UNITED NATIONS ENVIRONMENT PROGRAMME

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UNEP

PROJECT DOCUMENT

SECTION 1: PROJECT IDENTIFICATION

1.1	**Project title:**	Protecting Biodiversity and Multiple Ecosystem Services in Biological Mountain Corridors in Chile's Mediterranean Ecosystem
1.2	**Project number:**	GFL/ PMS:
1.3	**Project type:**	FSP
1.4	**Trust Fund:**	GEF
1.5	**Strategic objectives:**	
	GEF strategic long-term objective:	BD-2; LD-1; LD-2; LD-3; SFM/REDD+-1
	Strategic programme for GEF V:	
1.6	**UNEP priority:**	Ecosystem Management
1.7	**Geographical scope:**	National
1.8	**Mode of execution:**	External
1.9	**Project executing organization:**	Environment Ministry, Chile
1.10	**Duration of project:**	60 months Commencing: March 2015 Technical completion: February 2020
	Validity of legal instrument:	60 months

1.11 Cost of project

	US$	%
Cost to the GEF Trust Fund	5,657,201	17.35
Co-financing Total	26,952,404	82.65
Total Project	32,609,605	100.00
Cofinance- Summary		
Cash		
Chilean Environment Ministry	2,545,455	7.80
Council for Clean Production	18,182	0.06
La Florida (Mining Company)	9,091	0.03

Sub-total	2,572,727	7.89
In-kind		
Chilean Environment Ministry	4,140,872	12.69
Agriculture and Livestock Department (SAG), Metropolitan Region	3,209,455	9.84
Institute of Agricultural Development (INDAP), Metropolitan Region	7,347,500	22.5
National Forestry Corporation	651,000	1.99
Municipality of Alhué	591,051	1.81
Municipality of Calera de Tango	747,273	2.29
Rural Municipalities Association (AMUR)	880,291	2.69
Cordillera Park Association	2,156,818	6.61
Agronomy Faculty, University of Chile	1,078,364	3.30
Forestry Faculty, University of Chile	1,578,818	4.84
La Parva Ski Resort	48,182	0.14
Counsel for Clean Production	370,955	1.13
Fundación Chile (NGO)	318,182	0.97
La Florida (Mining Company)	910,917	2.79
UNEP	350,000	1.07
Sub-total	24,379,676	74.76
Total Co-financing	**26,952,404**	**82.65**

1.12. Project Summary

Chile is one of only five places in the world with a Mediterranean climate, along with Australia, California, South Africa, and the Mediterranean basin, areas recognized not only for their high levels of wealth and endemism in plant and animal species, but also for being regions with high risk of extinction. The Chilean Mediterranean eco-region is located in the heart of the country's Central Zone, and the area covered by this Project includes the Metropolitan Region (MR) and part of the Valparaíso Region (Region V), incorporating a total surface area of 1,187,344 ha, including areas with a high level of biodiversity, mountainous areas (the Andean foothills and the Coastal Mountain Range), ravines, and some Central Valley lowlands, where the wetlands and the Maipo River mouth are to be found.

The threats and environmental degradation factors in the Chilean Mediterranean Eco-Region, especially with regards to the Project area, are for the most part the result of human activities and overexploitation, which play a key role in the advancing deterioration of the ecosystem functions and habitats, which consequently affect the recovery capacity of the forests and biodiversity. The main factors are habitat loss, fragmentation and degradation caused by agricultural and urban expansion and forest fires; the increase in invasive and predatory wild species; deforestation of native species, extraction of forest soil, over-grazing and the scarce legal protection given to the ecosystem.

The objective of the Project is to consolidate public, public-private and private initiatives for overall conservation of significant biodiversity and multiple ecosystem services in the mountainous area of the Chilean Mediterranean ecosystem, in the Metropolitan Region and part of the Valparaíso Region. In order to fulfill this objective, this initiative includes three components. The first seeks to strengthen local environment management in the areas of forestry protection and management, biodiversity and ecosystem services. Under Component 2, conservation of forests, biodiversity and ecosystem services is improved through the promotion of practices that support the sustainable management of forests and soil and contribute to the fight against desertification. The objective of the third component is to establish and implement a pilot area under the legal framework entitled "Conservation District for soil, forest and water" to assure sustainable management of the territory.

This Project responds to Chile's political and institutional deep concern for the environment, for the sustainability of the development process, and for biodiversity conservation, as expressed in the national Constitution. Its aims and objectives are consistent with the commitments made by Chile as signatory of the Convention on Biological Diversity (CBD) and the United Nations Convention to Combat Desertification (UNCCD) and the United Nations Framework Convention on Climate Change (UNFCCC). Chile has made significant efforts to comply with these agreements through the enactment and enforcement of policies, plans and sectoral strategies in these areas, with purposes fully coincident with the objectives of this initiative.

This Project contributes to fulfilling the following GEF objectives: BD-2, LD-1, -2 and -3, and SFM/REDD+-1, which will be undertaken through local environment management activities, regional monitoring systems with environment and soil degradation components, in addition to programs which strengthen and promote sustainable soil and forest management. It is an initiative, which brings together stakeholders from various national, regional and local institutions, committed for the duration of Project implementation, some of whom will participate in the Steering Committee. This Committee will be in charge on the monitoring of the fulfillment of objectives, a process that will be supervised by the implementing agency, UNEP.

TABLE OF CONTENTS

ABBREVIATIONS

AM	Agriculture Ministry
AMUR	Rural Municipalities Association
CBD	Convention on Biological Diversity
CCP	Council for Clean Production
CONAF	Chilean National Forestry Corporation
CORFO	Chilean National Production Development Corporation
CPA	Clean Production Agreement
EIAS	Environmental Impact Assessment System
EM	Environment Ministry
EMAS	Eco-Management Auditing System (European)
EPIC	Ecosystem Protection through Infrastructure and Communities
FM	Financing Mechanism
GIS	Geographic Information System
GORE	Chilean Regional Government
HCVA	High Conservation Value Area
INDAP	Institute of Agricultural Development
IUCN	International Union for Conservation of Nature
LD	Land Degradation
LEM	Local Environment Management
LS	Logistic Support
M&E	Monitoring and Evaluation
MECS	Municipal Environment Certification System
MED	Municipal Environment Department
MOL	Municipal Organic Legislation
MSI	Millennium Science Initiatives
NBDS	National Biodiversity Strategy
NGO	Non-Governmental Organization
PSC	Project Steering Committee
PMU	Project Management Unit
POC	Project Operational Coordinator
PEM	Public Estate Ministry
PPG	Project Preparation Grant
RBDS	Regional Biodiversity Strategy
REDD+	Reducing Emissions from Deforestation and Forest Degradation
SAG	Chilean Agriculture and Livestock Department
SEREMI	Regional Ministerial Secretariat
SEREMI EM	Environment Ministry Regional Secretariat
SERNATUR	Chilean National Tourism Bureau
SFM	Sustainable Forestry Management
SLM	Sustainable Land Management
SNASPE	Chilean National System of Protected Areas
SNCAE	Environment Ministry program for environment certification of schools
SUBDERE	Under-Secretariat for Regional Development
TES	Township Environment Strategy
TNC	The Nature Conservancy (NGO)
TR	Terms of Reference

SECTION 2: BACKGROUND AND SITUATION ANALYSIS (BASELINE COURSE OF ACTION)

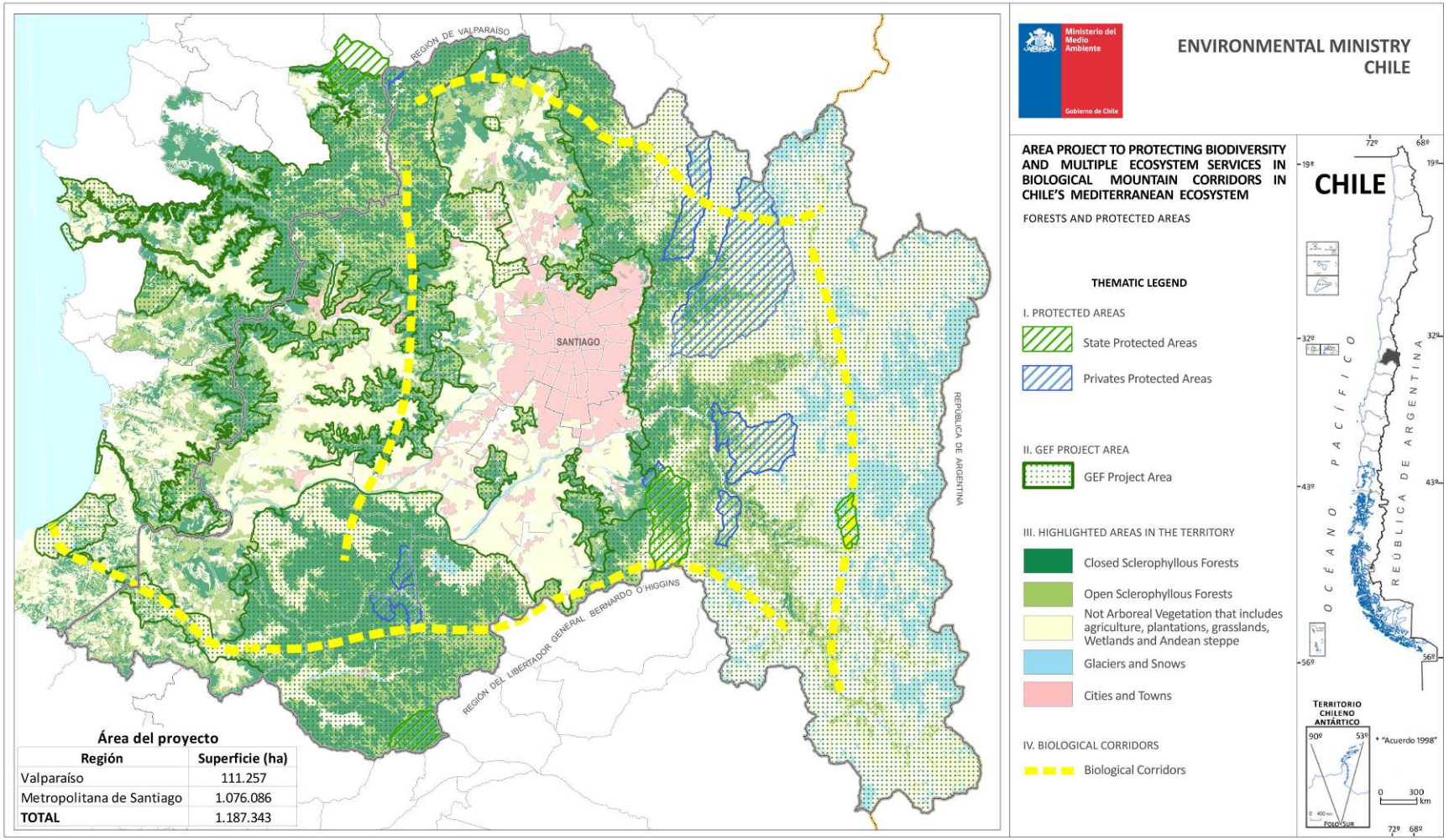
2.1. Background and Context

1. Chile is one of five places in the world with a Mediterranean climate, along with Australia, California, South Africa and the Mediterranean Basin (Vogiatzakis et. al., 2006). These five eco-regions with a Mediterranean climate are recognized not only for their high levels of wealth and endemism in plant and animal species, but also for being regions with high risk of extinction (Global 200, WWF). The Mediterranean ecosystems are expected to suffer the highest proportional change in biodiversity by the year 2100 because of its high level of sensitivity to changes in land use and its vulnerability to the impacts of climate change (Lavorel 1998; Sala *et al*., 2000, in GEO-4 Report, UNEP, 2007). Population density and urban growth, conversion of natural areas to agriculture and livestock production, and for developing projects related to tourism, are some of the main threats to these environments (Underwood *et al*., 2009).

2. The Chilean Mediterranean eco-region is located in the heart of the country's Central Zone, distributed between 32°45' and 37°30' south. This Project includes the Metropolitan Region (MR) and part of the Valparaíso Region (V), with 90.6% of the Project area located in the MR, including 1,076,086 ha (Figure 1). The MR is the smallest of the country's 15 administrative regions and includes nearly 40.3% of the national population (6,683,852 people, according to the National Institute of Statistics, 2012), contributing 48% of the country's GNP in 2009, where the major regional economic activities are linked to financial services, manufacturing industries and commerce.

3. In addition, the Region of Valparaíso contributes with a smaller participation, 111,258 ha, only 9.4% of the total Project surface area. However, incorporating this area, which includes the municipalities of Olmué, Quilpué, Casablanca, Cartagena, San Antonio and Santo Domingo, is strategically relevant for the Project, because San Antonio and Santo Domingo municipalities include the mouths of the Maipo and Yali Basins. This low section of the basins is a sort of barometer and receiver of the results of environmental management in the total area of the basins. In other words, in this zone it is possible to measure the effects of human activities upon the natural resources, which can be seen through the degree of biodiversity conservation, forest conservation and the quality of ecosystem services provided by the basin. In addition, the municipalities of Olmué, Quilpué, Casablanca and Cartagena constitute the biological corridor leading from the Coastal Mountain Range to the Pacific Ocean, contributing representation of low mountain ecosystems to the Project. In the Region V, municipalities are characterized by a Mediterranean climate with oceanic influence, with predominantly coastal evergreen vegetation surrounded by intensive agriculture systems. As for infrastructure and services, in San Antonio Municipality is one of the two most important ports in the Region, which between them process nearly 50% of food exports (KOM, 2009). Region V contributes 7.9% of the country's GNP, making it the third most important region in the country (INE, 2010). Map 1. below provides an overview of the project area.

