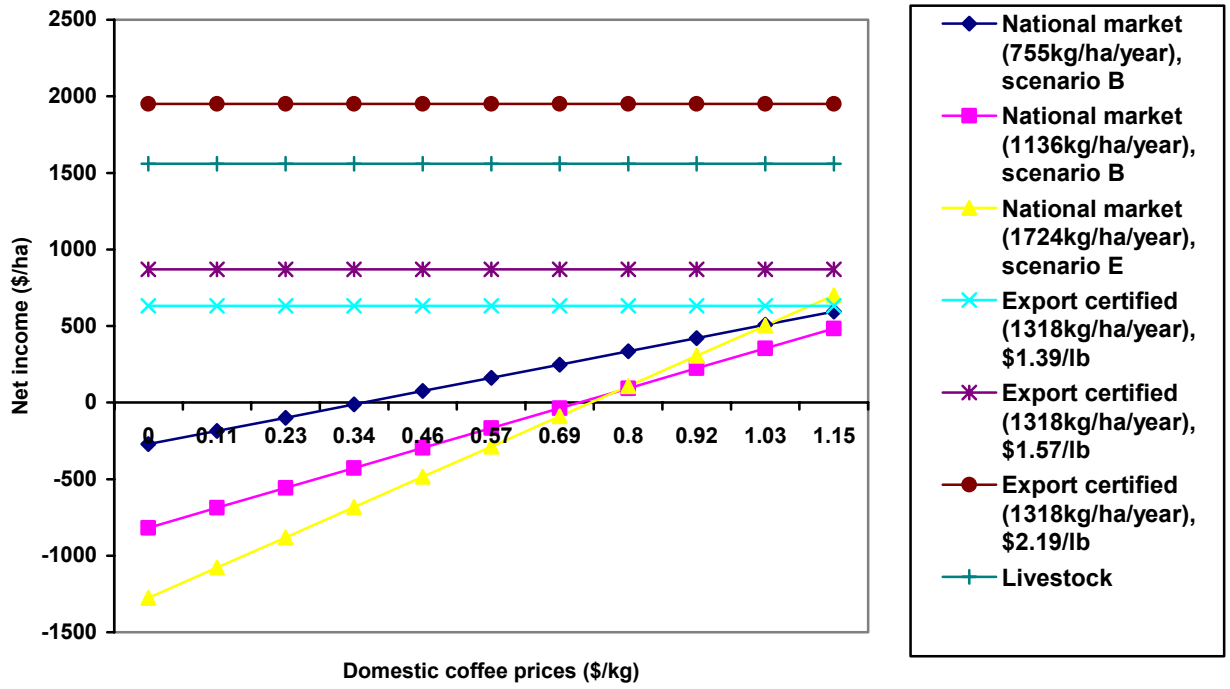
Those eligible for this support are small or medium-scale producers, either on an individual basis or organized into cooperatives. It is also is necessary for applicants to have a Producer Register, which requires application to the MAT, and an Agrarian Register which has to be obtained from INTI. Andres Bello Municipality, Mérida, provides an example where the Inter-institutional Municipal Commission has agreed in principle with the State level coordinator of PlanCafé additional criteria for access to this support, including the exclusion of "full sun" coffee, the exclusion of coffee established at the expense of existing ecosystems, the promotion of associated crops, and a goal that 20% of the area renewed or established should be managed organically.

10. Summary: competitiveness of alternative coffee production systems

Figure 8 and Table 15 compare the profitability of alternative coffee production systems under alternative scenarios. The relatively high prices obtainable for FairTrade and organic certified coffee for export largely compensate the higher production costs of these alternatives. Under favourable circumstances, they are competitive with traditional, non-certified systems aimed at domestic markets (systems A-C) and technified systems aimed at domestic markets (systems D-F). However this situation is dependent on the maintenance of high production levels per hectare, low export costs, and low relative prices on the domestic market. If these conditions are not met, the level of net income in "low" scenarios of FairTrade/organic certified coffee can be exceeded by "high" scenarios of traditional management.

Under present circumstances, and even despite high national prices (which is a quite recent phenomenon), investment in Fair Trade organic certified coffee is very much viable for all cases that qualify for this type of combined certification. This is dependent on competitive organic practices, adequate agricultural management and administrative efficiency, including management of export procedures. In case of mercantile or entrepreneurial operations, organic certification, preferably with a specialty coffee qualification, can also compete and outscore financial profitability of intensive, technified systems without these recognitions, although this is not always entirely risk free.

Figure 8. Net incomes from coffee on the national market compared to those from coffee on niche export markets and smallholder dairy farming



Notes:

1. Scenarios B and E refer to Table 15.
2. The current domestic price for coffee is $1.15/lb.
3. The current price for export organic coffee in NY is $1.39/lb.
4. The average price that would have been obtained for export organic coffee over the last 20 years, based on trends in the base NY price, is $1.57/lb.
5. Net incomes for export organic coffee assume a $0.23/lb transaction cost associated with market negotiation, export procedures and certification (in reality the range is around $0.18-0.23/lb).
6. For basis of net income for livestock see Table 7

Table 15. Comparison of profitability of coffee production systems

System	Production costs ($/lb)	Annual yield (lb/ha/year)	Scale (ha coffee/farm)	Price ($/lb)	Gross annual income/farm ($/year)	Net annual income/farm ($/ha/year)	Net annual income/ha ($/ha/year)
Traditional , small scale coffee production systems, for domestic markets							
A. Extensive , close to rustic, passive organic (non certified)	0.32	92	3	1.15	1,047	755	252
B. Traditional poly cultures , passive organic (non certified)	0.36	138-368	4.5		2,268-4,187	1,775-2,873	394-638
C. Traditional (semi) commercial poly cultures. Occasional synthetic input.	0.42	230-552			2,617-6,280	1,689-3,980	375-884
Technified small and medium scale coffee production systems for domestic markets							
D. One associated crop only(bananas and plantains). Specialized shade. Synthetic and organic input	0.57	322-736	4.5	1.15	3,664-8,374	1,845-4,214	410-936
E. Technified, monoculture, full sun exposure. Synthetic and organic input	0.70	552-1,978			6,280-22,504	2,448-8,774	544-1,950
F. Technified, monoculture, regulated shade. Synthetic and organic input	0.74	690-1,794			7,850-20,410	2,788-7,247	620-1,610
Small and medium scale commercial polycultures with organic and Fair Trade certification, for export.							
G. Active organic (certified), commercial poly culture under varied shade, one associated crop only	0.82	368-1,288	4.5	1.47	5,292-18,522	2,304-8,064	512-1,792
H. Active organic (certified), commercial poly culture under varied shade, one associated crop only, **with Fairtrade certification.**	0.91			1.52	5,475-19,162	2,153-7,538	478-1,675
I. Active organic (certified), commercial poly culture under varied shade, one associated crop only, with Fair Trade certification **and specific quality controls (specialty coffee qualifications)**	1.00				5,475-19,162	1,825-6,388	406-1,420

PART VIII Economic Comparison of Land Use Alternatives

Figure 9 compares the net income achievable from coffee on the domestic market, under a range of price scenarios, in comparison with the main land use which competes with it, livestock production. Under current conditions, the production of coffee for sale on the national market cannot compete with livestock production unless prices on the national market exceed $2.45/lb. The current price is around $1.15/lb. If, however, additional elements of the shade coffee system are marketed, such as minor products (for example bananas), timber and environmental services, it becomes more profitable than livestock production when prices exceed around $0.45/lb, as has been the case for at least the last 20 years (see Figure 4).

Figure 9. Comparison of the profitability of coffee for national markets with smallholder dairy farming.

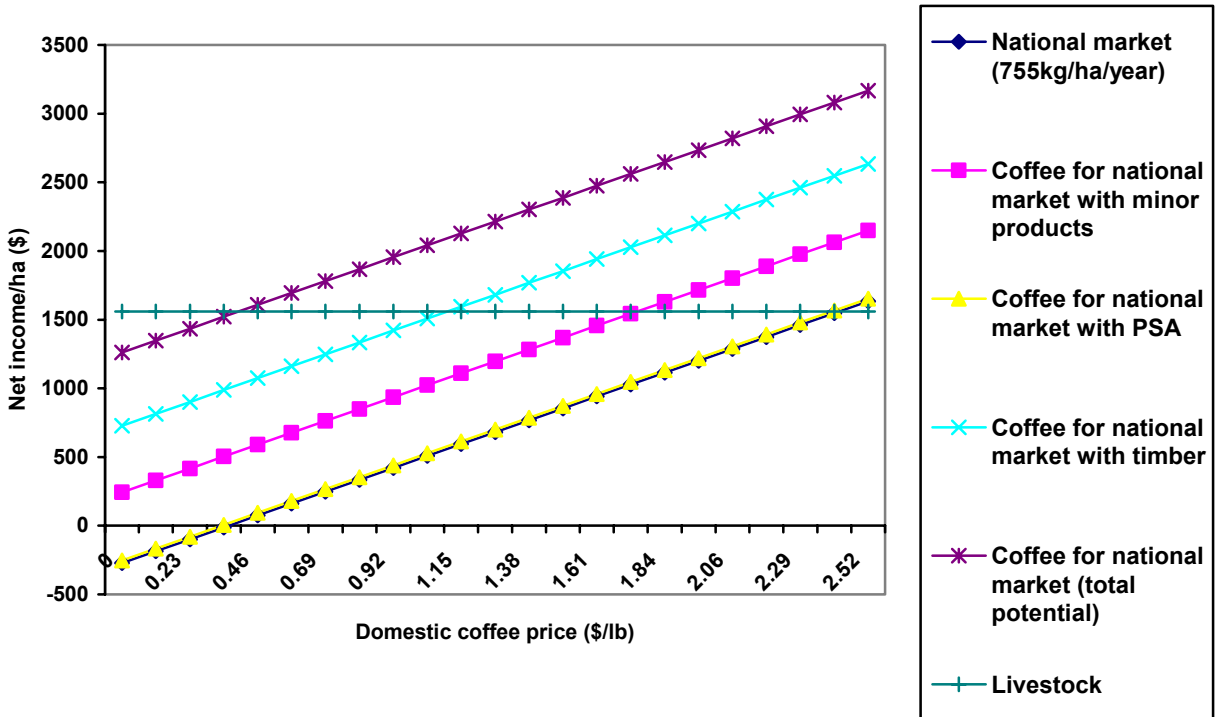
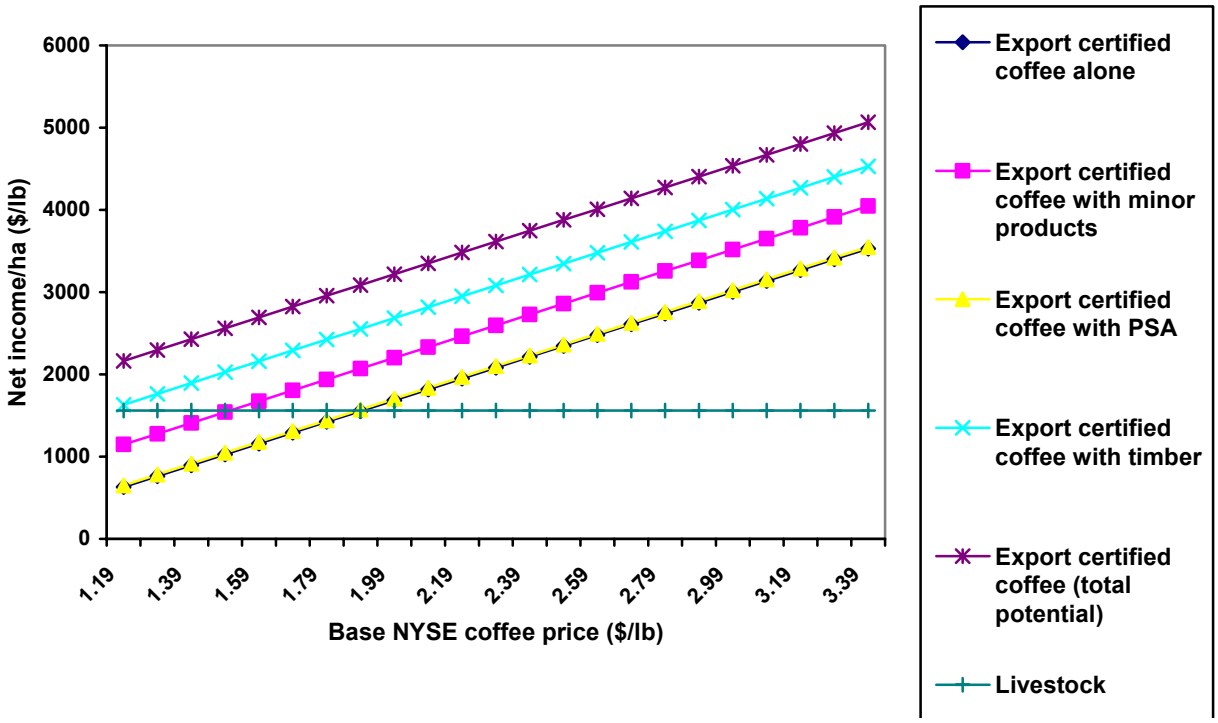


Figure 10 shows that export certified coffee, if only the coffee element of the shade coffee system is marketed, is only competitive with livestock if base NYSE coffee prices exceed $1.89/lb. However if additional elements of the shade coffee system are marketed, it out-competes livestock production under all circumstances, given the guaranteed base price of $1.19/lb offered by Fairtrade (see Figure 4).

Figure 10. Comparison of the profitability of export coffee for premium markets with livestock (dairy) production.



The comparison is based on the following data and assumptions:

1) Coffee prices

Domestic coffee prices are assumed to be 50% those of NYSE prices for certified Fairtrade organic coffee. This is the average situation over the last 20 years (see Figure 4), although currently (2005) domestic prices are unusually high and come close to those in NYSE. NYSE prices for certified Fairtrade organic coffee are calculated as the base NYSE price (with a minimum of $1.19/lb guaranteed by Fairtrade, plus a $0.05/lb Fairtrade social premium), plus $0.15/lb organic premium. Access to Fairtrade and organic certified export markets is assumed to incur additional costs of $0.23/lb in comparison with sales to non-certified national markets.