Map 1: Geographic Location of the Project Area



4. The Project area includes zones of high biodiversity value as identified by the "Strategies for Conservation of Biological Diversity in the Metropolitan and Valparaíso Regions" (R.E. N°184, COREMA MR 2005 and R.E. N°739 COREMA V, 2007). In the MR, the zones of High Conservation Value Areas (HCVA) add up to a total surface area of 1,076,086 ha, or 69% of the total Metropolitan surface area, located in mountain areas (Andean foothills and Coastal Range), ravines, and in some Central Valley lowlands. The dotted yellow lines indicate the biological mountain corridors defined strategically for the environmental management of the territory: two great longitudinal biological corridors running north-south, corresponding to the Andean and Coastal Mountain Ranges; and two east-west biological corridors, secondary but no less important than the previous two, which connect the two main axes by means of the Chacabuco-Peldehue mountain corridors, in the northern part of the Region, and the Limítrofe Sur de Angostura mountain corridor, through the southern part of the MR. This last corridor reaches all the way to the mouth of the Yali Basin, where the "El Yali" Mediterranean wetland is to be found. This coastal wetland is the most important one in Chile's central zone. It has a surface area of 11,500 ha and is characterized by big seasonal and interannual variation in the number of migratory species.

5. In the Metropolitan Region of Santiago, in spite of its name and the fact that it includes the country's capital city, the urban areas represent only about 6.7% of its territory, surrounded by agriculture and livestock with 13.8% within the intermediate depression of the basin. A higher proportion of the Region – nearly 78% – is made up of a series of interconnected mountain ranges representing in almost their totality the Region's areas of high biodiversity value (scrublands, forests, wetlands, rivers and mountain area beyond the tree line). These areas together supply 96% of the Region's potable water for human consumption and satisfy 90% of the demand for irrigation, benefits that are also extended to non-consumptive water uses such as hydroelectric generation, recreation and aquiculture (CONAMA MR, 2004). The Metropolitan Regional Water Division (2012) has estimated that the contribution made to the basin by high Andes Mountain glaciers and snow is around 5% in October and reaches 60% in the month of April, which indicates the type of snow-glacier hydraulic system in the basin, and therefore the importance of managing conservation and protection of the Andes Mountains.

6. The Metropolitan Region's soils and forests play an important role in terms of generating other key ecosystem services such as the following: habitats for biodiversity, regulation of hydraulic balance, flood and erosion control, filtering in organic and inorganic substance processes, air quality and recreational landscapes, among others (CONAMA MR, 2004). The Ecology and Biodiversity Institute's study (IEB, 2013), regarding the classification of terrestrial ecosystems, determined that one of the potentially richest terrestrial ecosystems in terms of ecosystem services (ES) is the Sclerophyllous Evergreen Forest (with 26 types of ES) and the Sclerophyllous Evergreen Scrublands (with 19 types of ES), both of which are classified as Endangered (EN) as evaluated under the N1 criterion regarding extension and representativity of the terrestrial ecosystem on the national level.

Table 1: Total surface of High Conservation Value Areas (HCVA) by Region and in relation to Project area

Region	Total Surface HCVA	Natural Surface Area of Total Project area	
	ha	ha	% of Project area
Metropolitan Santiago	1,076,086	1,015,891	94.4
Valparaíso	111,258	89,296.4	80.3
Total	1,187,344		

*Source: Project PPG, own work

7. These mountain zones are mainly inhabited by rural communities involved in agriculture, livestock and forestry activities, with 212,397 ha of irrigated or livestock lands and 6,660 ha of forest plantations (MOP, 2010; GORE, 2012). In order to get an idea of the interrelations between the mountainous zones and the forestry-agriculture-livestock sector, it can be pointed out that in 2011 this sector exported a total of US$ 2.2 million, where 88% consisted of agricultural products, 9% livestock products, and 3% forestry products, contributing significantly to the total of regional exports. On the national level, agricultural exports generated nearly 12% of exports of fresh fruit (INE Census, 2007).

8. Within the Project MR area, there are 30 municipalities involved, most of which are composed of rural communities. Among the municipalities with the most surface of agriculture-livestock potential (according to INE's census, 2007), are San José de Maipo (around 450,000 ha), Melipilla (approximately 107,000 ha) and Colina (with 84,000 ha). As for Alhué, San Pedro and Paine, they have around 50,000 ha devoted to this activity. The municipalities of Melipilla, Buin and Paine are noted for being the main producers of tree fruits, the Region's most important agricultural export. Other export products include vegetables (52% of which is from peasant family production), apiculture products (51.3% of the country's total export volume), and flowers in the Talagante and Maipo Provinces (INE Census, 2007).

9. In the following table, the 36 municipalities within the Project area are listed, by region, province and township, including the total population broken down into rural and urban, male and female.

Table 2: The 36 municipalities involved in the Project area

PROVINCE	MUNICIPALITY	Population Projected to 2012	MEN	WOMEN
METROPOLITAN REGION OF SANTIAGO				
SANTIAGO	HUECHURABA[2]	86,201	41,915	44,286
	LA FLORIDA[4]	397,497	198,660	198,837
	LA REINA[1]	94,802	44,182	50,620
	LAS CONDES	289,949	130,865	159,084
	LO BARNECHEA[4]	112,822	49,448	63,374
	MAIPÚ[1]	888,377	433,576	454,801
	PEÑALOLÉN[1]	249,621	122,345	127,276
	PUDAHUEL	274,330	134,671	139,659
	QUILICURA[4]	222,145	109,550	112,595
	VITACURA[2]	78,964	34,092	44,872
CORDILLERA	PUENTE ALTO[4]	757,721	371,467	386,254
	PIRQUE	24,180	12,032	12,148
	SAN JOSÉ DE MAIPO	14,455	7,678	6,777
CHACABUCO	COLINA[1]	116,410	60,687	55,723
	LAMPA[4]	67,256	34,458	32,798
	TIL TIL	16,405	8,375	8,030
MAIPO	SAN BERNARDO	315,221	154,829	160,392
	BUIN[2]	74,232	36,711	37,521

	CALERA DE TANGO[3]	27,781	13,779	14,002
	PAINE[2]	65,370	32,922	32,448
MELIPILLA	MELIPILLA	107,698	53,934	53,764
	ALHUÉ[4]	4,646	2,424	2,222
	CURACAVÍ[4]	30,157	15,122	15,035
	MARÍA PINTO	11,823	5,788	6,035
	SAN PEDRO[4]	8,062	4,400	3,662
TALAGANTE	TALAGANTE	78,887	38,627	40,260
	EL MONTE	31,525	15,890	15,635
	ISLA DE MAIPO[4]	32,174	16,031	16,143
	PADRE HURTADO	50,696	25,567	25,129
	PEÑAFLOR	87,741	42,839	44,902
VALPARAÍSO REGION				
SAN ANTONIO	SAN ANTONIO[3]	99,868	49,282	50,586
	SANTO DOMINGO	9,205	4,614	4,591
	CARTAGENA	25,787	12,900	12,887
VALPARAÍSO	CASABLANCA	21,874	15,672	14,945
MARGA MARGA	QUILPUE[2]	163,759	79,926	83,833
	OLMUE	16,243	8,178	8,065

Source: INE 2012. Population estimations for 2012 based on the 2002 Population and Household Census; http://reportescomunales.bcn.cl/2012/index.php/Categor%C3%ADa:Comunas
(1 Excellent, according to the MECS; 2 Intermediate; 3 Maintaining excellence; 4 Basic/Developing). Source: EM 2013.

10. These municipalities' population depends upon ecosystem services provided by mountains and forests in order to satisfy environmental requirements of their productive activities. Not all of these municipalities are included in their entirety within the Project area, some have only a small proportion, others an important part of their administrative territory within the Project area, but all of them, directly or indirectly, depend upon the environmental benefits that mountains and forests provide.

11. In general, the municipalities do not usually incorporate into their local environmental activities the management and conservation of their environmental heritage. The exceptions to this rule are a few municipalities (4 out of the 36), which have implemented voluntary initiatives for conservation of the biodiversity existing within their territories. The natural areas of these municipalities' territories are of high value in terms of forests and biodiversity, designated internationally as biodiversity "hotspot", representing the "Mediterranean Scrubland" ecosystem. In addition, 20 of the 36 (56%) municipalities participate in the Municipal Environment Certification System (MECS), a higher level of involvement in the strengthening of local environment management.

12. It must be pointed out that the present level of municipal involvement is an advantage for the Project. To be able to count on the interest of decision-makers within the municipalities in order to implement activities tending to conserve and develop the biological mountain corridors, conserving forests and ecosystem services, is a situation that will facilitate. For example, the establishment of norms, which make it possible to regulate soil use in areas outside the urban limits which at the present time are not regulated, unless they come under some legislation, such as the SNASPE or the like. Nonetheless, the lack of preparation on the part of the personnel in charge of issues related to conservation of biodiversity and natural resources is a challenge that must be met; as well as the lack of access to quality information regarding environmental components and their tendency toward deterioration; similarly, the lack of knowledge regarding financial mechanisms for

implementing best productive practices. Among other numerous shortcomings, these make it difficult for the municipalities to implement concrete activities in sustainable soil and forest management, in generating and maintaining the connectivity of the biological corridors, and in improving the quality of the ecosystem services of production, regulation and supply that they provide to the community.

13. This Project intends to develop and maximize the efforts already put in place for local environment management by the EM and other institutions competent in the environment field. Efforts, which have revealed the urgent need for maximizing the impacts of the productive activities carried out within the biological mountain corridors and of municipal decision-making, incorporating management and territorial environment planning tools; environment regulation tools and norms; financing mechanisms for implementing best productive practices; and a substantial education and awareness component targeting this Project's key stakeholders. The final expected result is to increase the resilience of the threatened mountain ecosystems (its forests and biodiversity in general), in the face of pressures from competition for land use in natural areas of high biodiversity value, as well as pressures for modifications stemming from the effects of climate change.

Table 3: vulnerability to climate change in the Chilean Mediterranean area

Agro-climatic zone (West to East or "costa a cordillera")	Average landholding size of smallholders	Uninhabited, non-agricultural, non-forest-plantation land in smallholdings	ΔT 2050	ΔP 2050
	ha	%	%	%
Secano costero (coastal drylands)	32	22%	10%	-25%
Secano Interior (inner drylands)	29	19%	11%	-25%
Valle Regable (irrigated valley)	11	12%	12%	-24%
Pre-Cordillera (pre-Andes)	49	24%	22%	-19%
Cordillera (Andean range)	459	36%	38%	-19%

* ΔT:Temperature; ΔP: Precipitation

Source: Segur., M. (2013) retrieved from: "Segunda Comunicación Nacional de Chile ante la Convención Marco de las Naciones Unidas sobre Cambio Climático", MMA 2011.

14. In this context, the Convention to Combat Desertification (UNCCD, 2012[1]) states that, although we manage to protect the native vegetation still present, we may not be able to stop ecosystem degradation. It is necessary to act upon the whole landscape, both that which has been altered and that which has been less altered, if we wish to halt deterioration, because all the parts of the ecosystem are interconnected.

2.2. Global Significance

15. Worldwide, Mediterranean-type ecosystems represent only 2% of the Earth's surface, but include 20% of the world's diversity in flora. Furthermore, in this type of environments, large concentrations of human population have settled, a high level of natural vegetation conversion is present, which when added to the direct use of native plants and animals by the population, translates into significant pressures and threats to the survival of biodiversity.

[1] Zero Net Land Degradation. 2012 United Nations Convention to Combat Desertification (UNCCD) in Bonn, Germany.

16. In all of South America, the Chilean Mediterranean eco-region is the only one of its kind. This eco-region is classified as the Chilean Matorral Eco-Region (NT 1201) whose conservation status is "Endangered" as per Dinerstein et al. (1995), and the Global 200 initiative of the WWF (Eco-Region N°122). It includes a rich diversity of plant and animal species as well as a high level of local and regional endemism, especially of the plant species, and is under severe pressures from mankind.

17. Likewise, this ecosystem is also included among the five biodiversity hotspots identified by Conservation International (CI) for South America, including the "Chilean Winter Rainfall-Valdivian Forests" (Myers et al., 2000; CI, 2012). This hotspot covers about 40% of Chile's land surface (CONAMA, 2008).

18. Just as the ecological classification indicates, the vegetation in Central Chile is also commonly known as "matorral" (evergreen scrubland), although other types of vegetation are present, such as relic coastal forests, thorny scrublands, palm forests, savannas (*Acacia caven*), swampy forests, coastal scrublands, and Andean mountain forests (Armesto et al., 2007). In this region, well conserved masses of native forest are rare, since, like in most Mediterranean zones, it is densely populated and heavily transformed by man, so that of the original forest vegetation, only scarce fragments remain – limited to some humid ravines.

19. According to Pliscoff and Luebert (2006), there are 127 terrestrial ecosystems present in continental Chile. Within the Project area, there are 14 belts, of which six are within the municipalities of the Valparaíso Region, and all of them are located in the Metropolitan Region of Santiago. These ecosystems are 100% restricted to Chile's Central Zone, existing only between the IV and VI Regions (Pliscoff and Fuentes-Castillo, 2011). The 14 ecosystems present in the MR would cover about 94.6% of the Region's total surface area (depending on their distribution). However, in terms of this Project's intervention area, and considering the surface area of these terrestrial ecosystems represented within the area of high biodiversity value, 66% of the regional surface area, covered with this type of ecosystems, will be within the area of direct Project impact, with only 28.6% of these vegetation formations outside the Project area.

20. Analysing the percentage of the surface area of these ecosystems represented within the protected areas of the SNASPE, National Assets and Natural Sanctuaries, the situation changes dramatically. All the ecosystems in both Regions fall into the conservation category of Endangered (EN) according to the Geobiota analysis (2012). This is due to the "endangered" status declared under scenario 3 for those ecosystems with highly limited percentage of representativity within the national territory and which account for a surface area of no more than 10%.

Table 4: Area of terrestrial ecosystems in the Project area, representativity within the SNASPE, National Assets (NA) and Natural Sanctuaries (NS), and conservation status according to Scenario 3 (Geobiota 2012)

Terrestrial Ecosystem	National Remnant (km^2)	Representativity SNASPE + NA + NS (%)	Classification by % representativity (scenario 3)
(27) Inland Mediterranean Thorny Scrub of *Trevoa quinquinervia* and *Colliguaja odorífera.*	1,584.8	0.6	Endangered
(32) Inland Mediterranean Thorny Forest of *Acacia caven* and *Prosopis chilensis*.	1,300.7	0.1	Endangered
(33) Andean Mediterranean Thorny Forest of *Acacia caven* and *Baccharis paniculata*	532.3	0.1	Endangered
(34) Coastal Mediterranean Thorny Forest of *Acacia caven* and *Maytenus boaria*.	1,932.3	0.2	Endangered

Terrestrial Ecosystem	National Remnant (km^2)	Representativity SNASPE + NA + NS (%)	Classification by % representativity (scenario 3)
(37) Inland Mediterranean Sclerophyllous Arborescent Scrubland of *Quillaja saponaria* and *Porlieria chilensis*	5,201.6	0.9	Endangered
(38) Andean Mediterranean Sclerophyllous Forest of *Kageneckia angustifolia* and *Guindilla trinervis*	4,334.8	4.4	Endangered
(39) Coastal Mediterranean Sclerophyllous Forest of *Cryptocarya alba* and *Peumus boldus*	4,394.5	3.2	Endangered
(40) Coastal Mediterranean Sclerophyllous Forest of *Lithrea caustica* and *Cryptocarya alba*	2,913.1	1.1	Endangered
(41) Andean Mediterranean Sclerophyllous Forest of *Quillaja saponaria* and *Lithrea caustica*	2,323.6	2.3	Endangered
(46) Coastal Mediterranean Deciduous Forest of *Nothofagus macrocarpa* and *Ribes punctatum*	873.2	6.4	Endangered
(111) Coastal Mediterranean Dwarf Scrub of *Chuquiraga oppositifolia* and *Mulinum spinosum*	57.2	3.2	Endangered
(112) Andean Mediterranean Dwarf Scrub of *Chuquiraga oppositifolia* and *Nardophyllum lanatum*	4,049.3	5.6	Endangered
(113) Andean Mediterranean Dwarf Scrub of *Laretia acaulis* and *Berberis empetrifolia*	9,024.4	3.7	Endangered
(119) Andean Mediterranean Moorland of *Nastanthus spathulatus* and *Menonvillea spathulata*	5,009.8	4.0	Endangered

Source: Classification and proposal of national conservation objectives, criteria for determining representativity and prioritization, and qualification and management at the national, regional and local levels, of priority locations for biodiversity conservation. Geobiota 2012. UNDP Project 125/2010.

21. From the data in the above table, if we take into account only the surface under official protection (SNASPE + NA + NS), by 4.74% of these type of terrestrial ecosystems are under protection (Project PPG, own work). This low level of protection of these 14 ecosystems is cause for concern since, as has been stated above, some of these are only to be found in Chile's Central Zone, and, in addition, some of them only in the MR. Therefore, giving support for the conservation of these ecosystems is vital. This Project expects to strengthen the territorial environment management of areas, which are not included in the SNASPE. Those territories where the Project will be implemented would include a surface area of over one million one hundred thousand hectares. The Project would give support to conservation efforts in favor of ecosystems with a low level of protection and with a conservation category of "endangered", according to the Geobiota analysis, condition in which all of the terrestrial ecosystems described for both Regions are to be found.

22. The characteristics of richness and endemism are typical of the Mediterranean ecosystems worldwide. The Mediterranean vascular flora is characterized by its high level of local endemism. A characteristic made evident by the high level of endemism in the regional flora: for example, of the 627 endemic species in continental Chile (43.7%), 422 species are endemic to the Mediterranean area (29.4%), 132 species are endemic to the Metropolitan of Santiago and Valparaíso Regions together (9.2%), and there are 91 species exclusive to the Metropolitan Region of Santiago (Arroyo et al., 2002). For the Metropolitan Region alone, there is a 6.7% of endemic species out of a total of 1,355 native vascular plant species described, this Region being considered to have the second largest total number in the country (Squeo et al., 2012).

23. As for fauna species, it has been determined that 50% of the vertebrate land species known in Chile inhabit the Mediterranean-type ecosystem with a level of endemism near 50% (Simonetti, 1999). Of the total of vertebrate land species known in Chile, 336 (48%) are to be found in the Regions of Valparaíso and Santiago Metropolitan. From this total of vertebrate species, it can be concluded that the two Regions together contain 57% of Chile's birds, 37% of its mammals, 36% of its fish, 28% of its reptiles and 20% of its amphibians. These percentages indicate that these two Regions contain a substantial part of the country's specific species wealth.

24. Four of the 13 endemic terrestrial mammal species described (31%) are to be found in the Metropolitan Region alone: *Chelemys megalonyx* (large long-clawed mouse), *Spalacopus cyanus* (cururo), *Abrocoma bennetti* (Bennett's chinchilla rat) and *Octodon lunatus* (moon-toothed degu) (ERBD-MR Update, in press). *Thylamys elegans* (elegant fat-tailed mouse opossum), one of the 4 marsupials existing in Chile, also inhabits this area.

25. Reptiles and amphibians merit special attention due to their vulnerability and limited local distribution. The amphibian species endemic to Chile reach 65% (of the 64 species described, 41 are endemic[2]). Within the Region, of the 10 native amphibian species described, 7 are endemic for the national territory, and 3 of these are exclusively endemic to the Region, these being *Alsodes laevis* (potrero spiny-chest frog), *A. montanus* (mountain spiny-chest frog) and the more recently described *A. cantillanensis*[3]. On the international level, *A. montanus* and *A. tumultuosus* have been designated as "trigger species" in accordance with the Alliance for Zero Extinction (AZE), because of its conservation status of "EN" and its distribution being restricted to remnant sites. On the basis of this, the objective of this organization is to generate the tools necessary to accelerate protection processes for these sites. As for Chile, 14 trigger species have been identified, including the above mentioned amphibians, which are located in the Farellones ravines in the MR. As for invasive species, the presence of the exotic species *Xenopus laevis* (African clawed frog) is to be noted; this species was introduced as a laboratory animal in 1970 and today is to be found in the wilderness, a threat to the highly vulnerable native amphibian populations.

26. As for reptiles: in continental Chile, 107 species of native reptiles have been described, of which 67 are endemic (62.6%). In the Region, 16 of the 21 reptile species described are endemic to Chile, reaching a level of endemism of 76% (RBDS-MR Update, in press). Among these, *Liolaemus valdesianus* (Lo Valdés lizard), *L. moradoensis* (El Morado brown lizard) and *Pristidactylus volcanensis* (Volcán growler) are species exclusive to the Metropolitan Region. Both within the country and in the Region, the genus with the most species is *Liolaemus*, with a representativity of 71% and 65% respectively (CONAMA, 2008).

[2] Book of Chilean Amphibian Conservation of the EM, 2013.

[3] The EM's Expedition to Cantillana, 2011, or personal communication from Charrier.

27. Of the bird species whose distribution includes this Region, six are endemic out of a total for the continent of 9 (CONAMA, 2008): the "moustached turca" (*Pteroptochos megapodius*) and the "white-throated tapaculo" (*Scelorchilus albicolis*), both of the *Rhinocryptidae* family; the "streak-throated canastero" (*Asthenes humilis*) and the "crag chilia chiricoca" (*Chilia melanura*), both of the *Furnariidae* family; the "Chilean mockingbird" (*Mimus thenca*) and the "Chilean tinamou" (*Nothoprocta predicaria*). The *Rhinocryptidae* and *Furnariidae* families are old endemic bird families of South America, and Chile is noted for having an exceptionally high representativity worldwide, of 28% and 10% respectively, compared with other families that do not surpass 5%. As for the wealth of migratory birds, in the Santo Domingo Municipality in the Region of Valparaíso, the "El Yali" Mediterranean Wetlands are to be found. This is the most important coastal wetland in Chile's Central Zone and one of only five wetlands in the world that are located in a Mediterranean zone. This wetland is designated as a Ramsar site for its environmental and cultural relevance. It is the nesting, resting and feeding site for more than 115 bird species (25% of the country's total bird species), most of which are aquatic: Chilean flamingos (*Phoenicopterus chilensis*), black-necked swans (*Cygnus melancoryphus*), and southern wigeons (*Anas sibilatrix*), among many other species.

28. As for aquatic fauna, Chile has a rather low number of fish species. Only 44 fish species have been described for the national territory. Despite this low level of diversity, Chile's continental ichthyofauna presents characteristics that make them unique, as well as a level of endemism, which reaches 54% (24 species; CONAMA, 2008). In the MR, 7 endemic fish species have been described (RBDS-MR Update, in the press). Belonging mainly to the endemic families of *Nematogenydae* (catfish) and *Perciliidae* (perch), they have limited distribution due to geomorphological factors, such as, for example, steep rivers with strong currents, which hinder many fish from going upstream. Others are restricted to two or three basins which, together with the Gondwanic origin of some of them (ex. *G. australis*), makes them veritable relics. To date, 26 introduced fish species have been identified in the Maipo Basin, which also affects the Yali Basin.

Table 5: Species wealth, levels of endemism and concern for species conservation (EM species classification) of terrestrial vertebrates in the Metropolitan and Valparaíso Regions of Chile

	Regional Total		Regional Total Endemics		% Endemism compared to regional total		Conservation Concern (EM Classification)		% Conservation Concern compared to regional total	
Regions	**MR**	**V**	**MR**	**V**	**MR**	**V**	**MR**	**V**	**MR**	**V**
Fresh water fish	13	17	7	11	54	65	10	16	77	94
Amphibians	11	6	8	3	73	50	9	6	82	100
Reptiles	21	21	16	5	76	24	20	21	95	100
Birds	173	239	6	2	3.5	0.8	28	41	16	17
Mammals	35	36	4	4	11	11	18	19	51	53
Total Vertebrates	253	319	41	25			85	103		

Source: Strategy Update for Biodiversity Conservation in the Metropolitan Region of Santiago, in the press. Ninth process of EM species classification, 2013.

29. In general, it can be seen that the taxonomical groups of highest concern, in the evaluation of their conservation status, are fresh water fish and amphibians. Due to the fact that because of their evolutionary characteristics, their habitats are limited to specific zones, strongly under pressure from various factors: pollution from both domestic and industrial liquid waste; 26 fish and one amphibian invasive species; habitat modifications from urban sprawl, intensive agriculture, agroindustry, mining and the tourist industry. These two groups of species are indicative of the alteration and response of the ecosystems present in the Project area.

30. After reviewing the global significance of the Chilean Mediterranean eco-region, with particular emphasis on the Metropolitan Region of Santiago and the 6 municipalities in the Valparaíso Region, it can be concluded that the Project area represents a significant nucleus of biodiversity, which is characterized by being highly endemic, and threatened by the anthropic pressures it attracts. Therefore, the Project area includes a significant portion of the country's species wealth, including species particularly relevant to the international community.

2.3. Threats, Root Causes and Barrier Analysis

Threats

31. The threats and environmental degradation factors for the Chilean Mediterranean Eco-Region, in particular the Metropolitan and Valparaíso Regions, derive mainly from human activities and pressure, which play a major role in the increased deterioration of the ecosystem functions and of habitats, which in turn affect the resilience of biodiversity and its forests.

i. Habitat loss and fragmentation, mainly the result of agricultural encroachment into wilderness areas and urban expansion into rural landscapes. These lead to the loss of connectivity of the biological corridors and the isolation of areas of conservation interest. So too, the establishment of human infrastructure within the rural areas, such as altering the hydrographic basins through implementation of hydroelectric projects and the construction of dams.

   The Project area is undergoing rapid urbanization processes involving changes in the patterns of land use and in urban morphology. One study of trends in urban density in the world's five Mediterranean ecosystems indicates that between 1990 and 2000, Chile experienced the greatest change, with an increase of 19% (Underwood et al., 2009).

   Recently, in the updating of CONAF's Register of Native Forests (2013), the areas of land use change were calculated, consisting of the difference in surface areas between the years 2001 and 2013. In the Region V, there was an increase in the surface area for the use "Urban-Industrial Areas" of 24,782 ha, equivalent to a 1.6% expansion. This increase in the surface area occurs in both sub-uses, mainly in Cities, Towns and Industrial Zones. As for the MR, the same use and sub-uses showed an increase of 47,926 ha, equivalent to a 3.4% increase compared to the year 2001.

   Meanwhile, Pastures and Matorrals showed the highest level of negative variation in surface area for both regions. In Region V, the decrease was on the order 356,489 ha, a reduction of 22.3%, the sub-use with the greatest loss of surface area being Matorral-Matorral, with a decrease of 403,909 ha, equivalent to a 25.2% decrease when compared to the surface occupied by the same sub-use in the year 2001. In the MR, Pastures and Matorrals decreased by 274,612 ha, a reduction of 17.8% of the Region's surface for this sub-use. These categories on land use changes illustrate the pressures on and substitutions for natural areas because of the demand for land generated by human activities.

The same negative variations of natural use surface areas is to be found in Santiago's foothills (MR), with urban encroachment increasing in altitude. Competition for the use of space characteristic of present anthropic impact gradually exerts greater pressure on land use for housing and major infrastructure projects, all of which increases the deterioration of the environment on high altitude slopes and mountainsides (PROTEGE, 2007).

ii. Habitat Degradation and Ecosystem Functions, the result of forest fires; the increase in invasive and feral species (especially dogs, cats, rabbits and hare) in areas with a high environmental value; deforestation of native forest for non-commercial uses, such as firewood and wood for local construction, all of these factors mainly occurring in lands bordering protected areas. Between 2006 and 2011, 2,269 forest fires affected the MR, damaging 769 ha of plantations and 23,062 ha of natural vegetation; whereas in the Valparaíso Region, 3,930 forest fires occurred between 2007 and 2012, affecting 9,019 ha of plantations and 29,422[4] ha of natural vegetation, all resulting in the loss of forest coverage and biodiversity (INE, 2011).