2) Timber production from shade coffee stands

Densities of timber trees such as *Cordia alliodora* in coffee stands may typically be around 150 stems/ha. Under these conditions, annual timber yield is estimated at 6-9m^3/ha/year. Current standing prices for *C. alliodora* timber in Venezuela are in the range of $93-186/$m^3$, depending on conditions of access and topography. These high prices are an indication of the high level of demand for such timbers. Average gross incomes are therefore in the order of $1,050/ha/year, using the middle part of the range of values for yields and timber prices. Total maintenance costs are estimated at $630/ha over the initial three years of the rotation when weeding is necessary, equivalent to an average annual cost over a 15 year rotation of $42/ha/year. Net incomes are therefore in the range of $1000/ha/year (this assumes that planting and establishment costs are covered by the Government's National Forestry Programme).

3) Minor products from shade coffee stands

Typically, shade coffee plantations can yield between 380 and 1,399kg/ha/month of bananas; with domestic prices ranging between $0.06 and $0.083/kg, this can provide an additional monthly income from coffee stands of $144-485. There is in addition a significant export market for dried fruit, including

bananas, papaya, blackberries, oranges, lemons and guava, and for herbs and spices such as dried basil, coriander, ginger, marjoram, mint, dill and rosemary. Recent market studies carried out by a cooperative in Mérida have found a total of 32 potential purchasers for such products in Europe, leading the cooperative in question to estimate a potential annual production of 50 tonnes of dehydrated bananas after 3 years. In 2003 total European demand for dried fruits was estimated to be worth US$2.6 billion[17]. Experiences from Costa Rica and Brazil have demonstrated that under Fairtrade conditions dried bananas have guaranteed prices of $3.80-4.85/kg FOB.

Assuming a median monthly production per hectare of 900kg of fresh bananas, equivalent to a yearly production of 840kg of dried bananas (assuming a ratio of 10:1 between fresh and dry weight), and a median sale price of $4.30, producers can potentially obtain $3,612/ha/year from the sale of dried fruit, equivalent to a net income (taking into account costs of $1.85/kg) of $2,058/ha/year[18]. Limitations of labour and technical capacity will probably imply that the full productive potential of all such products will not normally be realized. Although market for dried fruit is on the increase, there are likely to be limitations on the total yearly volumes which any given producer can sell; in an example cooperative in the Mérida Cordillera, each cooperative member currently is able to sell around 1000kg of dried bananas per year. Assuming this is obtained from an average area of shade coffee of around 4.5ha/farm, the average net income per hectare at present is estimated at around $514/year.

4) Environmental service payments

The annual income per hectare resulting from environmental service payment schemes depends on the design of the scheme. The two types of scheme considered are i) payment for hydrological services and ii) payment for carbon storage.

i) Hydrological services

Potential levels of payment are calculated on the base of estimates from two case studies: i) the **Yacambú catchment**, which contains a reservoir from which water will be drawn off via a tunnel (currently under construction) to irrigate the Quíbor valley and also supply drinking water to the city of Barquisimeto; and ii) the **Tocuyo catchment**, which contains the Dos Cerritos reservoir which supplies drinking water to around 1 million consumers in the urban centres of Tocuyo, Quíbor and Barquisimeto. The tables below show how the estimates of potential income per hectare from environmental services payment schemes were arrived at.

Table 16. Basis for the calculation of hydrological service payments in Yacambú Catchment

Average runoff from Yacambú basin	13.3 m^3/s
Proposed take-off to Quíbor valley	10.38 m^3/s
	327,343,680 m^3/year
Area to be irrigated in Quíbor valley	26,120 ha
Irrigation water provided per hectare in Quíbor valley	12,534 m^3/ha/year
Estimated payment for water by producers in Quíbor valley	US $0.005/ m^3
	US $62.67/ha/year
Total potential payment for water in Quíbor valley	US $1,637,000/year
Actual payment effected assuming 70% payment capture	US $1,145,900/year
Actual payment received assuming 30% transaction cost	US $802,130/year
Total area of forest in the catchment	17,741 ha
Payment/ha including only forest	**US $45/ha/year**
Total current area of forest and shade coffee in Yacambú basin	29,055 ha
Payment/ha including both forest and coffee	**US $28/ha/year**
Total area of coffee in the catchment	11,314 ha

[17] Fairtrade Product Rationale Paper on Dried Fruit, 2003.

[18] A part of this income stays with the cooperative, however as the producers are members of the cooperative this is calculated here as a benefit to the producer.

Payment/ha if scheme is limited to areas of coffee	**US $71/ha/year**

Table 17. Basis for the calculation of hydrological service payments in Tocuyo Catchment

Average outflow from reservoir	6.23 m^3/s
Average take-off for urban drinking water consumption	3.77 m^3/s
	9,907,560 m^3/month
Urban water consumers	1,000,000 people
	200,000 households
Households willing to pay $0.47/month for water (70% of total population)	140,000 households
Income perceivable from urban water consumers	US $65,800/month
	US $789,600/year
Actual payment received assuming 30% transaction cost	$552,720/year
Total area of forest in the catchment	54,775 ha
Payment/ha including only forest	**US $10/ha/year**
Total area of forest and coffee in the catchment	62,275 ha
Payment/ha including both forest and coffee	**US $9/ha/year**
Total area of coffee in the catchment	7,500 ha
Payment/ha if scheme is limited to areas of coffee	**US $74/ha/year**

If only coffee plantations were taken into account, under the two case study scenarios presented above $71 and $74/ha/year would be available from environmental service payment schemes. However, the calculations shown in Figure 9 and Figure 10 assume that environmental service payments are spread over both coffee plantations and forests, in order to avoid the risk of the generation of perverse incentives for the conversion of forest to coffee. The inclusion of forests as well as coffee will reduce the average per hectare payments significantly (based on the two case studies, to $28 and $9/ha respectively compared to $71 and $74 were only coffee plantations taken into account; a mean figure of $18.5/ha is used in Figure 9 and Figure 10). However as environmental service payments only constitute a small proportion of the potential increase to incomes from BD-friendly coffee production expected to result from the project (see Figure 10) this does not significantly jeopardize the impact of the project in terms of the attractiveness of shade coffee relative to less BD-friendly alternatives.

ii) Carbon storage

Carbon storage is estimated at 2.4 tonnes/ha, with a value per tonne of US $5/year, giving a potential annual payment per hectare of **US $12**.

PART IX Criteria for Selection of Pilot Municipalities

The 7 pilot municipalities identified were selected objectively through the following process:

1. Identification of forests of high biodiversity Conservation Importance

An initial filter was applied to identify those forests with high probable importance for biodiversity conservation on the basis of i) size (it is assumed that greater size increases biodiversity importance) and ii) degree of disturbance (it is assumed that less disturbance increases biodiversity importance).

i) **Size:**

Forests over a minimum size of 40,000ha were identified through satellite imagery.

ii) **Degree of disturbance**

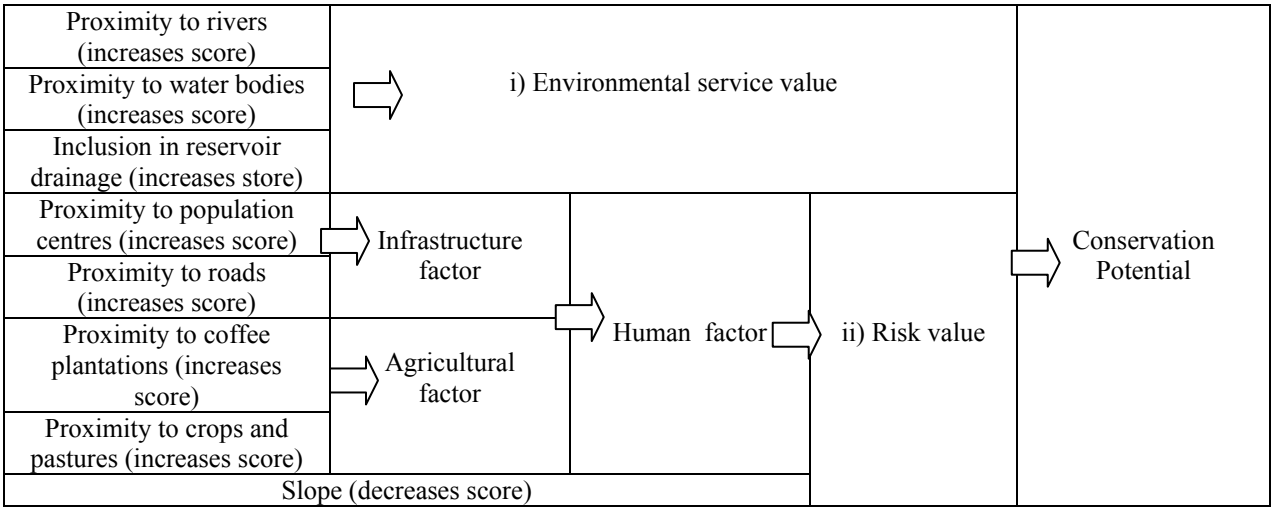
The degree of disturbance was determined through satellite imagery on the basis of reflective characteristics, texture and degree of fragmentation. These variables are indicators of the condition of vegetation, forest structure and even humidity levels.

The following categories of disturbance were defined:

I. **Forests without apparent intervention.** Blocks of forest with uniform and continuous cover, well structured, with canopy and sub-canopy apparently unaltered, generally of great size.
II. **Lightly disturbed forests.** Blocks of forest with uniform and continuous cover, well structured, with apparently unaltered canopy and only very slight alteration of the sub-canopy, almost imperceptible, in some cases of natural origin. Generally of great size.
III. **Moderately disturbed forests.** Blocks of forest with relatively uniform cover, little fragmented, with easily detectable disturbance of the sub-canopy (in some cases due to the type of forest), with variable size.
IV. Heavily disturbed forest. Very fragmented forests, with strong difference in cover, discontinuous canopy and sparse or non-existent sub-canopy. Generally small patches, isolated or in direct contact with disturbed areas.

2. Definition of Conservation Potential of each forest and coffee stand.

The Conservation Potential of each of the forests initially identified as having high probable Biodiversity Importance was defined on the basis of i) its potential for inclusion in environmental service payment schemes ("environmental service value") and ii) the significance of the risks affecting its conservation status. The process is summarized as follows:



3. Assignation of municipal values for forest conservation priorities

A value was assigned to each municipality in terms of its importance for forest conservation on the basis of its content of forests with high Conservation Potential. The range of forest Conservation Potential values was divided into four categories and each category was assigned a weighting, as follows:

Category	Ranges	Range of preservation values	Weighting	Weighted area
A	$X \geq \overline{x} + 1.5\,\sigma$	$X \geq 6.06$	4	Area(A) x 4
B	$\overline{x} \leq X < \overline{x} + 1.5\,\sigma$	$4.66 \leq X < 6.06$	3	Area(B) x 3
C	$\overline{x}\text{-}1.5\,\sigma \leq X < \overline{x}$	$3.26 \leq X < 4.66$	2	Area(C) x 2
D	$X < \overline{x}\text{ -}1.5\,\sigma$	$X < 3.26$	1	Area(D) x 1
Municipal conservation value (Y):				Sum of the above

The weightings were subsequently multiplied by the area of each category in the municipality in question. The sum of the resulting values is equal to the forest conservation priority at municipal level. The final step is to assign categories to the municipal conservation values, as follows:

Ranges	Category of municipal conservation value for forests
$Y \geq \overline{x} + 1.5\,\sigma$	5
$\overline{x} + \sigma < Y < \overline{x} + 1.5\,\sigma$	4
$\overline{x} + 0.5\sigma \leq Y < \overline{x} + \sigma$	3
$\overline{x} \leq Y < \overline{x} + 0.5\,\sigma$	2
$X < \overline{x}$	2

4. Assignation of municipal values for area of coffee plantation

The same process (steps 1-2 above) was followed for coffee plantations. Municipal values were calculated for coffee as follows:

Ranges	Category of municipal conservation value for forests
$Y \geq \overline{x} + 1.5\,\sigma$	5
$\overline{x} + \sigma < Y < \overline{x} + 1.5\,\sigma$	4
$\overline{x} + 0.5\sigma \leq Y < \overline{x} + \sigma$	3
$\overline{x} \leq Y < \overline{x} + 0.5\,\sigma$	2
$X < \overline{x}$	2

5. Human Development Index (HDI)

5 categories of HDI were defined; higher weightings were given to municipalities with low HDI and viceversa.

Ranges	HDI category
$Y \geq \overline{x} + 1.5\,\sigma$	5
$\overline{x} + \sigma < Y < \overline{x} + 1.5\,\sigma$	4
$\overline{x} + 0.5\sigma \leq Y < \overline{x} + \sigma$	3
$\overline{x} \leq Y < \overline{x} + 0.5\,\sigma$	2
$X < \overline{x}$	2

6. Potential for environmental services compensation schemes

Based on an analysis of conditions for the establishment of schemes for compensation of environmental services, municipalities were assigned a value of 1 (if they had potential) and 0 (if they did not).

7. Plan Café

Municipalities were also ranked according to the degree of co-financing investment in each by the Government's Plan Café programme.

Ranges	Plan Café investment category
$Y \geq \bar{x} + 1.5\,\sigma$	5
$\bar{x} + \sigma < Y < \bar{x} + 1.5\,\sigma$	4
$\bar{x} + 0.5\sigma \leq Y < \bar{x} + \sigma$	3
$\bar{x} \leq Y < \bar{x} + 0.5\,\sigma$	2
$X < \bar{x}$	2

8. Definition of demonstration value

The higher ranking municipalities were then compared on the basis of the existence of interesting experiences to date, of relevance to the project, which might provide the basis for pilot and demonstration activities.