Overgrazing, a non-sustainable practice of livestock production, which involves high densities of livestock and grazing on fragile soils, leads to the conversion of native forest into pastures and matorrals, accelerating the processes of soil degradation and desertification. This turns into a negative impact on aquatic environments, because of changes in the condition of the resource (CONAMA MR, 2004; EM, 2010).

In the MR, approximately 44.3% of the Region (683,000 ha) presents signs of erosion[5], mainly on the slopes of the Coastal Mountains and the Andean Foothills, while in the Valparaíso Region, erosion problems reach a level of 57% (or 906,943 Hectares), this being the second Region in the country most affected by erosion problems at the present time (CIREN, 2010). The 6 townships of this Region within the Project area have together an eroded surface area of 174,133 ha, equivalent to 19% of the Region's eroded areas. It should be pointed out that the factors indicated here coincide with the factors, which the United Nations Convention for Combating Desertification (UNCCD) state as the major causes of desertification.

As for water quality, this is also affected by the filtration of sediments and chemical overload from agricultural activities (the use of heavy machinery, fertilizers, pesticides and other contaminants). Water quality is also affected by the installation of hydroelectric plants and dams, which modify the hydraulic cycle of the ecosystem. In effect, the rate of loss of biological diversity in fresh water ecosystems is greater than in any other biomass (CBD-Ramsar, 2010).

Another source of contamination originates in mining activities in areas of high environmental value which are poorly managed and lack natural resource protection measures (ex. extraction of the upper level of soil with no recovery programs), leading to the deterioration of local habitats, especially those which are located near bodies of water, affecting both the quality and the quantity of the resource, as well as the habitat of ichthyofauna and of fresh-water communities.

iii. Disappearance of native flora and fauna, a threat which poses a major obstacle to conservation of biodiversity and the forests. Non-sustainable gathering of plants and animals (such as collecting medicinal plants, hunting and illegal sale of endangered native flora and fauna) has a direct local impact,

[4] Totals registered for the whole Valparaíso Region. There is no breakdown for the 6 municipalities within the Project area.

[5] The signs of erosion are classified into categories of light, moderate, severe and very severe. CIREN 2010.

as is gathering firewood for domestic heating and collecting humus to improve the soil, commonly in gardening.

iv. Deficient legal protection for the ecosystem, mainly due to the fact that most land is privately owned. Most of the owners do not have sufficient knowledge or awareness to be able to appreciate the real value of biodiversity and the benefits it provides, therefore the objectives they pursue in the use of their land often do not coincide with the principles of sustainability in support of recovery and protection of natural areas. The result of this is that protection efforts by the State are scarce and have a low level of representativity of the terrestrial ecosystems, with only 4.74% under official protection by the SNASPE, National Assets and Natural Sanctuaries (see Table 4). This situation reflects the fact that the Sclerophyllous forests and matorrals have little official protection, and those forests located outside the protected areas are even more vulnerable since they are threatened by various forms of pressure by human use without environmental awareness. All of the ecosystems in the Region fall into the IUNC conservation category of Endangered (Geobiota, 2012). Therefore, any effort to bring legally established protection to the Mediterranean forests on private land must necessarily contemplate working with private landowners to promote sustainable management practices.

    Three protected areas in the MR are managed by the State through CONAF (the Río Clarillo National Reserve, the Roblería de Cobre de Loncha National Reserve and the El Morado Natural Monument). The remaining nine protected areas are Nature Sanctuaries, which are private protected areas supervised by the Chilean Council for National Monuments. As for the Valparaíso Region municipalities, there are only two protected areas managed by CONAF (the "El Yali" Wetlands National Reserve and the "La Campana" National Park), and there are no Nature Sanctuaries established within these coastal municipalities (see Table 6). "Nature Sanctuary" is a protection category, which encourages the interested parties to preserve the natural conditions of the area in question. It is the only legal environment protection instrument in Chilean environment legislation, which allows private landowners to conserve their deeds of ownership and at the same time guarantee protection of the land.

32. Worthy of mention is the "Altos de Cantillana" Nature Sanctuary (2,743 ha) which was established in 2010, largely as a result of the GEF Project (GEF ID 1725) which was implemented between the years 2005 and 2009, with the long-term objective of offering a model for establishing and strengthening Chile's protected areas system and to establish additional Nature Sanctuaries. Thereafter, two additional Nature Sanctuaries were established within the GEF Project area: "Horcón de Piedra" (October 2010, with 1,968 ha) and just recently "San Juan de Pichi" (2013, with 1,417 ha).

33. Furthermore, in the Strategies for Biodiversity Conservation in the Metropolitan and Valparaíso Regions, areas of high biodiversity value have been identified, though not recognized by the State as legal protection category, and together include a surface area of over one million one hundred thousand hectares which define the area of action of this Project (see map 1). These areas of high biodiversity value include, in their totality or in part, six Important Bird Areas (IBA) identified by the organization Bird Life International (see Table 7). Again, there is international recognition of the environmental value of these bird refuge areas, but they are not recognized within the Chilean legal system, mostly because they are located on private lands. This Project expects to improve the conditions under which these private lands – not currently under legal protection - are utilized, through promoting sustainable management and use practices of the territory.

<u>Root Causes</u>

34. Even though the threats to biodiversity and forests in the Mediterranean ecosystem have many causes, most of them derive from the fact that Chile's economy is greatly dependant on exploiting natural resources, the most important productive activities in both Regions being mining, agriculture and livestock. Exploiting natural resources is a response to macroeconomic factors such as population growth and the increase in land values; the high profit levels of productive activities; as well as the national and regional policies, which promote the establishment of mining and hydroelectric infrastructure, among others.

35. Other causes have to do with the climate, changes in precipitation and temperature patterns, which because of the characteristics of Mediterranean biodiversity - of limited distribution but extended over different altitudes and latitudes within the country - must be taken into account.

36. The increase in population leads to urban expansion and its effects on consumption models, increasing human pressure on natural resources, either for domestic consumption or for production. A particularly important issue is water consumption. Due to population growth alone, the demand for water in the MR increased from 14 to 18 m^3/sec between 2000 and 2007, and water consumption per capita is expected to reach levels of between 20 and 23 m^3/sec by the year 2025 (CED-UNDP, 2012b). The availability of water in the MR is of some concern, estimated at 525 m^3/person/year, considered low in comparison with the rest of the country (800 m^3/person/year in the northern regions and over 10,000 m^3/person/year in the southern regions). This figure is also much lower than the World Bank's sustainable development threshold (2,000 m^3/person/year) and the world average (6,600 m^3/person/year) (CED-UNDP, 2012a). In contrast, despite being faced with a prospect of decreased water volume, in 2010 the MR had the highest level of residential water consumption in the country (22 m^3/residence/month) (SISS, 2011b in EM, 2011).

37. Traditional cultural practices tend to eliminate native flora and fauna. Collecting firewood for domestic use and for producing charcoal for sale are practices which historically have been associated with rural municipalities and generally with conditions of poverty. As with humus extraction, these are activities which exert pressure in the long term on the Mediterranean Sclerophyllous forest. For example, rural poverty in the MR of Santiago is at 6.3%, taking into account that the rural population only accounts for just over 3% of the Region's population, the level of regional poverty being 11.6% (CASEN, 2011). Another traditional practice is the seasonal migration of cattle to summer grazing in the Region's high mountain areas, a practice which has been in substantial decline in recent years because of historic overgrazing of the mountain grasslands, which has increased pressure on the forests in the search for food (Andean Santiago Plan, 2010) and extensive cattle grazing in the Sclerophyllous forests and matorral. Finally, poaching of vertebrate species for subsistence or for their skins is a scourge in biodiversity conservation programs. In Chile, in 1929 the first Hunting Law in Latin America was passed, and it regulated hunting of many species whose populations had diminished because of indiscriminate hunting (CONAMA, 2008). Despite this, it has been observed that these practices are having increasing negative impact on the ecosystems' balance.

38. The fact that private property is the prevailing situation in the Project area is an obstacle toward establishing State protected areas. In Chile, the rights of private property take precedence over State policies, which in this case would be to conserve and preserve biological mountain corridors. The lack of awareness and concern regarding the importance of biodiversity and the forests on the part of many private property owners, within the Project area, and the scarcity of regulation and control to protect biodiversity and the forests, with nearly no positive incentives, facilitate bad productive practices or the use of natural resources with no thought to sustainability, this being an obstacle to conserving many of the areas of high biodiversity value.

39. On the local level, there are political and institutional factors which cause local governance problems toward effective management and conservation of biodiversity and the forests, such as the limited availability of technical, financial and human resources, which translates into limited inspection and control of land use and productive practices, as well as contradictory sectoral policies which promote or encourage production in fragile soils, for example cultivating slopes without the benefit of adequate technology or environmental standards, resulting in detrimental incentives which promote native forest substitution. The municipal-level shortcomings combine with the limited coordination that exists between competent institutions in the realm of inspection and application of financial mechanisms for managing and conserving natural resources, complicating correct application of the current environmental norms.

40. The insufficient territorial environmental information available for assisting decision-making and land use planning leads to degradation of habitats and of the ecosystem functions, since the knowledge level of the decision makers determines the value they assign to environmental services which the areas of high biodiversity value provide to the community. With up-to-date and quality information on a more detailed scale regarding the components of the environment and the ecosystem services, it will be possible to incorporate into regional planning standards of sustainability in the use of the territory.

Barrier Analysis

41. Persistent challenges have been identified which limit the ability to fulfill the objectives and carry out the activities planned in this Project for the conservation of the biological mountain corridors:

42. Local concern for the importance of conserving biodiversity is still minimal: It remains necessary to establish the fact that sustainable land use practices halt soil and forest degradation, among the population and the authorities in the Project area. On the institutional level, there is a legal framework which allows that in many cases, in order to declare or implement a norm or a decree, it is necessary to communicate at a high political level with the participation and determination of many important stakeholders, who are not always available or are not in harmony or in agreement with the Project's objectives, because of the low level of general knowledge in these matters. For this reason, it is necessary to have a strategy of education and awareness in order to overcome this obstacle, which is evidenced by low participation and empowerment in environmental issues.

43. Persistent unsustainable use of natural resources and human pressure on endangered Mediterranean habitat: This includes mining without protection measures, and the extraction of humus; overgrazing, deforestation, illegal waste dump sites and dumping waste into rivers, poaching and trapping native species, urban expansion; and unregulated tourism. The complex functions of mountain forests and the lack of constant efforts to comprehend the synergies between soil, water and the degradation of soils and forests, have limited the understanding of their relationship to human activities or the latter's effects on them. Limited knowledge and incomplete or dispersed information stand in the way of an adequate understanding of the value of conserving biodiversity and the forests, which leads to erratic decision-making. In many cases, these bad decisions are due to a lack of awareness of the negative externalities and compensations, which occur between productive activities and conservation, as well as the lack of means or instruments for integrating the new base of technical-scientific knowledge into decision-making. Furthermore, many of the bad practices which impinge upon biodiversity and the forests occur because of lack of knowledge and undervaluing of the areas of high environmental value on the part of the neighbouring community, which makes increasing the level of knowledge and awareness about biodiversity and the forests a vital factor to develop in order to guarantee the success of the strategic conservation activities.

44. Need for better reference information on the local level: local environmental information on the municipal level is insufficient and the present maps available are on scales of 1:250,000 and 1:100,000. Therefore, in addition to collecting local base line data, it is necessary to develop updated maps with scales, which show more features in detail. Information which is not available is incomplete or dispersed is a serious obstacle to making informed decisions, for this reason the Project intends to collect and update detailed information regarding the environmental components on a scale of 1:25,000.

45. Capacities for local environment management must be strengthened: Law 20,417, from 2010, which modified the Environment Base Law 19,300, requires that the municipalities take responsibility for protecting the environment of their territories through Local Environment Management (LEM), which implies the following: a) propose and implement measures for putting environmental actions and programs into practice; b) assure that environmental norms are upheld within the Municipal territory, and c) prepare a preliminary plan for environmental governance. However, the new legislation does not allocate any financial resources to cover these additional activities. As a result, the municipalities are having difficulty complying with this requirement:

1. Human Resources: Of the 36 municipalities included in the Project zone, 13 have not assigned personnel exclusively to these tasks. There are only a limited number of professionals and community leaders trained in conservation and sustainable management of mountain forests.

2. Institutional Capacity: In other municipalities, the personnel assigned to this area are not always properly trained to carry out these tasks, and often they do not dedicate all of their time to them. In addition, there is a lack of adequate local environment management resources, supplies and tools for aiding in the planning and decision-making processes. The lack of diagnostic tools and information systems for aiding in appropriate decision-making results in the formulation of weak policies and the implementation of norms which, in relation to the objective of forest conservation, are both perverse and contradictory.

3. Limited local capacity for medium- and long-term supervision of process implementation: The municipalities are very susceptible to political changes and modifications in personnel trained to supervise, communicate and share lessons learned. In addition, the strengthening of legal instruments, improvements in high-level public policies, instruments that support good productive practices, and the implementation of corrective measures, are all long-term activities, which require the presence and continuity of key stakeholders in order to achieve the Project's objectives. For this reason, the development of institutional and individual capacities, in both public and private contexts, is fundamental in order to consolidate the environmental management of the Mediterranean forests. Guaranteeing the permanence of these relevant, trained stakeholders is of vital importance in order to meet the goals. Another example is establishing conservation incentives through financial mechanisms, which generally speaking are medium-term, so that in order to assure their implementation, it is necessary to have trained professionals available who will assist landowners in designing projects as well as accompanying them through the implementation stages.

46. Coordination between municipalities, other stakeholders and the private sector must be improved: Despite the fact that some of the Region's municipalities have had successful experiences, these have not been adequately shared and there is not enough coordination between municipalities on environmental conservation issues. Furthermore, this lack of coordination is evident in the lack of articulation in land use

planning on the local and regional levels, together with the lack of political will for generating the legislative and regulatory changes required.

47. In summary, because of the lack of adequate incentives both for the municipalities and private landowners, together with deficiencies in the institutional framework and ineffective instruments, these stakeholders are unable to deal with the increasing threats to the forest ecosystems and guarantee that the numerous and vital ecosystem services are provided to the community.