9. Geographical spread

Finally, the selection of municipalities was reviewed in order to ensure an appropriate distribution across the project area. Three principal regions were defined in the area: Pueblos del Sur, Northern Slopes and Sierra Portuguesa (Map 8). A number of municipalities were grouped together in the Sierra Portuguesa region, with the aim of promoting a "coffee axis" association of municipalities (Map 9). Aricagua and Andrés Bello were chosen largely in order to ensure the existence of pilot municipalities in the Pueblos del Sur and Northern Slopes regions respectively; in addition, Andres Bello in particular has very interesting experiences developed to date which are worthy of replication. Municipalities in Táchira State were excluded as this area is intended to be included within an eventual subsequent phase of the project.

10. Definition of total conservation categories at municipal level

The next step was, for each municipality, to sum the values defined for each criterion. The results are shown in Table 18.

Table 18. Summary of selection criteria for pilot and target municipalities

Municipalities	Category					Total	Demonstration potential
	Forest value	Coffee value	IDH value	ESP value	Plan Café value		
Pilot municipalities							
Boconó	5	5	5	1	5	21	
Morán	3	5	5	1	5	19	Important experiences with cooperatives and organizations
Bolívar	4	5	3	0	5	17	Experience to date with community-based rural tourism
Andres Eloy Blanco	2	3	5	1	5	16	Experiences with cooperatives
Sucre	1	5	5	0	4	15	Experiences with producer organizations
Aricagua	5	3	5	0	1	14	Representative of the “Pueblos del Sur” region
Andrés Bello	1	1	5	0	1	8	Experiences with coffee certification, and representative of the “northern slopes” region
Target municipalities for replication							
Arzobispo Chacón	5	3	5	0	1	14	
Guanare	1	5	3	0	3	12	
Cruz Paredes	2	1	5	1	1	10	
Monseñor José Vicente de Unda	1	2	5	0	2	10	
Caracciolo Parra y Olmedo	2	1	5	0	1	9	
Pedraza	2	1	5	0	1	9	
Tulio Febres Cordero	2	1	5	0	1	9	
Uribante	1	1	5	0	2	9	
Páez	4	1	3	0	0	8	
Alberto Arvelo Torrealba	1	1	4	1	1	8	
Carache	1	1	5	0	1	8	
Justo Briceño	1	1	5	0	1	8	Local coffee processors receptive to project lessons
Obispo Ramos de Lora	1	1	5	0	1	8	
Other municipalities							
Córdova	4	3	4	0	2	13	High rating but excluded because in Táchira
San Genaro de Boconoito	4	1	5	1	0	11	High ranking but excluded because not in Plan Café
Juan Vicente Campo Elias	1	1	5	0	1	8	
Junín	1	2	3	0	2	8	
Antonio J. de Sucre	4	1	2	0	0	7	
Cardenal Quintero	1	1	5	0	0	7	
Ezequiel Zamora	2	1	4	0	0	7	
Francisco de Miranda	1	1	5	0	0	7	

Fernández Feo	1	1	4	0	1	7	
Simón Planas	1	1	4	0	1	7	
Rangel	1	1	4	0	0	6	
Torbes	1	1	4	0	0	6	
Araure	1	1	3	0	1	6	
Iribarren	2	1	1	0	2	6	
Libertador	3	1	1	0	1	6	
Santos Marquina	1	1	3	0	0	5	
Campo Elias	1	1	2	0	1	5	

PART X Bibliography

Fahrig, I. (2001). How much habitat is enough? Biological Conservation 100: 65-74

Moguel, P., and V. M. Toledo. 1999. Biodiversity conservation in traditional coffee systems of Mexico. Conservation Biology 13: 11–21.

Philpott, S.M. and Dietsch , T. Coffee and conservation: a global context and the value of farmer involvement. Conservation Biology 17: 1844-1846

Rappole, J.H., King D.I. and Vega Rivera J.H. (2003). Coffee and Conservation. Conservation Biology Pages 1–4. Volume 17, No. 1, February 2003

Ricketts, T.H. (2001). The matrix matters: effective isolation in fragmented landscapes. The American Naturalist 158: 87-99.

Steffan-Dewenter, I. (2002). Landscape context affects trap-nesting bees, wasps and their natural enemies.

Vandermeer, J. and Carvajal, R. (2001). Metapopulation dynamics and the quality of the matrix. The American Naturalist 158: 211-220.

Yerena E and Torres D (1994). Spectacled bear conservation and dispersal corridors in Venezuela. International Conference on Bear Research and Management.

PART XI MAP ANNEX (Separate File)

Map 1. The Mérida Cordillera within the Northern Andes Bioregion

Map 2. The Mérida Cordillera

Map 3. Political and administrative divisions

Map 4. Ecological units of The Mérida Cordillera

Map 5. Vegetation cover on The Mérida Cordillera

Map 6. Vegetation cover within the CCRZ

Map 7. Reservoir drainage basins in the CCRZ

Map 8. Area of the CCRZ within National Parks

Map 9. Pilot and replication areas for productive systems in the CCRZ

Map 10. Conservation value of forests as a criterion for selection of pilot municipalities

Map 11. Pilot municipalities and target area for initial replication at municipal level

Map 12. Key areas for connectivity between Protected Areas

PART XII RESPONSE TO PROJECT REVIEWS

A) CONVENTION SECRETARIAT COMMENTS AND IA/EXA RESPONSE

SCBD Comment:
It is regrettable to note at this late stage that the project will be considered without any reference to COP guidance.

UNDP Response:
Reference has been made in the section on Policy Conformity (*see Executive Summary paragraph 27 and Project Document paragraph 84*) to the fact that this BD2 approach is fully consistent with the ecosystem approach adopted by the COP. Specifically, with regards to CBD/COP guidance, the project is consistent with Decision VII/12 which stresses "that the ecosystem approach is the primary framework for action in the Convention on Biological Diversity and that there is a need to consider the inter-linkages between the Addis Ababa Principles and Guidelines for the Sustainable Use of Biological Diversity and the ecosystem approach in the conservation and sustainable management of biodiversity." In the same light, the project is supportive of decision VII/12 of the CBD/COP (Article 10 on sustainable use) which calls for "integrating and mainstreaming the Addis Ababa Principles and Guidelines into a range of measures including policies, programmes, national legislation and other regulations, sectoral and cross-sectoral plans and programmes addressing consumptive and non consumptive use of components of biological diversity, including plans and programmes addressing the removal or mitigation of perverse incentives that undermine the conservation and sustainable use of biodiversity".

B) RESPONSE TO STAP REVIEW

STAP EXPERT REVIEW
Review for UNDP-GEF

Project Title*:* Biodiversity conservation in the productive landscape of the Venezuelan Andes (PIMS 2734)

Consultant: Enrique H. Bucher
University of Cordoba, Cordoba, Argentina, Centro de Zoologia Aplicada - Director

Proposal's global priority and relevance in the area of the biodiversity protection

This project is in full accordance with GEF objectives. It deals with a region of significant biodiversity and ecological value. The Venezuelan Andes still holds large portions of little-modified ecosystems of great conservation value, which are under significant and rapidly increasing threats, particularly through land-use changes. Unless adequate measures are taken, it is very likely that present trends will accelerate, leading to rapid loss of the natural capital. Accordingly, pre-emptive actions aiming at the integration of sustainable production systems, from the individual property to the basin

and landscape scale, are fully justified and timely. This approach is particularly important regarding conservation outside Parks and Reserves, taking into consideration the limited extension of protected areas in the Paramos.

Scientific and technical soundness

The diagnostic analysis is correct and comprehensive. The key threats to the Tropical Andes Region are adequately identified, both in terms of the natural, social, and economic components.

The strategy selected to maintain a biodiversity-supporting landscape in the Venezuelan Andes, based on supporting biodiversity-compatible coffee plantations, is adequate and with great potential for success.

Development of complementary activities that enhance adoption of good practices at the individual and institutional level is also consistent with the diagnostic analysis and adequate for the project area in question.

Outputs are consistent with the project's goals, general strategy, and methodological approach. Inclusion of the concept of pricing of environmental services as a complementary source of income for landowners is an innovative and significant step forward in Latin America.

Identification of the global environmental benefits and/or drawbacks

The proposal fits adequately with GEF goals. If this project were successful in achieving protection and sustainable use of the Andes forest in the selected sites, benefits would be outstanding for the whole eco-region. In my opinion, the opportunity is unique but greatly constrained by a very narrow time-window opportunity.

Regarding benefits and drawbacks, I suggest expanding or improving the following aspects:

1) In the diagnostic section, it is stated that conversion of large areas of coffee to pasture has been largely due to the low and unstable prices for coffee. At the same time, it is assumed that the risk of alterations of the relative stability of national and international coffee prices is considered low. However, only limited factual support is given. I recommend adding more justification and details to this assumption, taking into consideration that price instability is strongly associated with the international coffee market.

2) It is also assumed that the risk of coffee production being expanded at the expense of natural forests is low. Reasons for this assumption are based mostly on the "good will attitude" by organizations and stakeholders. Despite the fact that this project is based on a landscape approach to ecosystem management, there is no indication of the existence planning schemes and legislation oriented to land use regulation and the protection of the remaining forests. If this legislation does exist, should be included in the analysis. If not, perhaps the project should consider adding legal

aspects as a component of the general strategy aiming at the protection of the productive landscape in the Andes. Along this line, it would be interesting to develop a more explicit connection with the related output section "*Enabling policy, planning, and regulatory frameworks support BD-friendly productive systems in pilot municipalities"*

Replicability of the project

The project has clear value and feasibility for replicability in similar ecoregions of the world, and particularly the Yungas rainforest ecoregion that extends from Venezuela down to Northern Argentina.

Secondary issues:

1. ***Linkages to other focal areas:*** The project clearly links with biodiversity, desertification, and climate change issues.
2. ***Capacity-building aspects:*** The proposed capacity building activities are integrated as one of the core activities of the project, closely related with local, municipality-level actions. This is a very positive characteristic of the project.

Summary

Overall, this proposal is well structured, clearly focused on well-defined and highly relevant objective. It shows a convincing, comprehensive, and feasible strategy for encouraging and supporting integrated ecosystem and resource management in the Venezuelan Andes. Assuming that my previous comments will be considered and addressed, I fully support this proposal.

CÓRDOBA, JUNE 1, 2005

Enrique H. Bucher

RESPONSE TO STAP REVIEW

Summary of STAP Comment	**Response**	**Location where document was revised (sections, paragraphs)**
	The proponents and UNDP thank the STAP reviewer for a comprehensive and constructive review. All comments have been addressed as follows:	
In the diagnostic section, it is stated that conversion of large areas of coffee to pasture has been largely due to the low and unstable prices for coffee. At the same time, it is assumed that the risk of alterations of the relative stability of national and international coffee prices is considered low. However, only limited factual support is given. I recommend adding more justification and details to this assumption, taking into consideration that price instability is strongly associated with the international coffee market.	The principal project emphasis and strategy is on buffering BD-friendly productive practices against price fluctuations, by increasing their *profitability* and *diversity* within the productive unit of the farm. As farmer decisions regarding what is being produced is often dictated by considerations pertaining to economic gain and family livelihoods, both *enhancing* and *diversifying* these options at the farm level was collectively considered the most reliable and practical strategy to mitigate the impact of price fluctuations and the corresponding productive/land use decisions that follow. Specifically, the project will (i) help producers to access premium markets and to add local value to their products, thereby helping to ensure that even during periods of low prices these products remain competitive (an assessment of different price scenarios and their implications for both competitiveness and income generation vis a vis existing alternatives was conducted, further corroborating the viability of shade coffee and associated products against these other alternatives); (ii) increase producers' capacities and negotiating skills to ensure a more active and equitable sharing of benefits throughout the productive and marketing chain and iii) help producers to maximize the number of components of their productive systems from which they realize economic benefits (such as fruit, timber, landscape value and environmental services), through the provision of technical and	Paragraphs 85 and 89 of the Project Document (Objective and Outcomes) Paragraph 113 (i) of the Project Document (Assumptions) Section IV, Part VIII of the Project Document

	marketing support for these products.	
	Analyses carried out during the PDF-B phase - based on concrete practical experiences to date in the project area and corresponding discussions and feedback from producers - have confirmed the potential of these strategies to buffer BD-friendly production systems against price fluctuations, leading to the conclusion that this risk is indeed Low.	Section IV, Part VIII of the Project Document
	Under current conditions, the production of coffee for sale on the national market cannot compete with livestock production unless prices on the national market exceed $2.45/lb; if, however, additional elements of the shade coffee system are marketed, such as minor products (for example bananas), timber and environmental services, it becomes more profitable than livestock production when prices exceed around $0.35/lb, as has been the case for at least the last 20 years.	Section IV, Part VIII of the Project Document (Figure 9)
	If only the coffee element of the shade coffee system is marketed, certified (organic and Fairtrade) coffee is only competitive with livestock if base NYSE coffee prices exceed $1.89/lb. However, <u>if additional elements of the shade coffee system are marketed</u>, it out-competes livestock production under all circumstances and price scenarios, given the guaranteed base price of $1.19/lb offered by Fairtrade.	Section IV, Part VIII of the Project Document (Figure 10)
	Finally, it is important to note, in cultural terms, that there is a significant coffee growing tradition in the project area that has moulded its social structures, productive practices and overall way of life. There is therefore an imbedded socio-cultural disposition to maintain this tradition provided the necessary contextual and structural elements enabling the maintenance of its prior profitability remain.	

	This is what the project proposes to ensure.	
It is also assumed that the risk of coffee production being expanded at the expense of natural forests is low. Reasons for this assumption are based mostly on the "good will attitude" by organizations and stakeholders. Despite the fact that this project is based on a landscape approach to ecosystem management, there is no indication of the existence planning schemes and legislation oriented to land use regulation and the protection of the remaining forests. If this legislation does exist, should be included in the analysis. If not, perhaps the project should consider adding legal aspects as a component of the general strategy aiming at the protection of the productive landscape in the Andes. Along this line, it would be interesting to develop a more explicit connection with the related output section "*Enabling policy, planning, and regulatory frameworks support BD-friendly productive systems in pilot municipalities"*	Project preparation work included a review of existing legislation applicable to land use changes with potential impacts on biodiversity. In summary, there is a substantial body of legislation applied to the regulation of land use changes with potentially important benefits for biodiversity conservation in the productive landscape. While much of this legislation is currently under review to ensure conformity with the model of *endogenous development* proposed in the 1999 Constitution, its overriding objectives which promote social development based on considerations of equity, sustainability (including ecological), and empowerment, provide an enabling framework for meeting and delivering project objectives. Examples of key instruments include: (i) the **Organic Law for the Environment (1976)**, which provides, *inter alia,* for territorial land use planning and the sustainable use of natural resources; (ii) the **Organic Law for Territorial Land Use Planning (1983)**, which provides for the preparation, approval, management, execution and monitoring of land use plans and the adoption of the corresponding regulations; (iii) the **Forestry, Soils and Water Law (1966)**, (iv) the **Wildlife Protection Law (1970)**, the **Penal Environmental Law (1992)**, and (v) the **Biological Diversity Law (2000)**, which emphasizes the promotion of compatibility between economic activities and environmental protection, of civil society participation in conservation and sustainable use, of the recognition and preservation of local knowledge of biodiversity and its uses, and just and equitable participation in the benefits derived from its use.	Paragraph 52 of the Project Document (Institutional, Sectoral and Policy Context)

	As such, under the baseline scenario what is missing is not so much proper regulatory instruments, but rather the technical guidance, tools and capacities and coordination frameworks to most constructively apply these existing land planning and regulatory instruments for their intended benefit. This is addressed through Outcome 2 of the project (see below).	Paragraph 75 of the Project Document (Baseline Analysis).
	The most significant single element of the project baseline is the National Coffee Plan. Its objectives specifically include reference to the importance of shade coffee for the protection of hydrological catchment areas, and specific provision is made for support to organic coffee.	Paragraph 67 of the Project Document (Baseline Analysis)
	This further confirms the commitment of the Government to productive practices which are environmentally friendly and which via their application will safeguard ecosystem functions considered critical for the area's sustainable development (notably hydrological services).	
	The application of regulation in practice will be further facilitated as a result of the Government's investments in land titling, which is a fundamental requisite for effective land use planning, control, impact monitoring and the associated delivery of technical support services, including credit..	Paragraph 74 of the Project Document (Baseline Analysis)
	The project will adopt a multi-pronged approach to avoiding the risk of coffee plantations encroaching on natural forests, including both incentives and regulation. On the one hand, it will demonstrate the economic benefits which may accrue from environmentally-friendly forms of production which do not encroach on forests, through access to support from the National Coffee Plan, access to premium niche markets through BD-friendly coffee, environmental services payments and farm-based	

	tourism. On the other hand, Outcome 2 ("Enabling policies, programmes, and planning frameworks support BD-friendly productive systems in pilot municipalities"**)** is specifically geared to ensuring that existing legislation regarding planning and land use is applied as intended and that the necessary capacities and tools will be established to buffer the likelihood of expansion. Among the outputs of this Outcome will be mechanisms for participatory decision-making in land use planning, zoning and management in accordance with BD conservation principles; a capacity building programme for Municipal Offices, to support planning and management of the productive landscape in accordance with BD conservation and sustainable use principles; and technical guidelines to orientate the incorporation of BD principles into planning tools and land management systems. In this regard, the combination of assistance for enhanced land use planning, mechanisms participatory for land use management, coupled with incentives and baseline operations clearly supportive of conservation goals within productive landscape planning, are considered the most viable and practical means to avert any potential risks of natural forest encroachment.	Paragraphs 96-101 (Outcomes) of the Project Document.

STAP EXPERT REVIEW
Review for UNDP-GEF

Project Title*:* Biodiversity conservation in the productive landscape of the Venezuelan Andes (PIMS 2734)

Consultant: Enrique H. Bucher
University of Cordoba, Cordoba, Argentina, Centro de Zoologia Aplicada - Director

Complementary comments

I have analyzed the responses to my previous review (June 1, 2005) together with the modified version of the project. I find that all my comments and suggestions have been adequately addressed. About the need for buffering the structural price instability in coffee markets, the rationale and background information for the proposed measures are now adequately explained and justified. The approach selected, based on improving productivity and access to more selective and profitable markets appears quite reasonable, considering the economic and social regional background.

In relation with the assumption that there is a low risk for coffee cultivation to expand into natural forests, adequate clarification and support information have been provided in the response as well as added to the proposal document.

I consider therefore that additional clarifications and changes in the documentation have dealt satisfactorily with all my initial comments and suggestions. Accordingly, I now fully support this proposal.

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CÓRDOBA, JUNE 6, 2005

Enrique H. Bucher

C) GEF Secretariat and other Agencies' comments and IA/ExA response

UNDP responses to GEFSec Technical Review
Project Title: Biodiversity Conservation in the Productive Landscape of the Venezuelan Andes

Project Design

GEFSec Comment 1:

1. The PDF proposal had a slightly different focus and was not solely concentrated on the coffee sector. For example, the PDF envisioned the full project to establish biological corridors (US$100,000 was allocated during the PDF B to activities related to biological and sustainable use corridors) through conservation-set asides under different protection regimes and ownership providing increased connectivity between existing protected areas. This aspect of the project design is now missing. At WPI, the Secretariat requested that "the extent of areas identified, and to be set-aside as conservation set-asides (including corridors) should be stated, as well as the legal basis for them." There is no mention of conservation set asides etc. This is a substantial change in direction for the project having a potentially significant impact on biodiversity conservation gains. Please clarify what the strategy for the project is in this regard and why there has been this change.

UNDP Response:

Current project design has been modified from that proposed in the PDFB document on the basis of extensive analyses and consultations carried out during the project preparation phase. In this regard it is important to note that while the project's pipeline entry was secured in early 2003, the resulting PDFB preparation funds were only approved by CEO in Jan 2004 due to the prevailing funding freeze on all PDFs during that time. In the interim, significant government sponsored baseline opportunities emerged and matured thereby conferring additional programming synergies to project design and strategic orientation. Propitious contextual developments, coupled with the in-depth consultation processes mentioned above, resulted in a review of the lines of actions originally defined at conceptual levels to deliver BD gains in the productive landscape. While some of the means identified to mainstream BD into the productive landscape were indeed modified based on preparation work and analyses (in keeping with PDF spirit and rationale), major key elements have however remained unchanged (*see Project Document paragraph 116*).

The project retains its focus on productive landscapes and strategic priority #2 objectives and rationale. There is heavy emphasis placed on coffee production, and more precisely the "shade coffee producing farm" as this is the productive unit where PDFB analyses reveal the principal threats to BD to be occurring (*see Project Document paragraph 116*). These are flagged in pg 3 of the Executive Summary and essentially relate to the land conversion processes occurring in these farming units leading to shade coffee stands being converted to pasture. The corresponding root causes associated with these land use changes are also summarized in pg 3 of the Executive Summary and further described in *paragraphs 35-48* of the Project Document. The resulting scenario is one in which the landscape mosaic prevalent for over two centuries in the 400-3,000 altitude band of the Merida Cordillera and characterized by natural forests, shade coffee stands, pastures, hedgerows, fallows, staple crops and home gardens is being progressively altered in terms of its value and benefits for BD conservation.

Considering that BD2 guidance allows either a 'sector-based' or a 'landscape-based' approach: it was collectively decided, given the complex nature of farmers' decision-making with implications for BD, to adopt a landscape-based approach rather than focusing exclusively on the coffee sector. Coffee production is therefore considered as one (albeit major) component of the producers' farming systems, alongside other production systems and livelihood strategies such as off-farm employment, livestock raising etc. The 'coffee-producing farms' referred to as the basic planning unit in the project are in fact highly diverse units typically including (in addition to coffee) pasture, vegetables, staple grains and home gardens.

The decision not to focus on the theme of biological corridors in project's design was taken on the basis of the results of threats analyses and considerations pertaining to project SP focus (*see Project Document paragraph 117*). PDFB analyses clearly indicated that the major issues in the area in relation to BD threats were the processes occurring in the productive landscape. These were found to be far more significant and pressing than enhancing the management effectiveness of protected areas. It was also considered that the project would have a clearer operational focus and impact if it concentrated on issues specifically relevant to the productive landscape, rather than protected area management issues such as inter-protected area connectivity. Finally, preliminary conversations and feedback from the WB during early PDFB work indicated strong possibilities that this IA intended to invest in the area of protected area management, meaning that the obvious gap to be addressed by GEF was not PAs but the eminent threats observed in the productive landscape.

Having said that, the project will promote 'whole landscape' approaches to planning which will provide land use planners, resource users and protected area managers alike with the variety of tools and capacity skills required to promote the effective integration and critical balance required between protected areas and the productive landscape that surround them. In addition, and although not a specific aim of the project, improved BD conservation prospects in the productive landscape are also expected to generate incidental benefits in terms of reducing potential encroachment and pressures on PAs and delivering connectivity between protected areas. In this regard the project will certainly improve local level connectivity (mini-corridors) between component elements of the productive landscape.

Finally, project components have been conceived to promote the conservation of existing forest areas within the productive landscape, through a combination of regulation, planning, awareness building and economic incentives (payment for environmental services). These will in fact represent set-asides even if not specifically designated as such (*see Project Document paragraph 118*).

GEFSec Comment 2:

The PDF envisioned a Phase I of a long-term three phase programme. Please clarify the rationale for the change in design and implementation approach as there is no reference to a phased implementation approach in the current design.

UNDP Response:
It is correct that it was an omission not to mention the proposed subsequent phases of the project. The logic remains the same as that proposed in the PDFB document, i.e. to commence in the Merida Cordillera and in subsequent phases (to be proposed as stand-alone projects) the resulting projects would focus on the other areas of the Venezuelan Andes described in the PDFB document (*see Project Document paragraph 83*). The main rationale for this is that the magnitude of the Venezuelan Andes, and the logistical difficulties posed by its different constituent areas, would make it impractical to include them all in one project. The phased approach also permits the progressive learning of lessons and their incorporation into the design of successive projects.

GEFSec Comment 3:

The project has put in place a strategy to prevent natural forests from being converted to shade coffee. This is supported by the policies of the National Coffee Plan, but the proposal fails to indicate what enforcement mechanism is in place in case expansion does occur into natural forests. Does UNDP have within its own safeguards policies or project management modalities a mechanism whereby if natural forests are being replaced by shade coffee that funding disbursements can be withheld? Please clarify.

UNDP Response:

Enforcement is currently the responsibility of both MARN and local authorities (*see Project Document paragraph 75*). The ability of relevant institutions to carry out these responsibilities effectively is currently limited. As stated in point 4 of paragraph 114 of the Project Document, part of the project's multi-pronged approach to guarding against the risk of coffee encroaching on natural forest will be the strengthening of local planning and regulatory capacity, specifically among local authorities (*see Project Document paragraph 115, point 1, fourth bullet point*). In addition, a major disincentive to encroaching on natural forest will be that those responsible for so doing will become ineligible for support through a variety of baseline programmes and schemes such as the National Coffee Plan (*see Project Document paragraph 115, point 1, second bullet point*). As the project will support initiatives through which environmental criteria for government sponsored support will be formulated and applied a local levels - including the explicit requirement for nil impact on natural forest - it is envisaged that this risk is being properly addressed and mitigated. Finally, the project's M&E strategy and baseline information on natural forests (maps, GIS, etc) will ensure the means for a collective on-going oversight on these matters (*see Project Document paragraph 115, point 1, sixth bullet point*). If in spite of established precautions and incentives systems incorporated within baseline operations, expansion into natural forests is registered on a permanent basis, UNDP has the prerogative to freeze project disbursements (*see Project Document paragraph 115, point 1, seventh bullet point*).

GEFSec Comment 4.

The proposal notes that National Parks that are in the project area have "large proportions" occupied by shade coffee. This detracts considerably from any global benefits that will accrue from the intervention and seems to indicate that what was once a biodiversity rich landscape is now a very much degraded area in terms of biodiversity. Please clarify.

UNDP Response:

It is correct that there are large areas of coffee in the area's national parks (National Parks cover an area of 760.631 hectares). However the latter is shade coffee primarily present in the 2 km buffer area surrounding the national parks rather than their core zones (the total area of these buffer zones is 506,700 ha), and the total area of shade coffee present in these buffer zones is 49,550 ha, corresponding to only 9.8% of the total buffer zone area (*see Project Document paragraph 35*).

The presence of significant areas of shade coffee in the project area does not diminish the potential BD impacts of the project, as these impacts are to be measured by the condition of BD in the productive landscape, and not by the conservation status of the remaining intact ecosystems found in protected areas. Also, as coffee production principally occurs in the buffer areas of national parks, as detailed above, the latter is not considered a threat but rather a critical buffer against potential pressures and encroachment (*see Project Document paragraph 122*). In any case what remains relevant for this BD2 project is the current BD status in the landscape, which as explained in the document remains high despite the degree of human intervention which it has undergone.

GEFSec Comment 5.

The analysis of payment for environmental service schemes appears to present a skewed analysis that favors a very high payment for hectare of shade coffee maintained. Please clarify if the project is going to pursue this strategy that seems to give lesser importance to the payment of services for forest cover maintained. The information is presented in such a way that indicates that the project could create a perverse incentive by developing a system that would pay farmers more to have shade coffee than to maintain natural forests. This obviously would not be acceptable. Please clarify the PES scheme that is being proposed by the project. We encourage the project to promote a PES scheme that create incentives to maintain both forest cover and shade coffee.

UNDP Response:

The GEFSec Programme Manager is fully correct in that ESP schemes should avoid the risk of providing perverse incentives which might lead farmers to convert natural forests to coffee. The project will in fact promote the payment of higher amounts to forests than to coffee plantations *(see Project Document paragraph 115, point 1, fifth bullet point).* This will not significantly reduce the competitiveness of shade coffee relative to other productive land uses (*see Project Document Part VIII*), but will provide a significant incentive (backed up by other strategies such as planning, regulation and awareness raising) for the retention of forest areas.

GEFSec Comment 6.