Table 6: Protected Areas in the Project's area

Name	Area (ha)
Metropolitan Region	
Río Clarillo National Reserve	13,085
Roblería de Cobre de Loncha National Reserve	5,870
El Morado Natural Monument	3,009
Yerba Loca Nature Sanctuary	39,029
Los Nogales Nature Sanctuary	11,025
Cascada de las Ánimas Nature Sanctuary	3,600
San Francisco de Lagunillas Nature Sanctuary	13,426
Torcazas de Pirque Nature Sanctuary	827
Cerro el Roble Nature Sanctuary	996
Altos de Cantillana Nature Sanctuary	2,743
Horcón de Piedra Nature Sanctuary	1,968
Total for MR	**95,578**
Valparaiso Region	
El Yali Wetland National Reserve	520
La Campana National Park	7,825.1
Total for V	**8,345.1**
Project total	**103,923.1**

Source: SNASPE and National Monuments Council

Table 7: Important Bird Areas (IBAs) in Chile's Metropolitan and Valparaiso Regions

IBA Code	IBA Name	Area (ha)
Metropolitan Region		
37	Batuco Wetland	500
39	Yerba Loca Nature Sanctuary	11,575
41	Yeso Valley	48,400
42	Río Clarillo National Reserve	13,085
Valparaiso Region		
40	Maipo River Mouth	10,000
45	Yali Wetland	11,500

	Total Area	**95,060**

Source: Bird Life International, 2009

2.4. Institutional, Sectoral and Policy Context

48. The GEF Project is to be carried out in a context where institutions and policies formally express concern for the environment, sustainable development and biodiversity and forest conservation.

49. The objectives of the GEF Project are fully consistent with the obligations undertaken by Chile as signatory of the Convention on Biological Diversity (CBD), ratified in 1994, and with the Biological Diversity Strategic Plan (2011-2020) and Aichi Targets. The CBD's main objectives are conservation and sustainable use of biological diversity. The Strategic Plan's objectives are: to address the underlying causes of the loss of biological diversity, reduce direct pressures and promote its sustainable use, improve the situation of biological diversity, increase its benefits and the ecosystem services and improve the application of the CBD through participative planning, handling of knowledge and establishing capacities.

50. The Project's objectives are also consistent with the United Nations Convention to Combat Desertification (UNCCD), ratified in 1997, whose objective is to promote the creation of national plans for fighting desertification and mitigating the effects of drought, and with the Climate Change Convention (UNCCC), ratified in 1992, whose objective is to achieve stabilization of greenhouse gas concentrations in the atmosphere.

51. Chile has made important efforts to comply with these agreements through establishing sectoral policies and strategies in this realm, as detailed below:

52. Chile's Constitution, in Article 19°, guarantees everyone's right to live in a pollution-free environment. It is the State's duty to assure that this right is respected and to protect and preserve nature. These principles are established in Law 19,300, the General Environment Base Law of 1994 (modified by Law 20,417, of 2010), whose Article 1° establishes, among other things, that "preservation of nature and conservation of the environmental heritage will be regulated by the dispositions of this Law, notwithstanding what other legal norms establish in this realm". Article 2, letters b) and g) define Conservation of the Environmental Heritage as the rational use and benefit, or repair when appropriate, of the components of the environment, with the purpose of guaranteeing its permanence and its regenerating capacity, and defines Sustainable Development as the process of improving in a sustained and equalitarian manner peoples' quality of life, founded in appropriate measures of environmental conservation and protection, in a way that does not threaten the prospects of future generations. Law 20,417 establishes the Environment Ministry (EM), whose mandate is to design and apply environment policies and programs. In this respect, the EM requires, through the Local Environment Management system (known as GAL in Chile, for its abbreviation in Spanish), that the Municipalities take responsibility for protecting the environment in their territories.

53. In the year 1998, Chile published the Environment Policy for Sustainable Development, whose specific objectives include sustainable use of natural resources, incorporating environment considerations in the productive sector, involving citizens in environment management, and establishing new instruments for management of the environment.

54. The general objective of the EM's National Biodiversity Strategy (NBDS) is to conserve Chile's biodiversity, promoting its sustainable management; as well as guaranteeing conservation and restoration of habitats and ecosystems, maintaining viable flora and fauna populations, and promoting sustainable

productive practices, among others. Currently the NBDS is being updated and a program is being formulated for promoting the CBD Strategic Plan (2011-2020), which is expected to integrate Chile's commitments regarding the CBD into its national development programs and sectoral planning frameworks.

55. In addition to the NBDS, Chile also drew up Regional Biodiversity Strategies (RBDS), which are currently being updated. The objective of the Santiago Metropolitan Region's RBDS is to contribute to biodiversity conservation, promoting sustainable management of its features, services and potential, in a manner which protects its life capacity and guarantees access to its benefits. The RBDS is expected to deepen a culture of biodiversity conservation, establish conditions for the explicit valuing of ecosystem services, strengthen biodiversity management within the declared priority areas, promote the adoption of biodiversity conservation measures to be incorporated into the actions taken for adapting to and mitigating the effects of climate change, and consolidate institutional capacities which will make effective RBDS implementation possible.

56. Within the framework of the UNCCD, Chile established a National Action Program to Combat Desertification and Drought (PANCD 1997), and the National Consultative Committee on Combating Desertification and Drought, CONAF being the coordinating entity and headquarters. This made it possible to carry out a nationwide diagnosis and establish a Preliminary Map of Desertification in Chile (CONAF, 1999). It should be noted that the Project area is located in a semi-arid climate zone, and soil degradation in this zone falls within the category of desertification, according to their definition.

57. The EM defined the National Strategy for Climate Change (2006), identifying objectives for adaptation, mitigation, and establishing and promoting institutional capacities regarding climate change. Additionally, it set up the National Climate Change Action Plan 2008 – 2012, which establishes lines of action in the realm of adaptation, mitigation, and establishing and promoting institutional capacities regarding climate change. The Metropolitan Region has available a Regional Plan for Adapting to Climate Change (2012), which proposes 14 key measures organized under 4 major categories (adaptation measures for: soil use, vulnerability, water and energy).

58. In 2013, the EM established the Action Plan for Biodiversity Protection and Conservation, in a Context of Adaptation to Climate Change. This plan proposes transversal strategic initiatives for Chile, and strategic initiatives for concrete conservation targets.

59. The Agriculture Ministry, via CONAF, establishes the National Strategy for Forests and Climate Change and the Platform for Generation and Sale of Carbon Units for Chile's Forestry Sector (2012). This platform will make it possible for owners of forests and lands susceptible to forestry planting, who utilize Agriculture Ministry incentive instruments, to complement their income.

60. In the year 2009, Chile drew up a National Policy for the Protection and Conservation of Glaciers, a document that recognizes the importance of these ecosystems for the country and establishes the main actions, which should be implemented in order to guarantee their conservation. This policy establishes the following objectives: to obtain knowledge of and value Chile's glaciers, and establish preservation and conservation measures which guarantee the continuation of the natural processes and the productive activities which these support as well as the generation of environmental services.

61. Chile ratifies in 2009 the Green Growth Declaration promoted by the Organization for Economic Co-operation and Development (OCED), and makes a commitment to promote this development strategy in Chile. In 2013, they publish the National Strategy for Green Growth (2014 – 2022), with the following objectives: to

achieve economic growth that is environmentally and socially sustainable, promote economic growth via sustainable management of natural resources, implement adequate instruments, which incorporate environmental externalities, and stimulate the national market of environmental goods and services.

62. The National Council for Clean Production (CCP), an entity under the Ministry of the Economy, through its Clean Production Agenda to 2020, defines strategic actions and establishes goals such as the following: 60% of the industries declare themselves partly or wholly committed to establishing clean production, and energy and water consumption are reduced by 20% through clean production programs, among others.

63. The National Strategy for Water Resources 2012 – 2025 establishes as one of its strategic guidelines, efficient and sustainable water management, through promoting integrated water management on the basin level, and protection of water quantity and quality.

64. The National Rural Development Policy 2014-2024 seeks to improve the quality of life and increase opportunities for the rural population. It includes Environmental Sustainability of the Rural Territory as one of its Realms of Action. Four main strategic areas are established in this respect: Biodiversity and Ecosystem Services, Water Systems, Soil, Environmental Liabilities and Environmental Education.

65. The Strategic Plan for 2010 – 2014 of the National Institute of Agricultural Development (INDAP), under the Agriculture Ministry, establishes the following objectives: to support the development of competence among small farmers, both men and women, and have development strategies which target the specific needs of small farmers enabling them to improve their production and favoring marketing of their goods and services.

66. The Chilean National Tourism Bureau (SERNATUR) has its own National Tourism Strategy (2012 – 2020), a strategy that promotes an image of Chile in 2020 as a world-class tourist destination, known for its sustainable and high quality services. One of its main objectives is to increase the importance of tourism in the national economy.

67. Chile participates since 2007 in the Mountain Partnership (established in 2002 by the UN), its objectives being to protect the world's mountain ecosystems, promote sustainable development, and improve the living conditions of mountain-dwelling populations.

68. The Regional Government has established the "Metropolitan Regional Development Strategy for 2012 – 2021", a regional planning framework document which proposes in one of its strategy lines (Sustainable and Clean Region), to lead in the implementation of a system of regional biodiversity corridors in the Metropolitan Region.

2.5. Stakeholder Mapping and Analysis

69. During the Project's design stage, various stakeholders have been identified and efforts made together with them in order to establish synergies with the different existing initiatives toward developing and achieving the established objectives. Table 8 gives the details of the role, potential impact, synergies and potential contribution of each identified stakeholder.

Table 8: Alliances, Synergies and Contributions

Stakeholder	Role and Description	Impact Potential	Interests at stake or Synergies with the Project	Potential Contribution to the Project
Local Community and Producers				
Small-scale forestry-agriculture-livestock producers and tourism	Throughout the Project zone, there is a substantial number of small-scale producers (with up to 12 ha) in the area of forestry, agriculture and livestock, and of local tourism promotion initiatives. With the support of the municipalities and the Agriculture Ministry, work will be carried out with groups representing each of the biological mountain corridors, in order to promote sustainable management of soil and forests.	High	Better management of their operations/estates increases productivity, raises property value and provides higher-quality livelihoods.	Participation in the processes of training in best practices for sustainable soil and forest management and financial instruments, and in awareness campaigns on the compatibility of natural resources protection and productivity, as well as promoting organic production or similar. Beneficiaries for implementation of pilot projects in best practices, promoting pilot projects in territorial productive networks, and implementing activities financed by existing instruments. Work groups for minimizing conflicts between livestock producers and wild fauna.
Medium and large-scale forestry-agriculture-livestock producers, ski resorts and mining companies	Within the Project area, there are numerous medium and large-scale producers in forestry-agriculture-livestock, and tourism, as well as ski resorts (around 2) and mining exploitations, in the mountainous area. With the support of competent services, work will be carried out with some of them, promoting practices, which lead to sustainable management and protection of natural resources.	High	Better management of their operations/estates increases productivity, raises property value and provides higher-quality livelihoods.	Participation in training opportunities in best practices and financing instruments, as well as certification systems in operation or being developed. Generating standards for sustainable management of soil and forests, the efficient use of water, minimization of environmental liabilities and conservation initiatives *in situ.*
Landowners within mountain areas	Within the Project area there are in mountainous areas land holdings, which are not necessarily productive at the present time. Some of these already have land management plans which were drawn up in previous projects (around 30 farms), as well as some which are carrying out conservation activities, such as nature sanctuaries, or eco-tourism. As a form of support for these services, work will be carried out to promote sustainable management and conservation in areas, which are relevant for the Region.	High	Better management of their operations/estates increases productivity, raises property value and provides higher-quality livelihoods.	Participation in training opportunities on sustainable management of soils and forests, practices for passive and *in situ* conservation, beneficiaries for implementation of some best practices, promoting eco-tourism, drawing up land management plans for farms that do not yet have them, among other initiatives which will be identified during the course of Project implementation.

Stakeholder	Role and Description	Impact Potential	Interests at stake or Synergies with the Project	Potential Contribution to the Project
Civil Organizations and Communities	Within the Project area, there are no native communities. Each township involved in the Project has social territorial organizations, some of which the Project will work with, in coordination with the municipalities. According to the CASEN survey, there are nearly 7 million inhabitants in the MR (over 40% of the total national population), only 3.4 % of which is rural population.	Medium	Fulfillment of own objectives and foundational aims.	Citizen participation in the processes of education and awareness regarding the value of the natural heritage within their territories, which results in improvements in the local communities' quality of life.
Children and adolescents	In each one of the townships involved in the Project area, there are several educational establishments for children of from 5 to 17 years of age, public, subsidized and private, some of which, in coordination with the municipalities, will be beneficiaries of the education programs which will be created during Project implementation. Priority will be given to those schools with environment certification under the EM's *SNCAE* Program.	Medium	Improved awareness of their surroundings provides opportunities for local employment, avoiding emigration.	Beneficiaries of the environment education programs emphasizing the importance of biodiversity conservation, knowledge of ecosystem services that nature provides, and the social, economic and environmental benefits of promoting sustainable development.
Government Agencies. National Level				
Environment Ministry (EM). Natural Resources and Biodiversity Division	Ministerial Division in charge of assuring compliance with lines of action in the field of biodiversity protection on the national level, compliance with agreements, strategies and policies, as well as facilitating recovery of relevant ecosystems.	High	By means of its actions and role in this Project, they will facilitate implementation of the biodiversity and ecosystem services conservation initiatives within the Project area, guaranteeing fulfillment of its objectives. This Division is also in charge of the GEF Projects "Constructing a National System of Protected Areas" (ID 2772), which is still being implemented, and the "National Biodiversity Plan for Supporting Implementation of the Strategic Plan of 2011-2020" (ID 4857).	Ministerial Counterpart in all the Project's stages. Initiative Direction. Search for support and co-financing of other services and key stakeholders. Coordination with the other Ministerial divisions. Political support and monitoring for achievement of all the objectives, results and products. Co-financing of the initiatives. Synergy with GEF ID 2772, in the sense of promoting the scheme of the "Conservation Landscape" on the Municipal level (scheme equivalent to an IUNC category 5, not yet recognized as such in Chile) and with GEF ID 4857, through knowledge of and in agreement with the strategies proposed for biodiversity conservation within the framework of the National Plan.

Stakeholder	Role and Description	Impact Potential	Interests at stake or Synergies with the Project	Potential Contribution to the Project
Environment Ministry (EM). Education and Local Environment Management Division	Ministerial Division in charge of assuring compliance with the lines of action in the realm of environmental education, in addition to promoting local environment management at the municipal level as well as citizen participation.	High	Through its role in promoting and strengthening municipal environment management, this Division is in charge of the Municipal Environment Certification System (MECS), work with the municipal personnel in charge of environment issues throughout the country, as well as audits to assure compliance. Furthermore, they are developing a new management scheme called "sustainable township" which will be put in operation beginning in 2014. This Division is in charge of leading the GEF Project "Support to Civil Society and Community Initiatives for Generating Global Environment Benefits through Subsidies and Small-Scale Credit in the Mediterranean Ecoregion (ID 4939)"	Participation in the Project Steering Committee, supplying relevant information. Incorporating into the MECS Manual an annex on biodiversity management and conservation, as well as including this topic in the new "sustainable township" scheme. Support for implementing these schemes and training of municipal personnel. Processing of modifications to the Organic Municipal Law (MOL) for improving the status of the municipal environment units and the environment ordinances. Support for developing model ordinances for soil use environment standards. Synergy with the GEF Projects which work with local communities (GEF ID 4939).
Environment Ministry (EM). Environmental Economy and Studies Division	Ministerial Division in charge of developing the Environmental Accounts for the country and the Official Annual Report about the Environmental Condition. Ministerial Dept. in charge of social and economic evaluation of environment management instruments as norms.	High	The Division will use the knowledge and information obtained by the Project to achieve the Environmental Accounts. Especially important will be the ecosystem characterization, the Ecosystem services determination and the Biodiversity Monitoring System. This Division must develop a methodology for assessing the ecosystem services in Chile as well as proposals for payment per service.	Participation in the Project Directive Steering Committee, supplying relevant information and criteria from Environmental Economy. Commitment for developing a pilot methodology for assessing some ecosystem service in some part of the country within the GEF Project area. Financing will be by the Ministry itself.
Ministry of Agriculture (MA)	Its mission is to contribute to improving competitiveness, sustainability and equality in the forestry-agriculture-livestock sector on the national and regional levels.	High	Through its functions of coordination, monitoring and efficient application of policies, programs and projects which are implemented through agreements, as in this case with the EM, they will assure participation of the departments under them, such as CONAF, SAG and the Agriculture SEREMI's, throughout Project execution.	Support in the implementation of activities in this Project committed to by its departments (SAG, CONAF, INDAP and the MR Agriculture SEREMI). Declaration of a pilot area "Conservation District for soil, forest and water", and technical support for establishing the district plan and Decree. Financing for implementation of forestry-agriculture-livestock initiatives in the Project area.

Stakeholder	Role and Description	Impact Potential	Interests at stake or Synergies with the Project	Potential Contribution to the Project
Council for Clean Production (CCP) (Ministry of the Economy)	A CORFO Committee, under the Ministry of the Economy, whose mission is to promote clean production and the efficient use of resources, innovation in clean technologies, and environmental responsibility on the part of Chilean industries.	High	By means of their Clean Production Agenda to 2020, whose objective is to improve sustainability indicators, they have designed a proposal for a new instrument called "Nucleus for Territorial Sustainability in the Maipo Basin" (NEST+ Water), whose action plan includes promoting new Clean Production Agreements CPA's) in agriculture, livestock and tourism, as well as implementing a proposal for a water fund that will make it possible to conserve the water supply service of said basin which coincides with the Project area.	Supplying information concerning clean production agreements in the Project area, team effort for defining new CPA standards within the realm of the GEF Project, financing the diagnosis and the declaration of new CPA's within the area, on sustainable management of forests, agriculture, livestock and responsible tourism. Financing a consultancy regarding green economy within the Project area, support in coordinating with productive sectors.
Chilean National Forestry Corporation (CONAF) (Agriculture Ministry)	Chile's Forestry Department, under the Agriculture Ministry, in charge of administrating national forestry policy, promoting sustainable use of the forestry resource.	High	By means of complying with the objectives of the National Forestry and Climate Change Strategy, and the implementation of the GEF Project on Sustainable Soil Management (ID 4104), they will coordinate the activities of these initiatives in such a way as to contribute to protection of biodiversity and the services provided by the forest in the Project area, giving technical support in sustainable forest management and to the scheme of Conservation District for soil, forest and water.	Supplying survey information on native forests in the Project area, participating in the Steering Committee, working in a team for drawing up a proposal of new standards for sustainable management of the Mediterranean forest and incorporating them into the Native Forest Legislation, and adapting accordingly the support instruments they administrate, fostering the declaration of a pilot area under the legislation of Conservation District, proposing new standards for sustainable soil management, financing initiatives which are submitted to them for sustainable management of forests as well as studies in this realm.

Stakeholder	Role and Description	Impact Potential	Interests at stake or Synergies with the Project	Potential Contribution to the Project
Institute of Agricultural Development (INDAP)	Public Service under the Agriculture Ministry, whose objective is to promote and support sustainable agricultural development working with small producers.	High	In their strategic plan (2010-2014), they have included goals such as promoting organic agriculture, best agricultural practices, designations by origin, and improvement of capabilities in best practices, with the intention of promoting sustainability of the agricultural environment, seeking to recover deteriorated soils and maintain their recovered state. In synergy with this Project, they will promote fulfillment of these initiatives working with agricultural communities within the Project area in coordination with some municipalities.	Promoting best agricultural practices among small producers in the Project area, promoting their incentive instruments, establishing coordination mechanisms with the municipalities through their local programs, implementing a training program for improving technical capabilities of those professionals and stakeholders involved in INDAP programs. Financing initiatives which are submitted to their financial instruments within the Project area. Participating in implementing the Conservation District initiative for soil, water and forests in the pilot area.
Under-Secretariat for Regional Development (SUBDERE)	State Under-Secretariat, under the Ministry of the Interior and Public Safety, which oversees contributions to territorial development, strengthening their capacity for good government, through coordinating, promoting and evaluating regional development.	High	By means of the Municipalities Division, they can support strengthening of local environment management, as well as seeking sustainable development of their territories, with training programs targeting municipal personnel, hiring of human resources, among other initiatives.	Financing training activities in LEM targeting municipal employees (seminars-graduate degrees), financing for hiring support personnel for municipal associations, which formulate environment initiatives within the municipalities in the Project area, financing initiatives presented within the neighbourhood improvement program, support for presenting modifications to the Municipal Organic Law. Updating of LEM information throughout the country through the survey program for the evaluation of public management.
Ministry of Public Properties (MPP)	Its mission is to recognize, administer and manage the public heritage in the interest of economic, social and cultural development, with an integral and sustainability orientation.	Medium	In the Project area, specifically in the Andes Mountains, the MPP has a landholding of 70,000 ha, where it is implementing the "Rio Olivares Mountain Park" initiative, whose purpose is to conserve the existing biodiversity in this location.	Commitment through agreement with the EM, to set aside the 70,000 ha land holding for biodiversity conservation, supply relevant environmental information, technical support for implementing initiatives which further the sustainable use of said territory, as well as working with livestock communities to diminish their impact.

Stakeholder	Role and Description	Impact Potential	Interests at stake or Synergies with the Project	Potential Contribution to the Project
Chilean National Production Development Corporation (CORFO) (Ministry of Economy)	Entity under the Ministry of the Economy, in charge of promoting productive initiative for improving productivity and competitiveness.	Medium	This entity has a series of instruments for financing initiatives in technological innovation, communication, productive initiative and transfer of capabilities targeting private interests, in addition to one instrument for financing studies of public-interest innovation. Among the programs promoted on the national level is that of sustainable tourism.	Technical support for designing financeable projects and supplying information regarding different financing instruments. Possible funding of productive initiatives which are submitted for financing within the Project area. Financing for the adaptation of standards in order to apply, for the first time in Chile, Life Certification, which incorporates biodiversity conservation.
Chilean National Tourism Bureau (SERNATUR). Ministry of the Economy.	Public entity under the Ministry of the Economy in charge of promoting and publicizing tourist activities in Chile.	Medium	In 2013, they launched the sustainable tourism master plan in the Cantillana sector, one of the major mountain areas in the Coastal Range of the Metropolitan Region. In addition, they have a program for sustainable tourism certification in the Municipality of San José de Maipo, which represents about 40% of the total Project area.	Supplying information. Implementing the activities indicated in the Cantillana master plan. Promoting the sustainable tourism seal. Technical support for the education and awareness programs, as well as identifying possible routes for promoting eco-tourism within the Project area.
Governmental Agencies. Local Level				
Municipalities within the Project area (36)	The local governments of the 36 municipalities located within the Project area. Among its administrative powers is that of promoting sustainable development within its territories.	High	The municipalities, through local environmental management, are key in achieving the objectives of environmental and ecosystem services protection. By developing or incorporating environmental issues into routine municipal activities, they will be promoting sustainable development of their territories, in addition to being key agents for education and awareness initiatives, citizen participation, among others. In particular, the Municipality of Alhué and Calera de Tango will become reference points for environmental management in the realm of natural resource protection from their experiences in these areas, because of the fact that they have incorporated the idea of the environment into their routine municipal activities and can serve as an example to others.	Implementing local environment protection legislations, which incorporate biodiversity management and conservation. Implementing a Model Ordinance for sustainable soil use in the mountain area. Supporting coordination activities with the community (education and awareness) and working with productive stakeholders in the zone for promoting sustainable management of soil and forests. Training of their personnel in environment issues. Providing political support for achieving the Project's objectives.

Stakeholder	Role and Description	Impact Potential	Interests at stake or Synergies with the Project	Potential Contribution to the Project
San Antonio Municipal Museum of Natural Science and Archeology	Non-Profit Institution, under the Municipality of San Antonio, Valparaíso Region, whose mission is to conserve, study and publicize the township's natural and archeological heritage.	Medium	Institution, whose work in synergy with the Municipality of San Antonio, makes possible education and communication regarding the municipal's natural and archeological heritage, recovery of wild fauna individuals, as well as research and protection of the zone's relevant natural areas.	Providing information regarding the township's natural resources. Supporting strengthening of municipal environment management in the realms of biodiversity management and conservation. Supporting environmental education and extension activities targeting the community and municipal personnel.
Provincial Governments	State Entities which administrate and govern the Provinces (groups of townships within a given territory), representing the Region's highest government authority.	Low	Entity which, because of its functions, can play a role in supervising the actions of public services within their territories as well as supporting coordination of work between the municipalities within each Province. In the Project area, there are 9 Provinces (Chacabuco, Maipo, Santiago, Cordillera, Talagante, Melipilla, San Antonio, Valparaíso, and Marga Marga).	Possible support in coordinating initiatives, which are carried out with the community and municipalities in each Province under this Project.
National NGOs				
Sendero de Chile (Chile's Trails) Foundation	Non-Profit Organization, devoted to promoting hiking as a relevant activity for interpreting, valuing and protecting Chile's existing natural and cultural heritage.	High	The Foundation selected by the EM as executing agency for the design. In addition, because of their vast experience, they will contribute to community education and awareness regarding biodiversity and ecosystem services within the Project area.	Providing relevant information, cofinancing of hiking activities targeting the local community, and training of guides in pilot municipalities. Supporting the design of an extension, education and awareness strategy. Identifying and supporting proposals for new hiking routes in the Project area.
Sustainable Chile Program	Initiative by ecologist organizations, academics, and individuals, organized for the purpose of fostering the development of a citizens' proposal, to encourage Chile to seek a kind of development based on sustainability criteria.	Medium	This Foundation has had an important role in promoting sustainable development in the Municipality of San José de Maipo. They participated in a project for sustainable production systems for mountain ecosystems in said municipality.	Supporting strengthening environmental management in the Municipality of San José de Maipo. Supporting coordination together with productive stakeholders in the zone for implementing best practices for sustainable management of soil and forests. Supporting implementation of activities in environment education and extension in the Andes Mountain zones.
Foundation for Overcoming Poverty. "Servicio País"	A Program for social intervention which works with isolated, vulnerable communities, through volunteers who implement activities for overcoming poverty, with the support of the municipalities and other government institutions and sheltering institutions.	Medium	This institution carries out a program for young professional volunteers, for developing activities during a full year, in vulnerable municipalities throughout the country, including the two Regions involved in this GEF Project, in realms such as culture, health and education.	Supporting professionals, for implementing activities with an environment orientation, in vulnerable municipalities within the Project area, strengthening local environment management (LEM).