It is not clear how the project proposes to maintain the 641,700 hectares of non-coffee forest cover nor what the condition of this forest cover is at project start up. Is this the area in the National Parks that is not shade coffee? Please clarify.

UNDP Response:

The forest area referred to in the impact measurement table represents the forest cover in the productive (non-protected) landscape which is *not used* for shade coffee production (*see Project Document Table 2*). As stated in the table, this definition includes forest of all conditions ranging from secondary fallow through to intact forest patches (*see Project Document paragraph 121*). The strategies to ensure that this forest area (much of which is included within the same farms that contain shade coffee) and the mosaic it conforms is maintained are multi-pronged and include: enhancement of local land use planning instruments for an integrated farm and landscape-wide planning approach, strengthening of regulatory capacities, incorporation of economic incentives in baseline operations, diversification and economic sustainability of the shade coffee productive unit, and environmental education. The project target is that the area of such forest will be the same at the end of the project as at the beginning. The project strategy is therefore one which seeks to stabilize and reverse current land conversion trends and their associated impact on the BD present in the productive landscape.

Technical Comments to be taken into account during project Implementation

While these will be fully taken into account during project implementation and the project's M&E strategy, as applicable, some comments are detailed below.

GEFSec Technical Comment 1:

The proposal does not clarify what species of coffee is being cultivated in the shade plantations, but we assume that it will be *Coffea arabica*. Coffee demand from developed countries is likely to increase at only a rate of 1.3% a year and that demand will likely be focused on specialty arabicas. This is a small market opportunity that will be very competitive. Commodity production has low barriers to entry which also increases potential competition. Given that most exports from Venezuelan coffee go to the US, a market that has high demand for specialty Arabicas, it is not

clear how the project will define its market niche and separate their product from competitors. Furthermore, given that most global demand in the future will be from developing country consumers who are unlikely to pay environmental premiums for specialty Arabicas but will rather opt for Robusta or cheap Arabicas, other market options may be limited. These broader market issues should be considered.

UNDP Response:
As shown in *Part VII, Figure 3 of the Project Document*, demand for quality certified coffee in Europe is steadily and significantly rising. The key factor that will be used to establish a competitive edge over the other sources of quality arabicas to which the PM refers will be the organic and Fairtrade certification of this coffee, in addition to its quality (*see Project Document paragraph 115, point 7*). Given the relatively limited extent of the Venezuelan Andes, the area is always going to be a relatively minor player in global terms, which means that it can focus on a particular niche market which has been shown to be robust. Many of its potential competitors are likely to produce quality but uncertified coffee, or certified coffee without the quality of product and presentation that experiences to date (such as the Quebrada Azul cooperative) have demonstrated can be achieved in this area.

GEFSec Technical Comment 2:

Very often in shade coffee systems, once the native overstorey dies out it is replaced by fast-growing monocultures of exotic species. The project is encouraged to develop a strategy that avoids this and favors native species.

UNDP Response:
The risk of an originally diverse native over-storey becoming gradually impoverished by replacement with limited numbers of sometimes exotic species is recognized. The fact remains that even when impoverished in this way, shade coffee plantations will have higher BD value than the normal alternative, pasture. However, as the reviewer suggests, additional BD gains may be achieved by promoting the maintenance of the over-storey in a condition as close to that of the original forest as possible in terms of structure and species composition (*see Project Document paragraph 123*). It is intended that the project will promote this by ensuring that its activities promoting farmers' commercial use of timber species within their coffee plantations are accompanied by technical support and advice encouraging them to replant with the same species once the original trees die or are felled (*see Project Document paragraph 93 and paragraph 115, point 2*).

GEFSec Technical Comment 3:
A project response to the extension of cattle grazing into natural forests should be considered.

UNDP Response:
The project's strategy to minimize the risk of the expansion of cattle-grazing into natural forests will again be multi-pronged, based on a combination of strengthening of planning and regulatory capacity, the provision of incentives for forest conservation (as evidenced in baseline operations and the conditions included in the provision of technical assistance programmes and credit schemes), awareness raising and integrated farm- and landscape-level planning (*see Project Document, paragraph 121*). In addition, other project activities aimed at increasing the value to farmers of their shade coffee stands may also be extended to areas of natural forest: these may include for example promotion of the sustainable extraction of timber and the exploitation of minor (non-timber) products on a sustainable basis. Weak

GEFSec Technical Comment 4.
Given the influx of newcomers to the area who may have more resources to pursue more lucrative production options (vegetables, fruits) the sale of shade coffee plantations for conversion to non

BD-friendly intensive horticultural production presents a risk. The project should develop a risk mitigation strategy to address this.

UNDP Response:
As in the case of cattle-grazing, the project's approach to counter this risk will be multi-pronged. The project will introduce a range of measures to increase the economic attractiveness of shade coffee production relative to alternative land uses such as horticulture (*see Project Document paragraph 91 and Part VIII*). This will be backed-up by the strengthening of planning and regulatory capacity, awareness raising and integrated farm- and landscape-level planning (*see Project Document, paragraph 121*).

Sustainability

GEFSec Comment 1.
At the end of the 7-year project, will the relevant Government programs absorb the project activities into their regular program of work? How will the support services provided by the project be paid for by Government? Are budget disbursements designed to increase Government contributions on a percentage basis during the life of the project such that at the end of the project the majority of projects costs are being borne by Government? Please clarify.

UNDP Response:
Much of the project's actions will focus on capacity building and mainstreaming into baseline operations and are therefore 'one-off' in nature; at the end of its 7 year period it is expected that BD considerations will have been fully mainstreamed into ongoing Government operations and lasting capacities will have been developed, making the targeted institutions and baseline activities more 'BD-friendly' without entailing proportional increases in their cost to the Government (*see Project Document paragraph 134*). Nevertheless, and as shown in the budget table, there will actually be a considerable decrease in GEF funding for demonstration activities (Activities 1 and 2) between the period Years 1-3 and the subsequent period which will focus on replication, accompanied by a significant increase in co-financing (GEF funding will fall from $3,061,800 in Year 1 to $425,200 in Year 7, while co-financing increases from $3,974,448 to $4,479,448 over the same period).

Monitoring and Evaluation

GEFSec Comment 2:
The project notes benefits to climate change (carbon sequestration), land degradation and even POPs. However, no measurement of impacts is proposed. Please clarify.

UNDP Response:
Benefits to these focal areas were not quantified as they are considered incidental and are not used as measures of project success. Indications of the scale of carbon sequestration are provided however by the fact that the project will ensure the maintenance of 1,004,100 ha of forest (including both shade coffee stands and natural forests). Its impacts on the conservation status of the landscape mosaic as a whole will limit land degradation processes (associated with deforestation and subsequent grazing) on a total of 1,975,000 ha (*see Project Document paragraph 126*).

Replicability:

GEFSec Comment 1:
Please clarify what lessons have been applied from FUDENA project.

UNDP Response:

Both projects are quite different in nature, focus and objectives. Potential lessons learned, as applicable, will nonetheless be explored at the time of project inception (*see Executive Summary, paragraph 51 and Project Document, paragraph 160*).

Financing Plan

GEFSec Comment 1:
Total project cost and cost to GEF has increased considerably since PDF B stage. Please clarify.

UNDP Response:
The increase in the cost to GEF is due to the additional information which became available during the project preparation period regarding the geographical characteristics of the project area, the diversity of conditions which it includes, and the nature of the problems to be addressed and solutions to be demonstrated through the project. The Mérida Cordillera presents major topographical and infrastructural conditions which imply certain costs in terms of working in the field in the demonstration municipalities, which are dispersed over a wide area of the Cordillera. It was not until PDFB work was complete that the scale of these contextual demands and their financial implications became fully clear. In addition, the complexity of the factors affecting the status of BD in the productive landscape require activity at a number of levels, and on-the-ground presence in order to make progress and win the support and interest of local stakeholders.

Increase in the co-financing figure is due to the expressions of commitment by the Government to supporting the coffee sector and other aspects of endogenous development in the project area, which are of direct relevance to the project objective. The nature and scale of this commitment only became clear during project formulation. Finally, based on portfolio wide lessons learned, it became clear that a project duration of seven years, as opposed to five as originally imagined, will be required to deliver intended benefits.

GEFSec Comment 2:
The project provides little justification for its cost-effectiveness in terms of a global conservation benefit. Costs per hectare impacted are at best US$19/hectare and close to twice as much per hectare if one assesses the hectares that will be directly targeted by the project.

UNDP Response:
The total GEF budget is $7,351,900, which will result in the conservation of the habitat value of 1,975,000 ha of the landscape mosaic (see Global Benefits section). This is in fact equivalent to $3.7/ha (*see Executive Summary, paragraph 45)*.

GEFSec Comment 3:
The proposal fails to provide a presentation of alternatives that were considered and discarded thus it is very difficult to assess whether US$19/hectare is cost effective. Please present a summary of options considered and discarded. This is particularly relevant given the changes that occurred since the PDF B phase was approved.

UNDP Response:
The cost-effectiveness of this $3.7/ha investment may be judged by comparison with the other alternative strategies considered and discarded (*see Project Document paragraph 119*).

Protected area management: the BD1 approach was discarded for a variety of reasons. The fact that over 50% of the montane habitat of the Merida Cordillera remains intact and that 60% of this habitat form parts of the existing or potentially productive landscape under no form of conservation-oriented land use, was decisive. In the same vein the Venezuelan Andes are flagged as one of the country's

principal development axes with potentially significant implications for attendant biodiversity. Significant baseline operations and local development models offer strategic opportunities to mainstream BD goals into planning and productive sector activity thereby securing BD values in this rich productive landscape. The BD2 approach focusing on productive systems and land use management options allowed for the identification of productive options which contribute to conservation gains while at the same time resulting financially viable in their own right.

Sector-based approaches: This would have entailed an increased focus on market issues within targeted sector(s) such as coffee. However project focus on one given sector would not have been cost-effective nor practically viable in the long term as it would have failed to address the multiplicity of highly interrelated factors affecting farmers'/producers' decisions within their productive farm units. Despite high levels of investment (for example in *solely* improving marketing and processing chains) it could have led to limited impacts as farmers could have refused to take advantage of the opportunities offered, as a result of broader livelihood and contextual considerations. The integrated farm/landscape approach adopted, by contrast, also pays attention to critical issues such as landscape and farm planning, the fundamental need to bolster and integrate BD conservation objectives into local planning frameworks and associated planning and monitoring tools, the auspicious opportunities offered by current baseline operations and government assistance programmes, and finally the maintenance of traditional cultural values associated with the smallholder coffee production system *as a whole*.

Institutional arrangements: the choice of the *Ministry of Popular Economy* (MINEP) as Executing Agency offers excellent cost-effectiveness as it constitutes the optimal option and institutional partner for effectively mainstreaming BD directly into rural assistance programmes, credit mechanisms for community based organizations, and productive sectors. In this regard the MINEP has the overarching mandate of coordinating and channeling technical and financial assistance at local levels to community based organization in a decentralized and efficient manner. As the lead government agency for the provision of financial and social support programmes, especially in terms of capacity building at local community level, the choice of MINEP also allows the project to be directly associated with very significant amounts of co-financing channeled through that ministry and the mainstreaming prospects in can easily deliver.

GEFSec Comment 4:

The Government, through MINEP/CIARA, is providing a substantial amount of baseline financing that will "be redirected as cofinancing, given that it is considered essential for the success of the project". In Outcome 1, for example, US$12,864,400 of MINEP/CIARA funds geared towards technical support through Plan Café is now being considered cofinancing. However, it is not clear from the presentation of the project, what costed project activities that this US$12,864,400 is going to finance. Please clarify for each outcome the costed project activities that are being supported by the "redirected cofinancing".

UNDP Response:

Examples of the costed GEF activities (set out in the Indicative Work Plan table) with which the $12,864,400 MINEP/CIARA technical support is related include the provision of training workshops for producer organizations under *Output 1.1*, and the training of producers in activities related to BD-friendly production, product certification, rural tourism and handicraft products under *Output 1.2* (*see Executive Summary paragraph 43 and Project Document paragraph 216*).

The $2,168,044 co-financing provided by MINEP/CIARA, in the form of financial support through Plan Café, meanwhile, relates specifically to the support of economic incentives and financial mechanisms under *Output 2.4*, through support such as the facilitation of negotiations between environmental service producers and consumers; organizational and administrative support for the establishment and

management of such schemes; and the establishment of systems for the monitoring of the environmental services. The $14,512,617 MINEP/CIARA co-financing of financial and technical support relates to the replication costs of these same activities under *Outcome 3* (*see Executive Summary paragraph 44 and Project Document paragraph 217*).

Core Commitments and Linkages

GEFSec Comment 1:
UNDP is offering no co-financing to the project. Please clarify UNDP's co-financing contribution to the project.

UNDP Response:
There is no direct cash co-financing from UNDP to the project. UNDP's contribution to the project is however best expressed through its on-going involvement with municipal authorities, strengthening their capacities to operationalize and implement their development agendas, and establishing participatory decision-making structures and oversight mechanisms (*see Project Document paragraph 161*). This on-going support will be particularly beneficial to the project in relation to Outcomes #2 and #3 in which BD supportive planning frameworks and incentive systems will be established at municipal level. In addition, the UNDP Country Office has played a very active role throughout preparation work in leveraging the sizeable co-financing mobilized by the project and supporting the definition of the project's institutional arrangements.

Consultation, Coordination, Collaboration between IAs, and IAs and EAs, if appropriate

GEFSec Comment 1:
Proposal notes collaboration with UNEP during project design, however project implementation modalities not clearly presented. Please clarify communication with UNEP such that they are able to attend project inception workshop etc. to ensure complementarity with UNEP GEF project in the Paramo.