Stakeholder	Role and Description	Impact Potential	Interests at stake or Synergies with the Project	Potential Contribution to the Project
Foundation Chile	Non-Profit Corporation devoted to promoting innovation and productive initiative in such realms as the environment, water, energy and climate change, which make it possible to solve problems of national relevance.	Medium	In the realm of biodiversity conservation, they have a business and environment initiative which they hope to adapt to Chile, called Life Certification, in which they perform an integral evaluation of the ecological footprint left by some institution, activity or company in particular, whose compensation focus consists of conservation initiatives. In addition, they are currently developing a proposal for one Metropolitan Region municipality, in order to recommend a model for environment management which can be replicable in other townships.	The adaptation of standards for Life Certification in Chile will be one of the activities in synergy with the GEF Project, financed by CORFO, approved by the EM and carried out by the Foundation, for promoting conservation compensation mechanisms in mountain chains within the Project area. Technical support for strengthening municipal environment management.
Forestry Engineers' pro-Native Forest Society	Non-Profit Organization concerned with conservation and sustainable management of Chile's native forests.	Medium	They have had experience in such areas as forestry policy and legislation, forestry monitoring, certification, environmental education and professional accreditation.	Providing technical support for work on native forest legislation, improving the financing instruments which incorporate best practices for sustainable forest management.
Adapt-Chile	A Non-Profit Organization dedicated to facilitating the process of adaptation to climate change and global environmental change, in the municipalities, cooperatives, governments and companies.	Low	In 2013, they carried out the project "Integrating climate change in municipal management" whose objective was to lend support to management related to climate change on the municipal level in 16 Metropolitan Region municipalities. In addition, they developed the project "Science and Political Dialogues for Climate Actions on the Municipal Level", which sought to support municipal management in the face of climate change, through generating opportunities for dialogue between scientists and employees in 15 Metropolitan-Region municipalities.	Supplying the final reports of both initiatives. Synergy with the already-established network of municipalities through these same projects and contacts with the people responsible within the municipalities. Synergy with the proposed strategies for municipal management of climate change and with the management and conservation of natural resources as proposed by this GEF Project.
International NGOs				

Stakeholder	Role and Description	Impact Potential	Interests at stake or Synergies with the Project	Potential Contribution to the Project
The Nature Conservancy (TNC)	An International NGO dedicated to conservation of ecologically significant soils and water, with special emphasis on Chile's Mediterranean ecosystem.	High	Synergy with the 2013 Conservation Plan for the Maipo and Aconcagua Mediterranean River Basins, whose objective is to implement strategies which will make it possible to protect the most relevant and threatened components of biodiversity, as well as guaranteeing the significant provision of ecosystem services for people and productive activities in these priority basins. This GEF Project intends to carry out synergic actions in the area which coincides with both prior initiatives, as is the Maipo Basin.	Providing information gathered and compiled within the Project area, as well as a methodology for risk analysis and conservation components, participating in the Steering Committee, providing technical support for proposals in sustainable agriculture and livestock production, education and publicizing, clean production and water conservation agreements Water Fund proposal), supporting the effects of public policies oriented toward basin conservation, identifying and implementing green infrastructure for maintaining hydraulic processes in the Maipo Basin.
Wildlife Conservation Society (WCS)	An International NGO dedicated to wild life and wild areas' protection throughout the world.	Low	In Chile, they are in the process of developing a methodological proposal for evaluating optimum biodiversity compensation, to be incorporated into a System of Biodiversity Compensation Banks in Chile's Environment Ministry.	Supporting the possibility of promoting a biodiversity compensation bank, identifying Project areas, technical support for identifying threat indicators and a monitoring system.
EPIC of the IUCN	A IUNC Program which seeks to promote valuing wild ecosystems for the services they provide toward buffering or preventing natural disasters.	Low	In Chile, they are currently carrying out the project "Ecosystems for Community and Infrastructure Protection", in the hopes of influencing decision-makers and policies which target risk management and adaptation to climate change.	Supporting obtaining information related to management for conservation of biodiversity and ecosystem services, generated under their initiative, as well as in generating networks of key stakeholders.
Academic Institutions				
Universidad de Chile. Faculty of Agronomic Sciences. Dept. of Environmental Sciences	Academic Institution whose purpose is to develop their activities in all disciplines related to the process of renewable natural resource protection and environmental management, as well as in livestock production, with a mind to sustainability.	High	Research into mountain ecosystems within the Project area. Developing methodologies for soil use plans, ecological zoning and land management plans. Proposal for implementing conservation district and a best practices manual for productive activities in mountain zones.	Providing technical support in designing a methodology for gathering biodiversity and services data, cartography and soil use plans. Supporting the process of establishing Conservation District and monitoring indicators for soil degradation. Providing methodologies for sustainable management of Mediterranean forests.

Stakeholder	Role and Description	Impact Potential	Interests at stake or Synergies with the Project	Potential Contribution to the Project
Universidad de Chile. Forestry Sciences Faculty.	Academic Institution whose purpose is to carry out activities in all disciplines related to the process of protecting renewable natural resources and environment management, with a mind to sustainability.	High	Research into sustainable practices of forest management in the Mediterranean ecosystem, studies of species, adaptability, forest ecosystem services, among others.	Providing technical support in the design of a methodology for gathering data on the forest, biodiversity and services. Supporting implementation of pilot projects for sustainable forest management, and improvement of practices for forest conservation in the Project area.
Institute of Ecology and Biodiversity (IEB)	Institute created under the Chile's Millennium Science Initiative (*MSI* in Chile). It is a center dedicated to scientific research for biodiversity conservation, training of human resources, and education and extension among civil society.	High	Research into climate change and grape production in the Mediterranean ecosystem in Central Chile. Research in biodiversity and environment components which provide benefits to the agricultural system in wine production, within the Project area. Climate monitoring projects in the Region as well as other data-gathering.	Strategic alliance with the "Wine, Climate Change and Biodiversity in Chile" program, which has been operating for over 6 years and has succeeded in incorporating biodiversity management among wine producers in Chile's Central Zone, with emphasis on training in the ecosystem services which the surrounding natural areas provide to the grape plantations. This initiative will be replicated in the Project area. Providing technical support in the design of a strategy for monitoring and conservation of biodiversity and ecosystem services.
Universidad Mayor. Center for Research on Natural Resources (OTERRA in Chile)	Research Center under the Faculty of Forestry Engineering, since 1998 it is devoted to developing projects related to management of and applied research into natural resources.	Medium	Design of standards for sustainable forest management. Gathering information on vegetation survey within the Project area.	Providing information in SFM Possible technical support for promoting Clean Production Agreements (CPA's) which encourage sustainable forest management.
Universidad Mayor. Center for Eco-Toxicological Research (CIE in Chile)	Center for Research related to evaluating contamination affecting hydrographic basins, taking into account water, soils and wildlife.	Medium	This Center is carrying out several projects which promote biodiversity conservation in the areas of *El Roble* and the *Batuco* Wetlands, which are part of the GEF Project. They have gathered basic data regarding wealth, threats, management plan proposals, environmental education and awareness initiatives, among others.	Providing information generated in both areas as well as management proposals. Supporting the design of strategies for conservation, biodiversity education and awareness in these areas, as well as coordination with the Municipality involved and the main stakeholders in the zone.
Center for Advanced Research in Arid Zones (CEAZA in Chile)	Research and Technology Center in the Coquimbo Region which seeks to promote the Region's scientific-technological development in arid and marine zones, promoting environmental protection.	Medium	This Center is in charge of implementing the GEF Project for ecosystem services (ProEcoServ) (ID 3449) in the Township of San Pedro de Atacama, Antofagasta Region.	Synergy in knowledge of the methodology to be used for study of the water-supplying ecosystem services, and ecotourism, in the township of San Pedro, in addition to the methodology for including them in the municipality's township development planning, and promoting the care of that township's natural heritage.

Stakeholder	Role and Description	Impact Potential	Interests at stake or Synergies with the Project	Potential Contribution to the Project
Pontificia Universidad Católica de Chile. Center for Advanced Research on Ecology and Biodiversity (CASEB)	Advanced Research and Educational Center dedicated to transferring ecological knowledge relating to biodiversity and ecosystems, promoting conservation.	Low	Since the year 2002, it has had at its disposal a station for Mediterranean ecological research (*EDIEM* in Chile), located in the Metropolitan Region, with a considerable collection of publications on research into climate, soil, flora and fauna.	Providing information. Possible technical support in design of a strategy for monitoring and conservation of biodiversity and ecosystem services.
Pontificia Universidad Católica de Chile. Center for Global Change	Center dedicated to carrying out basic and applied research on the biophysical and human dimensions of global change.	Low	They are presently carrying out the *MAPA* Project (Maipo: Adaptation Plan), whose objective is to create an adaptation plan regarding variability and climate change in the Maipo River Basin, on the basis of an analysis of vulnerabilities of the different kinds of water users (in an area which coincides with the GEF Project area).	Providing generated data. Identifying synergies between both projects in order to intensify the efficient use of water in the Maipo Basin, in addition to initiatives for promoting conservation of Andean areas which are relevant for the service of water provision.
Universidad de Chile. Center for Wildlife Studies	Academic Center whose purpose is to contribute to research, training, and management of Chile's wildlife.	Low	This Center created the biodiversity atlas for amphibians and reptiles in Chile's Metropolitan Region, with the purpose of contributing to knowledge and publicizing information about the Region's herpetological fauna. In addition, they made a study about conserving one reptile species, endemic to the *Altos de Cantillana* zone, pertaining to the Project area.	Providing data collected within the Project area. Supporting the selection of wildlife species for the monitoring and evaluation system.
Pontificia Universidad Católica de Chile. Center for Sustainable Urban Development (CEDEUS in Chile)	Research Center which promotes learning and transfer of knowledge in the realm of sustainable urban development.	Low	They are currently drawing up a proposal for monitoring ecosystem services.	Providing information. Possible technical assistance in the design of a strategy for monitoring and conservation of biodiversity and ecosystem services.
Pontificia Universidad Católica de Chile. Dept. of Agrarian Economy.	They specialize in agro-industrial administration and commerce, agrarian policy and economic management of natural resources.	Low	In 2013, they completed the project "Ecosystem Services Quantification and Valuing in the *Aguas de Ramón* Natural Park" financed by the Native Forest Research Competitive Fund.	Providing information. Possible technical support in the design of a strategy for monitoring and conservation of biodiversity and ecosystem services.

2.6. Baseline Analysis and Gaps

Project Baseline

70. The Project will be implemented in a territory which conserves a significant number of unique species and ecosystems. At the same time, some of these are heavily endangered, this being a zone with sources of pressure associated with large nearby urban centers and industrial concentrations of all kinds, including mining, intensive agriculture and livestock production, important winter tourism centers, among others. Despite progress in environmental management to slow the deterioration of biodiversity and ecosystem services, of the soil and forests, these phenomena continue.

71. In the last ten years, a series of actions have been undertaken toward protecting biodiversity, on the part of Public Services, NGO's, and private landowners. Two GEF Projects and several others financed entirely with national funds have made a contribution to these efforts. Such is the case with the "Biodiversity Conservation in "Altos de Cantillana" Project (GEF ID 1725), which promoted biodiversity conservation in a mountain sector of nearly 200,000 Hectares of private native forest. Thanks to these projects, 3 private protected areas were established in that sector, with nearly 20,000 Hectares in total; a fire brigade was established in the sector with State financing; nearly a third of the sector's total surface area is going through a process of being converted into a Conservation Landscape.

72. The other GEF initiative is called "Foothills of Santiago" in the foothills of the Andes Mountains, located in direct line with the capital city, and where, through the Western Santiago Association of Municipalities, a Master Plan for Conservation of an area measuring 13,352 ha was established, proposing actions for protection, organizing and management of this zone. In the Andean sector, a project entirely financed with national resources was carried out (CORFO-INNOVA 07CN13IYM-16), which generated data about the area's biodiversity and prepared management plans for large lands which promote their productive exploitation with livestock and tourism in harmony with biodiversity. The area benefited by that Project included over 150,000 Hectares.

73. At the same time, within the framework of the Regional Biodiversity Conservation Strategy, several Metropolitan-Region municipalities initiated actions for protecting the biodiversity present in their territories, utilizing the Environment Ministry's Funds for Environmental Protection (FEP) and contributions from private companies. One noteworthy case is that of Calera de Tango, where detailed biodiversity data was gathered (1:5,000) and indicator use plans were prepared for the island hills of Lonquén and Chena (surface area of 5,484 ha), both surrounded by a matrix of farm lands and private recreational lots. In addition, both hills have 15 land management plans, for a total of 2,100 ha, presently in search of financing in order to implement concrete actions for biodiversity conservation.

74. Nevertheless, there are still several sources of pressure. These pressures are the result of a series of underlying causes, which have not been sufficiently reduced. Without a doubt, in accordance with the Aichi targets 1, 2, 3, 5, 7, 14 and 19, it is urgent that work begin on these (table 9). Among them are the following: a low level of consciousness and awareness regarding the need to protect biodiversity and ecosystem services; scarce regulation for protecting biodiversity and promote sustainable use of its biotic and abiotic components; weak local environmental institutions for controlling and inspecting interventions in this predominantly wild territory (corresponding to the Project area). Most of the population has no knowledge of the services

provided by the wild ecosystems found within the township where they reside. There are no land-use regulations in the Project area (regulations exist only for urban and agricultural land use). Although the municipalities can establish such regulations on the basis of indicator instruments pertaining to national institutions, where these do not exist the municipalities' attributions are limited. This is a strong disincentive for many municipalities, there being only a few who by some subterfuge, carry out some actions for requiring productive practices in harmony with the biodiversity in their wild territories. There are some incentives which do damage, such as agricultural subsidies for producing on slopes, substituting in most cases the natural vegetation. On the other hand, incentives for conservation of soil and forests are scarce and poorly implemented. Besides the fact that incentives for undertaking best practices are scarce, they are usually not focused by the entities in charge on the very locations where the processes of ecosystem degradation make them most necessary.

Table 9: Relationship between Aichi Biodiversity Targets, Project Outputs and CBD Indicators.