UNDP Response:
As mentioned in project documentation (*see Project Document paragraph 158*) representatives from the UNEP-PDFB Paramo project (both project team and affected stakeholders) have been involved on an on-going basis in the development and design of this project. They have participated in the diverse project design exercises conducted during project development and contributed to ensuring the necessary complementarities between both projects are delivered in a practical and cost-effective fashion. Both UNDP and UNEP-PDFB teams have respectively relied on similar local expertise in the definition of threats and the most effective means to address them in a complementary and integrated fashion. It has long been decided that both projects will formally participate in corresponding inception events and subsequently in coordination meetings to take place every six months between both projects. Both teams have established an excellent rapport during preparation work, further complemented by the on-going exchanges and collaboration present between UNDP and UNEP at regional Office levels. We trust that this will be duly reflected in forthcoming comments by UNEP.

D) Response to GEF Council Members' Comments

Comments from Switzerland	Response (relevant sections are indicated in green in the project document)	Location where document was revised (sections, paragraphs)
	Firstly, UNDP and the proponents thank the reviewers for their observations. We fully concur with the Swiss Council members' observation that GEF-financed BD2 projects should deliver clear benefits for biodiversity. In the same vein we appreciate the Council members' concurrence that: (i) shade coffee production systems are BD-friendly; (ii) that it is important to attach value to these systems and; (iii) that it is important to increase their attractiveness as a production alternative to local farmers, and finally that these elements are well described in the rationale of the proposal. With regards to project-related biodiversity gains, project proponents and UNDP-GEF believe that the project's approach in halting and reversing land conversion processes occurring in the productive landscape will deliver significant benefits for BD conservation, in a cost-effective manner. Land use changes in the Mérida Cordillera have been identified as the major threat to biodiversity, which if left unchecked, will result in the virtually complete elimination of BD-friendly shade coffee production systems from the area over the next few decades. As such, project argumentation focused on detailing how this BD-based objective will be achieved by modifying and maintaining production systems to increase biodiversity benefits, while at the same time enhancing the economic viability of the production system and productive landscape as a whole. Responses to the reviews, set out in detail below, have therefore focused on explicitly clarifying this intent and the resulting BD gains at the outcome and activity level, as suggested. This has implied relevant modifications to the project documentation, including the logical framework, to make the BD benefits of the project's strategy more evident and ensure that these are adequately monitored throughout project implementation.	

Biodiversity conservation is not sufficiently addressed with indicators at the project outcome level		
The issue of biodiversity conservation is mainly treated at the level of the project rationale and objectives, and only to a small extent at the level of project activities, outcomes, and impact. The issue of biodiversity conservation is not yet followed through in a consistent way from the definition of the rationale and objectives to the level of outcomes, impact, and indicators. It does not seem enough to soundly describe in theory all the advantageous aspects of shade coffee production systems for biodiversity conservation at the landscape level, but, regarding its application in the project design, leaving the outcomes and impacts for biodiversity conservation untouched. There are not yet any well-specified and appropriate indicators for biodiversity outcomes and impacts.	We agree with the Council member on the need for the issue of biodiversity conservation to be followed through in a consistent way throughout the project's vertical logic, indicators and activities. In essence, the project strategy is based on the following rationale: by providing farmers with the capacities *to continue* production systems which (as the Council member correctly observes) contain large amounts of species level BD (Outcome 1), creating favorable policy and land use planning frameworks that motivate farmers and establish land use categories fostering connectivity (Outcome 2) and ensuring replication throughout the project area (Outcome 3), the project will ensure the maintenance of a productive landscape which - by virtue of the size, relative location, and individual BD value of the vegetation units it contains - is categorized as significant in terms of its overall BD value. The logical framework now includes a number of indicators which *specifically* measure biodiversity and the existence of the habitat conditions on which it depends. At the Objective level, project impacts on biodiversity in the landscape as a whole will be measured through the following indicators: ➢ The total *amounts* of BD-friendly vegetation (shade coffee and native forest) in the landscape as a whole; ➢ The *quality* of the vegetation throughout the landscape as a whole, in terms of its structural diversity (this is strongly related to its value as habitat) and the diversity of species which it contains. It is important to note that this parameter will be measured in a participatory manner and will therefore require processes of discussion and induction with the local participants. Consequently, baseline and target values for this particular indicator will be obtained only after project start-up and within the first 6 months of project implementation (i.e. these will be available by the time of the project's first PIR). ➢ The extent and nature of the vegetation throughout the productive landscape, in terms of its level of disturbance; ➢ The extent and nature of the vegetation in key areas for *connectivity* between protected areas. Shade coffee and other forests in the productive landscape contribute significantly to the conservation value of protected areas by acting as stepping stones for gene flow between them and increasing their effective size. Key characteristics of these elements in the productive landscape, which	See Logical Framework (Executive Summary, Annex B) See Project Document, paragraphs 85-105 and Table 2. See Project Document, paragraphs 109, 110, 112 See Logical Framework (Executive Summary, Annex B)

	determine their contribution to connectivity, are: the *overall amount* of vegetation in corridor areas; the *numbers and sizes of the patches* of vegetation in these areas (the less fragmented the better); and the *quality* of the vegetation in terms of its degree of disturbance. Baseline values are now presented for each of these parameters. The biodiversity implications of Outcomes 1 and 3, at the *productive unit* level, will be measured *directly,* in terms of the numbers of bird and mammal species observed in transects in different types of land use, by species conservation priority (e.g. IUCN Red List classification). This indicator will be measured in a participatory manner, which will require processes of discussion and induction with the local participants and implies that baseline and target values will be obtained as a priority after project start up.	
The GEFSEC's technical review made comments regarding the previous existence of specific conservation aspects in the initial PDF proposal (such as activities related to biological corridors to allow for a better connectivity of this landscape production mosaic and the remaining montane forest patches of the Meridean Cordillera) that afterwards disappeared and can no longer be found in the current proposal. Despite the response of the project proponents to the GEFSEC technical review with regard to these changes, we do not agree with the current proposal and the fact that biodiversity is addressed only in an indirect way.	As stated in the responses to the GEFSec, PDF-B analyses indicated that the most serious threats to biodiversity in the Mérida Cordillera, and the processes driving these threats (particularly the elimination of shade coffee areas), occur within the productive landscape. It was therefore considered essential by counterparts and the project's PDFB multidisciplinary team to maintain a strong central focus on BD conservation in the productive landscape (BD2), both spatially and at the farm unit level. However, despite this central focus on BD1, the issues of corridors and set asides have been maintained and the project will achieve significant benefits in these areas, albeit secondary in importance to its impacts in productive systems. PDF-B preparation work concluded that the most effective strategy for BD-friendly spatial mainstreaming, is the provision of planning tools, mechanisms and information requirements needed for conservation-based planning and zoning at the landscape level. This is what the project proposes to deliver via Outcome 2 ("Enabling policies, planning and regulatory frameworks support BD-friendly productive systems in pilot municipalities"). Specifically, technical guidelines will be developed (Output 2.4) for promoting connectivity, explained as follows in the text of the Project Document: "The proposed guidelines will incorporate considerations pertaining to ecological vulnerability, **connectivity**, and the required conditions and opportunities for the sustainable use and conservation of biodiversity in the productive landscape."	See Project Document, paragraph 116,117, 118 and 119. See Project Document, paragraphs 116-118 See Project Document, paragraph 100.

	The indicators at Objective level now include specific reference to quantitative and qualitative characteristics of key areas of connectivity between protected areas (see above). Finally, to better detail the alternatives considered in relation to this issue, the "Alternatives Considered" section has been modified accordingly (see paragraph 119): "Consideration was also given to whether the project should focus *exclusively* on BD2 or include a secondary element of BD1. It was decided to include BD1 as a secondary element, by promoting connectivity between protected areas through actions in the productive landscape, as it is possible thereby to deliver additional BD benefits without jeopardizing the achievement of BD2 goals". These BD1 benefits will be achieved (under Outcome 2) through the mainstreaming of BD considerations such as connectivity into policies, planning and regulatory frameworks, and also (under Outcome 1) through the appropriate selection of pilot areas and location of field level interventions in relation to protected areas.	See Logical Framework (Executive Summary, Annex B) See Project Document, paragraph 119.
The target of the project to maintain the current land use mosaic is of limited impact for biodiversity conservation.		
The goal of the project seems to be of little impact for biodiversity conservation; at least it would not significantly improve the actual biodiversity. This modest target for biodiversity is in contradiction with the more promising project objectives (e.g. page 9, executive summary), which indicate: "*maintenance and stabilization of forest cover, conversion to shade coffee and / or organic agriculture within farming plots,…"*.	Project targets should be considered in relation to the baseline (without project) situation. Paragraph 31 of the Project Document makes it clear that, *without the project, there would be a severe loss of biodiversity*: "The area of shade coffee stands in the Mérida Cordillera has **diminished** by an estimated 50% in the last 30 years. In addition to the loss of these habitats themselves, the complexity, connectivity and habitat value of the productive landscape as a whole is being **reduced** through its gradual conversion from a mosaic of small patches of different land uses to increasingly homogenized and ever larger continuous expanses of pasture." Under the baseline scenario, "there will be a continued **loss** of the biodiversity value of the landscape, and local farmers will fail to realize the full potential of the natural resources which they manage to contribute in a sustainable manner to their livelihoods. In addition, key water catchment areas are likely to suffer **continued degradation**, resulting in the loss of hydrological services currently provided to downstream users" (Project Document, paragraph 77). Extrapolating these trends into the near future, and taking into account probable acceleration due to ever increasing ease of access through the project area, it is probable that over the next 7-10 years a further 50% loss of shade coffee area may occur, equal to around 180,000 ha. The objective of the project to halt land conversion trends and maintain the current *status quo* of shade coffee area therefore equates to a **benefit for biodiversity in the productive landscape of at least 180,000 ha** of BD-friendly	See Project Document, paragraph 31. See Project Document, paragraph 77.

	shade coffee. *In addition*, the project will achieve **biodiversity gains in the broader landscape** (relative to the baseline), through the support of the incorporation of BD considerations (such as connectivity, vulnerability and potential for sustainable use) into instruments for spatial planning and financial support, under Outcome 2. The project will thereby contribute to the maintenance of both *shade coffee areas* (as explained above) and *native forests* (which currently occupy 641,700 ha of the project area); it will also contribute to the *ecological functioning and effective size of protected areas* by helping to maintain the status of the areas of importance for connectivity between them (again, through the mainstreaming at landscape level foreseen under Outcome 2). The reference to "conversion to shade coffee" in the Executive Summary was erroneous, as it did not correspond to the targets included in the logical framework, and is not considered to be a cost-effective approach to BD-conservation (see below). The corresponding text has now been removed.	See Project Document, paragraph 96 See Executive Summary, page 9 (Key Indicators, Risks and Assumptions)
In order to improve biodiversity, the project proponents should not only target the maintenance of the current surface of biodiversity friendly production systems, but also the (re-) conversion of other production systems, which are less biodiversity friendly (e.g. coffee production without shade).	Given the significant benefit for BD represented by the project's objective of avoiding the loss of 180,000 ha of BD-friendly shade coffee, the additional benefits for BD in other land uses (to be achieved through supporting the mainstreaming of BD issues into landscape level planning instruments), and the typically low levels of structural and specific diversity and habitat value found in coffee stands with planted (as opposed to natural) shade, the conversion of non-forest land uses to shade coffee is not considered a cost-effective strategy for promoting biodiversity. An additional section has been added under paragraph 119 to this effect: **"Focus on conserving natural shade or promoting planted shade for coffee.** There are significant areas of coffee in the project area which are managed without shade trees, in order to achieve high levels of production in the short term (see paragraph 8 and SECTION IV PART VII). The option existed for the project to invest in promoting the introduction of shade trees into these full-sun production systems. However the levels of specific and structural biodiversity typically found in coffee plantations with planted, rather than natural, shade are normally low, as the shade tends to be composed of a limited number of tree species with agronomically favourable characteristics, such as *Inga* spp. and *Gliricidia sepium*. The biodiversity benefit which would be achieved by this approach, per dollar invested, is therefore likely to be much lower than that achievable through the maintenance of existing,	

	BD-friendly natural shade systems. The strategy of promoting planted shade was therefore discarded on grounds of cost-effectiveness." The effectiveness in practice of this focus on the promotion of shade coffee will be furthered by the existence of solid baseline of support to shade coffee production , in particular that provided by the Government's National Coffee Plan (Plan Café).	 See Project Document, paragraph 211

Comments from Germany	**Response (relevant sections are indicated in blue in the project document)**	**Location where project documentation was revised (sections & paragraphs)**
Financing: • From the 7.3 Mio GEF-Support nearly 2 Mio will be used for outcome 4, focusing on the PCM and M&E of the project itself. As the GEF contribution shall cover the incremental costs of the project, we think that the **budget needs to be re-adjusted**.	The budget for Outcome 4 has been revised to permit a greater clarity in relation to resource distribution amongst project outcomes. In this regard, $680,400 corresponding to the salaries of the project's 4 Thematic Technical Coordinators and 5 Municipal Project Coordinators, the bulk of whose time will be dedicated to supporting the development of local stakeholders' capacities under Outcome 1, are now rightfully budgeted under that outcome (instead of Outcome 4 as was previously the case). The correct figure for Outcome 4 is now $1,599,600, equivalent to just under 22% of the total GEF budget for the project. This figure consists of the following: ➢ $1,122,600 ***(equivalent to $160,000 per year approximately)*** to cover items essential for overall project management including: salaries, travel and allowances of the Project Coordinator based in Mérida and other staff in the Technical and Operational Coordination Unit (i.e. 1 M&E specialist, 2 administrative and logistical assistants and other support staff related to transport and office maintenance), office rental, equipment, supplies, support costs (fuel, maintenance, insurance, etc.) and transportation for head office staff. Based on experience, this budget is considered to be realistic given the *7 year duration* of the project (as mentioned above annual expenditure on these elements will be around	 See Total Budget and Work Plan (Project Document, Section III) See Total Budget and Work Plan (Project Document, Section III)

	\$160,000), the wide geographical spread and difficult topographical and infrastructural *conditions of the project area*, and the *thematic complexity* of the project, which will require the participation of specialists in a range of disciplines. ➢ \$477,000 to cover monitoring and evaluation costs, including recording lessons learned on a variety of project-related themes and processes. The M&E activities currently proposed (broken down in detail in the indicative M&E budget in Table 1) conform to UNDP and GEF norms. The corresponding budget has been carefully reviewed and found to be realistic, taking into account the nature and scale of the project. The measurement of indicators at the objective and outcome levels, through the corresponding means of verification, will permit an informed assessment of project progress and performance whilst allowing the application of adaptive management principles (in accordance with BD tracking tools and recommendations that indicators cover both socioeconomic and biodiversity aspects). ➢ Adequate investment in the interpretation of these results and the qualitative analysis of project progress and impacts is also essential, through mid term and final evaluations. Given the geographical and thematic complexity of the project, it is foreseen that these evaluations will each involve 3-4 high level experts in different thematic areas, who will probably spend around 3 weeks in country, including visits to a range of field sites, and a subsequent 2 weeks in analysis and write-up. The existence of adequate capacities and methodologies for M&E is also essential if lessons learnt are to be documented and fed into the 4C initiative (see below). The earlier *indicative* M&E budget presented in Table 1 of the Project Document (presented in July) has been refined resulting in the *detailed* costing used in the formulation of the *Total Work Plan and Budget* as currently presented in the documentation for CEO endorsement.	See Project Document, Table 1 See Project Document, paragraphs 203 and 204 See Total Budget and Work Plan (Project Document, Section III)

World market for organic and fair trade coffee: • Although there is positive evidence for the growth of this niche market, the success of the project not only depends highly upon the **stability and growth** of this market niche but also on the **access of the farmers** to the market. The components of the production of **other products** than shade coffee should be given more importance during project implementation. Therefore, it would be necessary to find local and national markets for all products to **diversify** the clients to become more independent from one market sector.	We fully agree with the reviewers' comment. In this regard, the potential of other products to contribute to the net income from shade coffee stands is analysed in Part VIII of the Project Document and illustrated in Figure 10. **Minor products from shade coffee stands** Typically, shade coffee plantations can yield between 380 and 1,399kg/ha/month of bananas; with domestic prices ranging between \$0.06 and \$0.083/kg, this can provide an additional monthly income from coffee stands of \$144-485. In addition, there is a significant export market for dried fruit, including bananas, papaya, blackberries, oranges, lemons and guava, and for herbs and spices such as dried basil, coriander, ginger, marjoram, mint, dill and rosemary. Recent market studies carried out by a cooperative in Mérida have found a total of 32 potential purchasers for such products in Europe, leading the cooperative in question to estimate a potential annual production of 50 tons of dehydrated bananas after 3 years. In 2003 total European demand for dried fruits was estimated to be worth US\$2.6 billion[19]. Experiences from Costa Rica and Brazil have demonstrated that under Fairtrade conditions dried bananas have guaranteed prices of \$3.80-4.85/kg FOB. Assuming a median monthly production per hectare of 900kg of fresh bananas, equivalent to a yearly production of 840kg of dried bananas (assuming a ratio of 10:1 between fresh and dry weight), and a median sale price of \$4.30, producers can potentially obtain \$3,612/ha/year from the sale of dried fruit, equivalent to a net income (taking into account costs of \$1.85/kg) of \$2,058/ha/year[20]. Limitations of labour and technical capacity will probably imply that the full productive potential of all such products will not normally be realized. Although market for dried fruit is on the increase, there are likely to be limitations on the total yearly volumes which any given producer can sell; in an example cooperative in the Mérida Cordillera, each cooperative member currently is able to sell around 1000kg of dried	See Project Document, Section IV Part VIII and Figure 10.

[19] Fairtrade Product Rationale Paper on Dried Fruit, 2003.
[20] A part of this income stays with the cooperative, however as the producers are members of the cooperative this is calculated here as a benefit to the producer.

	bananas per year. Assuming this is obtained from an average area of shade coffee of around 4.5ha/farm, the average net income per hectare at present is estimated at around $514/year." The activities of the project aimed at assisting farmers to gain access to markets for these products are explained under Output 1.1 (paragraph 92 of the Project Document): "Adequate organizational capacity is critical in determining producers' access to niche markets, for example for organic coffee and bananas from shade coffee plantations, so that producers can negotiate marketing arrangements and prices to their benefit, manage their resources effectively and ensure the continuity and consistency of product supply and quality control typically required by premium markets. To this end, project activities will result in the existence of consolidated producer organizations, whose members will have as a result have access to premium prices for the products of their BD-friendly activities, through their enhanced participation and decision-making ability in productive and market chains. Examples of project activities required to achieve this will include the provision of organizational training and advice; the exploration of alternative opportunities for commercialization (such as niche export markets and the Government's Mercal Network); support of the establishment of procedures and technical tools for quality control of goods and services; and support to the establishment of producer fairs emphasizing cultural aspects of shade coffee production."	See Project Document, paragraph 92
While higher prices for organic and fair trade coffee are getting less important on the world market, the relevance of aspects such as **certified origin** and **quality** of the coffee beans is rising: Other countries in Latin America and Central America are currently addressing this issue, trying to improve the quality of their coffee. We would like to ask the GEF Secretariat and the	While prices for Fair Trade organic coffee continue to be very favorable (currently $1.42/lb raw green coffee), the proposal recognizes the importance of ensuring adequate attention to quality. The problem at present is recognized in Part VII of the Project Document: "…producer groups are aimed at the national coffee market and have little capacity to access niche export markets or otherwise to add value to their products. The most common causes for this limited access to markets and premium prices are inadequate organizational and managerial capacities, which make it difficult for them to guarantee that quotas can be filled **and quality standards can be met**, and to	See Project Document, Section IV, Part VII

implementing agencies how the project intends to address these challenges.	investigate and negotiate markets; and inadequate access to information on potential market opportunities." To date, however, many certified organic producer organizations have demonstrated very high quality standards that have enabled additional quality premium and the elimination of negative quality differentials that apply to some coffee producing countries. In Colombia several such organizations also sell part of their production as speciality gourmet coffee thus showing that certain commercial circuits are not exclusive but can perfectly complement each other. Further improvements in quality will be achieved through the co-financed support by the National Coffee Plan to the genetic improvement of coffee planting material. Under Output 1.1 (paragraph 92 of the Project Document) the project will provide producers with support in order to ensure that quality standards are met: "Examples of project activities required to achieve this [access to premium prices for the products of their BD-friendly activities] will include the provision of organizational training and advice; the exploration of alternative opportunities for commercialization (such as niche export markets and the Government's Mercal Network); **support of the establishment of procedures and technical tools for quality control of goods and services**; and support to the establishment of producer fairs emphasizing cultural aspects of shade coffee production." The promotion of shade coffee in itself confers benefits in terms of quality, as recognized in paragraph 124 of the Project Document: "In particular (**in addition to the benefits for coffee quality arising from the use of shade in coffee plantations**), the adoption of a landscape-level approach to conservation may contribute to coffee productivity…"	See Project Document, paragraph 66 See Project Document, paragraph 92 See Project Document, paragraph 131

German Development Cooperation is a member of the "Common Code for the Coffee Community" Initiative (the "4C Initiative").The objective of this code is to foster **sustainability** in the mainstream green coffee chain and to increase the quantities of coffee meeting basic sustainability criteria. We therefore propose to initiate an exchange of information and experiences between the project and the "4C Initiative", in order to avoid a duplication of work and to benefit from the lessons learned.	The proposed relation with the 4C initiative is most appreciated and has been duly referred to in a new paragraph (163) in the Project Document, as follows: "An exchange of information and experiences will be initiated with the Common Code for the Coffee Community Initiative (the "4C Initiative"), supported and facilitated by European Coffee Federation 4C Group, the Swiss State Secretariat for Economic Affairs (SECO) and the German Development Cooperation (GTZ), whose objective is to foster **sustainability** in the mainstream green coffee chain and to increase the quantities of coffee meeting basic sustainability criteria. This exchange will allow duplication of work to be avoided and benefits to be gained from lessons learned." One of the key tasks of the M&E unit (see above) will be to capture the lessons learnt which will be fed into the 4C initiative. Emphasis is placed in project design and budgets to ensure that the required capacities and methodologies for M&E exist (see above)	See Project Document, paragraph 170
It is not obvious why there should be "only" 600 families with certified coffee production but a total of 10.500 families with an increased annual income and 17.500 families with an additional source of income (see indicators of outcome 1). We would like to ask the GEF Secretariat and the implementing agencies for clarification.	The target for the number of families with certified coffee by project end is in fact 400 (200 at mid term *plus an additional* 200 at project end), not 600 (see second indicator of Outcome 1 in the Logical Framework). The difference between the number of 400 families with certified coffee production, and the 10,500 families with increased annual income and 17.500 families with an additional source of income, is due to the fact that increased incomes and additional sources of income will arise not only from producing certified coffee, but also from participation in other BD-friendly practices and schemes associated with shade coffee, such as rural tourism and environmental service compensation. Additional text has been added to paragraph 124 of the Project Document to make this clearer, as follows: "At the *local level*, the project will result in social, productive and environmental benefits. Incomes, livelihoods and food security will be improved and diversified as a result of the increased viability of traditional productive activities and the adoption of additional new ones **such as rural tourism and participation in schemes for the compensation of environmental services** (by the end of the project, 10,500 rural families in the CCRZ, representing 30% of the total, will have increased their average annual income by 10%)."	See Logical Framework in Executive Summary, Annex B See Project Document, paragraph 131

	The figures related to the quantitative goals of beneficiaries implied in the different components of the project are based on previous experiences by organizations and institutions working in the project area, regarding the optimal balance between concentrating efforts on a sufficiently small number of beneficiaries in order to achieve sustainable impacts, and spreading efforts between a sufficiently large population in order to maximize replication potential.	
Land titles: • Most of the small farmers do not have **formal land titles**, "a fundamental requisite for accessing assistance programmes" (p. 3 of the executive summary). The project outline does not point out clearly how to face these challenges, although this would be an important baseline for the success of the project, especially in terms of sustainability after project end.	As explained in the last bullet point of paragraph 38 of the Project Document, "[the situation that many farmers are not eligible for participation in credit and technical assistance programmes as they do not have the formal land title which is in many cases required by the Government] is being actively addressed through the Government's land titling programme". Land titling is given very high priority by the Government, as part of its drive to achieve equitable development and alleviate poverty in rural areas.	See Project Document, paragraph 38
	The description of the baseline (paragraph 209 of the Project Document) states that "The *Ministry of Agriculture and Lands*, through the *National Institute of Lands* (INTI) is investing in the titling and agrarian registry of the lands of farmers in the zone".	See Project Document, paragraph 216
	"The organizational support to be provided through the project will also contribute to overcoming the problem of limited access to land titles. The potential impact of such support has been demonstrated in the case of the Quebrada Azul cooperative, where organizational support from the NGO CODESU has resulted in cooperative members obtaining "producer registration" and "agrarian registration" with INTI, including topographical plans, farm evaluations and inscription in municipal land registry. This has greatly facilitated producers' access to, for example, credit and inspections for organic certification." Among the most important areas of support, to which producers have access as a result, is that available through the Government's *National Coffee Plan*, which is one of the principal elements of the project's baseline.	See Project Document, paragraph 92
	In addition, while the lack of formal land titles may be an obstacle to gaining access to the *formal* financial sector, producers without title	

	can gain access to other sources of finance through "solidarity guarantees" provided by other community members. This is a model which has been successfully applied to date by the Programa Andes Tropicales in its support to community-based tourism development. This was not made clear in the original text, but has now been explained in the description of root causes in the Executive Summary, as follows: "Furthermore, producers' ability to obtain the support needed for insertion into premium markets has in the past also been constrained by the absence of formal land titles, which for many constitutes a requisite for accessing formal programmes of technical and financial assistance **(although they may have access to other sources of credit on the basis of "solidarity guarantees").**" Similarly, paragraph 9 of the Project Document has also been modified as follows: "Many smallholder coffee producers lack formal title to the land which they work, a situation which limits their access to formal credit and financial and technical support programmes **(although they may have access to other sources of credit on the basis of "solidarity guarantees").**"	See Executive Summary, paragraph 7 See Project Document, paragraph 9
Incremental costs: • The GEF increment will result in "increased livelihood and food security, including demographic stability, among the local population, thereby helping to ensure landscape stability" (11.ii, p. 6 of the executive summary). The **demographic stability** depends on numerous factors, which will be difficult to calculate and handle within a project like this.	The comment made by the reviewer is duly noted. The main demographic process to which the project was referring to is rural depopulation through emigration, rather than reproductive growth. The intention was to state that the project will *contribute* to *reducing* emigration rates, rather than to suggest that rural depopulation could be halted as a direct result of the project alone. The sentence has been modified as follows to capture its original intent: *"Increased livelihood and food security, including **reduced** emigration rates, among the local population, thereby helping to ensure landscape stability"*	See Executive Summary, paragraph 11.
Improved living conditions • "Living conditions (for example	Experiences to date with the promotion of rural tourism, for example by the local NGO Programa Andes Tropicales (PAT) in the project	

access to water and sanitation) will be improved, as a direct result of the increased incomes resulting from the application of biodiversity-friendly activities" (p. 7 of the executive summary). Although the income of numerous farmers' families is supposed to increase, it is not becoming clear how this can have a direct **influence on infrastructure** in the region (see also logical framework: last indicators for the objective of the project). Strategies for a more direct influence of the development of this kind of investigations should be developed during project implementation.	area, have demonstrated that this *can* result in a direct improvement in access by the participants to basic services. The families participating in the initiatives promoted by PAT receive technical and financial assistance (in the form of credit) from the NGO to enable them to establish the basic infrastructure necessary for them to offer accommodation to tourists, including water supply and sanitation. These facilities also benefit the families themselves. PAT also provides training on issues such as sanitation, cooking and hygiene to the participating families as well as to other members of the community. This is explained in paragraph 124 of the Project Document: "Living conditions (for example access to water and sanitation) will be improved, as a direct result of the increased incomes resulting from the application of biodiversity-friendly activities, **and also through the education and investment needed to achieve the minimum conditions required for rural tourism**." In addition, improvements in organizational capacities (to be supported by the project under Outcome 1.1) can result in community members having improved ease of access to State sponsored projects such as water supply, as they imply increased capacity for transparent management and administration of financial resources, democratic and transparent decision making processes and environmental consciousness.	See Project Document, paragraph 133
Environmental Services • The project proposal does not state clearly who will **pay** for the produced environmental services.	Compensation for the provision of environmental services will be provided by downstream users of water. In the Yacambú catchment, which is the subject of the case study presented in Table 16 (Section IV, Part VIII of the Project Document), it is envisaged that compensation will be made by commercial agricultural producers in the Quíbor valley downstream; while in the Tocuyo catchment case study (Table 17) it would be made by urban water consumers. Additional text has been added to the description of Output 1.2 to make it clearer who in practice will compensate the provision of environmental services, as follows: "It is envisaged that compensation for the provision of environmental	See Project Document Section IV, Part VIII, Table 16 and 17 See Project Document,

	services will be made by the downstream consumers of water, including commercial agricultural producers, urban water consumers and State-run water enterprises." The text of the Stakeholder Analysis has also been modified to make this clearer. Paragraph 64 now starts as follows: **"Downstream water users** (including commercial agricultural producers, urban water consumers and State-run water enterprises) have an important role to play as participants in the schemes for the compensation of environmental services that will be supported by the project."	paragraph 93 See Project Document, paragraph 64
Stakeholder participation: • The stakeholders should be involved in the monitoring and evaluation of the project itself (outcome 4).	Monitoring of the biodiversity impacts of the project will be carried out through participatory measurements by local stakeholders, with support from local research centres and Universities (see indicator 5 of the project Objective, indicator 9 of Outcome 1 and indicator 3 of Outcome 3). Parameters to be monitored in this way include numbers of bird and mammal species observed in transects in shade coffee, non-coffee forest and agricultural/pasture land, by species conservation priority, and habitat conditions, in terms of number of native and exotic tree species in shade coffee stands, by size class. This participation is provided for in the Stakeholder Participation Plan (Part IV, page 84 of the Project Document): "Establishment of a participatory system for local managing and interpretation of environment indicators by local community members." Project support will aim to develop capacities for self-monitoring: *"In addition, as an intrinsic aspect of organizational development, support will also focus on the development of capacities for monitoring by the organizations themselves of changes in their conditions, as a result of support received from the project and other sources and their own efforts."* As explained in the section on Social Sustainability (paragraph 137 of the Project Document) *"The continuity of the commitment to the outcomes of the project by members of local communities will be further ensured by the proposed investment in environmental education and awareness raising, and the promotion of the*	See Logical Framework (Annex B of the Executive Summary) See Project Document, Section IV, Part IV (page 84) See Project Document, paragraph 92 See Project Document, paragraph 144

	involvement by local people in the monitoring of biodiversity, through mechanisms to be developed by those involved themselves, with facilitation by the project." Additional text has been added to paragraph 106 of the Project Document (Output 4.1) to stress that "[the monitoring and evaluation strategy and financing plan] will make provision for the participation of local stakeholders in the measurement of indicators, as appropriate, including the interpretation of the results." In the Monitoring and Evaluation section of the Project Document it is stated that *"A detailed schedule of project review meetings will be developed by the project management, in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report."* (paragraph 170).	See Project Document, paragraph 113 See Project Document, paragraph 177

Comments from France	Response (relevant sections are indicated in blue in the project document)	Location where project document was revised (sections & paragraphs)
It is said that there is not a big pressure to transform forest into coffee area, and that 640.000 ha of forest will be integrally maintained. At the same time, it is said that there is a guaranteed market for quality coffee. This is contradictory: if there is a market, then coffee will be planted in forest area.	Under the GEF alternative, the existence of a market for quality coffee does **not** imply that there will be big pressures to transform existing forests into coffee area, for the following reasons: ➢ The project will offer significant benefits to cooperatives of shade-coffee producers in terms of market access and incomes, as described in Part VII of the project document. **The provision of this support will be however <u>conditional</u> on cooperatives incorporating BD considerations** into their internal norms and regulations. <u>This includes the full avoidance of impacts on natural forests</u>. ➢ The technical and financial assistance provided to producers through the *National Coffee Plan* **places specific emphasis on the importance of the conservation aspects of shade coffee** and will include **viable safe-guards for the conservation of natural**	See Project Document, paragraph 122 (Strategic Considerations)

	forests. In the Andres Bello Municipality in the State of Merida, **criteria for accessing support from the National Coffee Plan** have been agreed locally with the State level coordinator of the Plan, including the requisite that shade coffee plantations supported by the Plan do not affect natural forest. The project will build and further support the mainstreaming of BD considerations into the *National Coffee Plan* and other initiatives, and will promote the replication of such experiences and best practices. ➢ Access to markets with premium and guaranteed prices, such as Bird-friendly coffee, is **conditional on coffee *not* being produced in areas converted from natural forests**. The project will pay particular attention to assisting farmers to gain access to these markets. In addition, significant areas of forest within the project area are included in protected areas, a situation which provides an additional regulatory check on their possible conversion to coffee. Furthermore, the following safeguards have been included as part of the project strategy to ensure that coffee is not planted in forest area: ➢ **Support to capacities for planning and the application of regulation at municipal level** (see Outcome 2, paragraphs 96 to 101). There is a significant body of legislation which supports such controls on land uses changes, including the Organic Law for the Environment (1976), the Organic Law for Territorial Land Use Planning (1983) ***Agua y Suelo*** and the Penal Environmental Law (1992) (see paragraph 52). The project will help to ensure that municipal governments and other local entities, as relevant, apply this regulation effectively, particularly in effectively avoiding the conversion of natural forest to coffee, through the provision of tools for monitoring, evaluation and planning. ➢ **Support to the development of compensation schemes for the provision of environmental services from forests.** It is proposed that such environmental service compensation schemes will actively favor forest over shade coffee. The two case studies presented in Table 16 and Table 17 show that if compensation	See Project Document, paragraph 122 (Strategic Considerations) See Project Document, paragraph 96 (description of Outcome 2) and paragraph 118 See Project Document, paragraph 52 and 118 See Project Document, Tables 16 and 17

	under such schemes were directed exclusively at areas of forest rather than shade coffee, there would be a significant incentive for forest conservation (of $10 and $45/ha/year respectively), yet shade coffee would remain economically competitive in relation to less BD-friendly land uses. ➢ **Support to the application of the above measures through monitoring**, within the context of the project's M&E strategy. Project indicators will regularly monitor whether natural forests are being affected by coffee production (e.g. project indicators at Objective level include the relative areas covered by forest and shade coffee). ➢ **Oversight by UNDP of the project's environmental impacts**, with the possibility that if expansion into natural forests is registered on a permanent basis, UNDP will use its prerogative to freeze project disbursements. ➢ **Monitoring of forest conditions.** Monitoring will be carried out of the extent of shade coffee and non-coffee forest, and of the structural and specific diversity of forests in key areas. The corresponding indicators are explicitly stated in the logical framework. This will allow any possible incursions of coffee into forest areas to be detected and timely remedial actions to be taken.	See Logical Framework, Executive Summary Part B and paragraph 115 See paragraph 116 See Logical Framework, Executive Summary Part B and paragraph 115
It is also said that there is a market for biodiversity friendly coffee: we are not sure there is such a market for the 362.000 ha of shade coffee. As GEF has been financing in several countries similar programs of biodiversity friendly coffee, it would have been necessary to develop the lessons learned by those projects on the market.	The achievement of the target of maintaining the coverage of shade coffee at its current level of 362,400 ha (*Objective, Indicator 1*) does not assume that biodiversity-based markets necessarily exist for the coffee produced from the whole of this area. The end-of-project targets actually foresee that only around 5% of the total area of shade coffee, equivalent to 18,100 ha, will be covered by certification of biodiversity friendly coffee production. The targets for certification are around 600 ha in the pilot municipalities, based on a target of 400 families (*Outcome 1, Indicator 2*) and a typical range of coffee area per farm of 0.7-2.3 ha, and 17,500 ha in the target municipalities for replication (*Outcome 3, Indicator 3*). The appropriate clarifications have been made in the project documentation to avoid any potential confusion on this important point.	See Logical Framework (Executive Summary, Annex B)

	Having clarified the above distinction, it is important to note that there are reliable indications that ample markets will exist for the biodiversity friendly coffee produced in the area. Although the evaluation of the GEF/World Bank project *"Promotion of Biodiversity Conservation within Coffee Landscapes"* in El Salvador (approved in 1998), found that, in that case, project results were hampered by insufficient market demand for Rainforest Alliance coffees and inadequate marketing measures, market conditions have changed significantly since that time.	
	In recent years, the Rainforest Alliance coffee certification program has been growing by more than 100% per year and the recently approved GEF/UNDP/Rainforest Alliance regional project "*Biodiversity Conservation in Coffee: transforming productive practices in the coffee sector by increasing market demand for certified sustainable coffee*" foresees a drastic growth in demand. That project will help increase demand for Rainforest Alliance certified coffee in all countries, not just the six project countries which will directly participate. Experiences in the area of this project show that sales of organic coffee have been boosted by demand for Fairtrade coffee as more and more FT consumers go for a double certified FT/organic package.	See Project Document, paragraph 160
	Project support to eco-tourism will further help to develop marketing opportunities by opening up niches such as "souvenir coffees", which have come to represent a significant market segment in the case of Costa Rica.	
	Finally, it is important to note that the principal factor which has limited until now the economic viability of coffee relative to other land uses, and thereby motivated the elimination of coffee farms in the Merida Cordillera, has not in fact been an absence of markets for coffee, but rather the producers' limited abilities to **gain access** to these premium markets, due to deficiencies in product quality, information limitations, and their limited capacity for negotiation.	See Principal Root Causes of Biodiversity Loss in the Productive Landscape (Project Document, paragraph 38).
	The project will support producers in these critical areas through Output 1.1 (producers' organizations are consolidated and fully functional) and Output 1.2 (a Capacity Building Programme is	See Outcome, Outputs and Activities (Project Document,

	developed and delivered for the application of BD-friendly productive practices, certification standards, marketing "know-how" for BD based businesses and environmental service payment schemes). In addition, producers' access to premium markets will be promoted through Output 1.4 (an information management system is developed and operational to strengthen links between producers in pilot municipalities and consumers).	paragraphs 89-105) See Project Document, paragraph 92 See Project Document, paragraph 93 See Project Document, paragraph 95
We did not see in the summary who is going to pay forest owners for environmental services, for how much and for how long. Is Venezuela willing to enter in a long-term policy of environmental services payment?	In the two case studies presented in Tables 16 and 17 (Part VIII of the Project Document), it is made clear that the source of compensation for environmental services would be payments made by agricultural producers in the first case and urban water consumers in the second case. In the Stakeholder Analysis (paragraph 64 of the Project Document) it is stated that: "**Downstream water consumers** will play an important role as participants in the compensation schemes for environmental services that will be supported by the project. Currently there is little provision for these consumers to compensate producers in the upper watershed areas for the actions which they take to protect hydrological services. Channels will be established through which these consumers will enter into communication with stakeholders in the upper watersheds to determine mechanisms for such compensation." Likewise, in paragraph 93 it is stated that "It is envisaged that compensation for the provision of environmental services will be made by the downstream consumers of water, including commercial agricultural producers, urban water consumers and State-run water enterprises." The compensation for environmental services is an incipient issue in Venezuela, although a number of instruments introduced recently (such as the Parafiscal Law and the Marketing Law) are helping to create the required enabling legal context. As stated in paragraph 93, the schemes to be promoted in this project will be of a **pilot** nature, building on the recent favorable changes in the legislation. It is foreseen that the results of these pilot experiences, which will be systematized and disseminated as described under Outcome 3, will serve to inform the debate on this issue and to help the Government	See Project Document (Section IV, Part VIII, Tables 16 and 17) See Project Document, paragraph 64 See Project Document, paragraph 93.

	define under what conditions and models such schemes may be applicable. In this regard, project experiences will be decisive in imparting the necessary considerations for informed decision-making and advances in relation to PES.	

SIGNATURE PAGE

Country: Venezuela

UNDAF Outcome(s)/Indicator(s): Not applicable

Expected Outcome(s)/Indicator (s):
Biodiversity Conservation in the Productive Landscape of the Venezuelan Andes

Expected Output(s)/Indicator(s):

1. Producers in pilot municipalities have the required capacities to carry out BD-friendly productive systems
2. Enabling policy, planning, and regulatory frameworks support BD-friendly productive systems in pilot municipalities
3. Pilot municipalities operate as platforms for the interchange of experiences on best practices and lessons learnt.
4. Adaptive management principles supported by monitoring and evaluation tools guide project implementation and management functions

Implementing partner: Ministry of Popular Economy (MINEP) CIARA Foundation

Other Partners: Ministry of Agriculture and Lands (MAT)
Ministry of the Environment and Natural Resources (MARN)

Programme Period: 2003-2007
Programme Component: SP 2: Mainstreaming Biodiversity in Production Landscapes and Sectors
Project Title: Biodiversity Conservation in the Productive Landscape of the Venezuelan Andes
Project ID: PIMS 2734 Atlas no.51604
Project Duration: 87 months (7.25 years)
Beginning date: September 2006
Finalization date: 31-12-2012
Management Arrangement:

Budget:	7.351.900 USD
Allocated resources:	
• GEF	7.351.900 USD
• Fee for general execution support	
Total Budget:	7.351.900 USD
Co-financing (in kind):	29.545.061 USD
Co-financing (in cash):	

In kind co financing: human resources, information, technological resources, equipment, office space and furniture

Agreed by the Ministry of Planning and Development (MPD):

Name: _____ Date: _____ Signature: _____

Agreed by the Ministry of Popular Economy (MINEP):

Name: _____ Date: _____ Signature: _____

Agreed by the United Nations Development Program (UNDP):

Name: _____ Date: _____ Signature: _____

(*) NOTE: The UN exchange rate by the date of project signature is: US $ 1 = 2145 Bolívares, which will be adjusted accordingly with the variations of Venezuela's official exchange rate.