Aichi Biodiversity Target	Related Project Outputs	Selected SMART Indicators[6]
Target 1. By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably	1.1. Local scale land use plans developed and linked to GIS system of the project area. 1.3. Carrying out a pilot project to enhance personnel capacities in the environmental departments of 36 municipalities. 1.4. Coordination mechanisms set in place for municipalities in the mountain areas. 1.5. Preparation of an upgraded version of the municipal environmental management certification scheme that will include requirements for sustainable land use (SCAM/ECOCOMUNA). 2.1. Monitoring system for biodiversity conservation and SLM/SFM with private and public stakeholders in the project area. 2.5. Education program on the need to conserve biodiversity and combat desertification for relevant local stakeholders	Trends in awareness, attitudes and public engagement in support of biological diversity and ecosystem services • Trends in awareness and attitudes to biodiversity (C) • Trends in public engagement with biodiversity (C) • Trends in communication programs and actions promoting social corporate responsibility (C)
Target 2. By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.	1.1. Local scale land use plans developed and linked to GIS system of the project area. 1.2. Local-scale assessments on the biodiversity components and ecosystem services of the project area. 2.1. Monitoring system for biodiversity conservation and SLM/SFM with private and public stakeholders in the project area. 2.3. Program for Promoting, Strengthening and Implementing Financing Mechanisms (FMs) which Support Biodiversity Conservation and Sustainable Management of Soils and Forests 2.4. Support program to explore market options for best practice compliant products from the Project area	Trends in integration of biodiversity, ecosystem services and benefits sharing into planning, policy formulation and implementation and incentives • Trends in number of countries that have assessed values of biodiversity, in accordance with the Convention (C) • Trends in guidelines and applications of economic appraisal tools (C) • Trends in integration of biodiversity and ecosystem service values into sectoral and development policies (C) • Trends in policies considering biodiversity and ecosystem service in environmental impact assessment and strategic environmental assessment (C)

[6] CBD. 2012. Decision XI/3 Indicator framework for the Strategic Plan for Biodiversity 2011–2020 and the Aichi Biodiversity Targets. The indicators "for use at the national or other sub-global level are denoted by the letter (C)", page 5.

Aichi Biodiversity Target	Related Project Outputs	Selected SMART Indicators[7]
Target 3 - By 2020, at the latest, (…) positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.	2.2. Strategy for improved dissemination and application of existing financial resources as incentives for biodiversity conservation among private land owners in the project area. 3.1. Declaration of one pilot-scale areas as soil, forests and water conservation district. 3.2. Conservation plans and activities for the pilot-scale areas. 3.3. Dissemination of lessons learned in the implementation of the pilot-scale areas.	Trends in integration of biodiversity, ecosystem services and benefits sharing into planning, policy formulation and implementation and incentives • Trends in identification, assessment and establishment and strengthening of incentives that reward positive contribution to biodiversity and ecosystem services and penalize adverse impacts (C)
Target 5 - By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.	1. Local scale land use plans developed and linked to GIS system of the project area. 1.2 . Local-scale assessments on the biodiversity components and ecosystem services of the project area. 3.1. Declaration of one pilot-scale areas as soil, forests and water conservation district. 3.2. Conservation plans and activities for the pilot-scale areas.	Trends in extent, condition and vulnerability of ecosystems, biomes and habitats • Trends in condition and vulnerability of ecosystems (C) • Trends in the proportion of natural habitats converted (C)
Target 7. By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	2.2. Strategy for improved dissemination and application of existing financial resources as incentives for biodiversity conservation among private land owners in the project area. 2.3. Program for Promoting, Strengthening and Implementing Financing Mechanisms (FMs) which Support Biodiversity Conservation and Sustainable Management of Soils and Forests 2.4. Support program to explore market options for best practice compliant products from the Project area 3.1. Declaration of one pilot-scale areas as soil, forests and water conservation district. 3.2. Conservation plans and activities for the pilot-scale areas. 3.3. Dissemination of lessons learned in the implementation of the pilot-scale	• Trends in pressures from unsustainable agriculture, forestry, fisheries and aquaculture. • Trends in proportion of products derived from sustainable sources (C) (decision VII/30 and VIII/15)
Target 14. By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.	1.1. Local-scale assessments on the biodiversity components and ecosystem services of the project area. 2.1. Monitoring system for biodiversity conservation and SLM/SFM with private and public stakeholders in the project area. 1.1. Local scale land use plans developed and linked to GIS system of the project area.	Trends in distribution, condition and sustainability of ecosystem services for equitable human well-being • Trends in natural resource conflicts (C) • Trends in the condition of selected ecosystem services (C) • Trends in biocapacity (C)

[7] CBD. 2012. Decision XI/3 Indicator framework for the Strategic Plan for Biodiversity 2011–2020 and the Aichi Biodiversity Targets. The indicators "for use at the national or other sub-global level are denoted by the letter (C)", page 5.

Aichi Biodiversity Target	Related Project Outputs	Selected SMART Indicators[8]
Target 19. By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.	1.2. Local-scale assessments on the biodiversity components and ecosystem services of the project area. 2.1. Monitoring system for biodiversity conservation and SLM/SFM with private and public stakeholders in the project area.	Trends in accessibility of scientific/technical/traditional knowledge and its application • Number of maintained species inventories being used to implement the Convention (C)

Analysis of Gaps

75. The analysis laid down herein is the same as written down in 2.3, constituting different formulations of the same cause-effect analysis.

76. Information Gaps: Local environmental information at the municipal level is insufficient. During the Project design stage, most of the available data regarding the Project was compiled and analysed, differences were found in the methodologies utilized for gathering data in some areas, and in addition, the available maps were on a regional scale of 1:250,000 and 1:100,000, except in very specific zones where greater efforts have been made. In order to improve local environment management and decision-making in accordance with the objective of conserving the biological corridors, there is a need for improving the baseline data by means of carrying out a diagnosis of the condition of the local environmental components on a scale of 1:25,000, for the totality of the Project area, which includes significant biological corridors and ecosystems which provide important services. Having significant geographic information systems installed in the municipalities, it will be possible to strengthen management, improve response times and evaluate decision-making on the basis of more detailed data.

77. Management Gaps: The municipalities do not have environmental territorial planning tools within their system of management which make it possible for them to make assertive decisions regarding natural resources conservation. In Chile, territorial planning instruments are oriented toward territorial organization of urban areas, leaving the natural areas with no limitation to their use, a situation which promotes the establishment of bad practices in land use, counteracting the biodiversity conservation efforts existing in these areas. One way to fight this management gap is, for example, to establish an indicative ecological zoning system for the municipality's wild areas. This is a territorial environment management tool which will supply them with information regarding the environment values and use recommendations in the different management zones, and whose proposal was accepted and enriched during the Project design stage through a participative workshop. Another example: the municipalities do not have a monitoring system of environmental components for conversation of biodiversity and ecosystem services, and for fighting soil degradation. Having at their disposal a system of monitoring programs will make it possible for them to evaluate the degradation tendencies of the environmental components, and thus make pertinent decisions to slow the progress of environmental deterioration. Improving and strengthening municipal management by closing these gaps, through developing and implementing territorial environment management tools, will

[8] CBD. 2012. Decision XI/3 Indicator framework for the Strategic Plan for Biodiversity 2011–2020 and the Aichi Biodiversity Targets. The indicators "for use at the national or other sub-global level are denoted by the letter (C)", page 5.

signify progress in both internal municipal management and in response times and the degree of certainty in evaluations, as well as administratively supporting conserving wild areas within their municipalities.

78. Legal Gaps: Chilean legislation presents deficiencies regarding management, financing and protection of natural resources when productive activities utilize the earth in an unsustainable manner, as was mentioned earlier in the section on threats (mining, overgrazing, deforestation, poaching and trapping of native species, urban expansion, and unregulated tourism, among others). The way in which this Project intends to promote territorial sustainability is through combating desertification, and by strengthening and implementing, for the first time in Chile, Law N°18,378, establishing Conservation District for soil, forest and water in territories within the Project area. The Conservation Districts legislation establishes conservation techniques and programs which will be applied in the declared terrains. In addition, they will help to focus numerous economic incentives from the Agriculture Ministry, which will finance these programs. Another example, analysed during the preparation phase, is modification of the instruments associated with the Native Forest Legislation N°20,283, where the Project expects to update and adapt the management instruments and table of subsidies to the Mediterranean ecosystem, since these were designed initially for management of temperate forests in Southern Chile. These modifications will contribute to the execution and effective implementation of land management plan actions which at present have not been carried out because of difficulties with the financing mechanisms.

79. Yet another example are the gaps in the Local Environment Management instruments (LEM) from Law N° 20,417 (Environment Base Law), which requires the Municipalities to take responsibility for environmental protection of their territories through local environmental management, implying the following: a) to propose and implement measures for putting into practice environmental actions and programs, b) to assure that environmental norms are met within the municipal territory, and c) prepare a project proposal for environmental governance. Not all municipalities are prepared to assume such responsibilities, so that this Project expects to offer them the following support: gathering territorial data which will form the basis for an ecological zoning of the wild areas of high environmental value in each of the pilot municipalities, leading to a plan of standards for land use which will serve as a normative platform for establishing an Model Municipal Ordinance. This ordinance will fulfill the objective of addressing the requirements of the law in environmental matters. With this management tool and other actions which introduce modifications into municipal legislation, in order to improve the capacities of local governments, investigated during the preparatory phase, the Project will improve environmental management capacities in general, and in particular, those which will make it possible to promote the sustainable use of the territories containing natural habitats.

80. Implementation Gaps: As far as knowledge and publicizing of financial incentives and mechanisms for implementing land management plans which promote sustainable use of forests and soil, within the Project area there are no practical implementation pilots for plans established by previous projects, according to the analysis made during the Project design phase. The real cost of implementing and maintaining the management plans is unknown, therefore there is no experience that can be transferred to other landowners. The Project expects to identify financing mechanisms and best practices in order to implement sustainable actions within the territory, in addition to clarifying the differences in implementation costs for the management plans in the Mediterranean ecosystems, between the design or theory and what occurs in practice.

81. Law N° 20,417 (Environmental Base Law) does not allocate financial resources to cover the requirements of implementing local environment management instruments in these territories. As a result of this, the municipalities have deficiencies in human resources and institutional capacities for complying with the Law. A recurrent demand on the part of the municipalities is the request for human resources in order to be able to comply with these new legal requirements. Furthermore, in instances where some municipalities assign personnel to the area relating to environmental matters, this personnel is not always properly trained to take on these tasks, and often they do not dedicate all of their time to them. For this reason, the Project expects to strengthen the already existing Environment Units; to train their personnel in environment issues and in managing the territorial data generated; together with managing monitoring systems established for inspection and control of the state of conservation and degradation tendencies of the environmental components within the municipal territories. Furthermore, working with the pertinent regional governments, the Project will arrange for an adequate quantity and permanence of professionals trained so as to guarantee effective implementation of the LEM tools. Among the administrative arrangements that should be promoted, and which were identified during the preparatory phase of the Project, is recognition of the municipalities' efforts in terms of environment management schemes, from funds which provide financing for projects, so that these initiatives offer real implementation incentives. At the present time, when a municipality seeks Environment Ministry certification for different initiatives in environment management, this does not lead to preferences in financing from the different funds which provide resources to the municipalities.

82. Gaps in Public Consciousness: Local interest regarding the importance of biodiversity conservation is only just beginning. People (both the community and the decision-makers) are concerned about the increased water shortage and soil degradation. But they rarely associate improving this situation with forest and biodiversity protection. There are few incentives for sustainable use practices for soil and forest, which seek to detain natural resource degradation, nor are these very wide-spread or well known among the population or the authorities. Without public consciousness, effective and long-term conservation cannot be achieved. For this reason, the Project expects to establish strategies for education and to promote best practices for sustainable soil and forest use in order to stop environmental deterioration. In addition, as a way of creating awareness among the relevant stakeholders, ecosystem services which have been identified as relevant for the Project will be assigned a value, with the objective of empowering the municipalities, community and landowners with knowledge of the benefits which conserving and protecting environmental components generate, enhancing these services. Through Project implementation, a strategy of education and awareness will be carried out with the community for the purpose of introducing them to biodiversity and ecosystem services within the Project area. Education and awareness campaigns will be carried out on forest conservation, biodiversity and other ecosystem services, for the benefit of relevant stakeholders in the community within the 36 municipalities participating in the Project.

2.7. Linkages with other GEF and non-GEF Interventions

83. The Project will relate to other GEF Projects and additional related interventions, on two levels: 1) international-global [this includes projects developed in two or more countries] and 2) national/regional. On the international-global level, the Project will use systemized information from other GEF projects, in order to enhance/improve its own implementation, and in the case of global projects which are present in Chile, the Project will seek to generate a working, collaborative relationship. On the national/regional level, the Project

will seek to generate a collaborative relationship with other GEF projects and/or other initiatives related to the Project objectives.

84. On the international-global level, those projects which offer opportunities for relationships are:

- The completed GEF UNEP Project **(GEF ID 3449)** "Carbon Units: Modelling, Measuring and Monitoring", has developed a standard system which makes it possible to measure, monitor, model and predict changes in carbon dioxide amounts, and in greenhouse gas emissions, a system which could be applied in SLM activities, in a simple and cost-effective manner. A new project **(GEF ID 5698)** is in the development phase, and this Project will establish connections with its executors through the UNEP Project in order to study the application of these tools developed in the 3449 Project.
- The GEF UNEP Project "Financial Guidance for Businesses Based on Biodiversity, and Support for Market Development Activities in the Andean Region" **(GEF ID 2391)**, which will be finishing in 2014, leaves important lessons regarding value chains and the practical application of biocommerce principles and criteria, as well as being a reference in methodology for market studies for sustainable products, among others.
- The on-going GEF UNEP Project "Biodiversity Conservation and Sustainable Use in Arid Ecosystems for Guaranteeing the Flow of Ecosystem Services and Slowing the Deforestation and Desertification Processes" **(GEF 4772)**, has for objective to reduce the present tendency of deforestation of arid forests and desertification, to guarantee the flow of multiple ecosystem services. The biodiversity conservation, ecosystem services and SLM/SFM activities to be implemented by this Project will be able to consult the strategies and activities utilized in the above-mentioned GEF Project.
- The on-going GEF UNEP Project "Pro Ecosystem Services-ProEcoServ **(GEF ID 3807)**", has for its general objective to better integrate ecosystem evaluation, the development of hypotheses and the economic valuing of the ecosystem services into national sustainable development planning. This effort is being carried out in five countries: Chile [San Pedro de Atacama], South Africa, Lesotho, Trinidad and Tobago, and Vietnam. Although the pilot project in Chile is located outside the Mediterranean ecosystem, the Project's objectives are similar in the following ways: to incorporate ecosystem services into decision-making on the municipal and national levels, and to seek to develop incentive tools, among others, which will be most useful and serve as a reference framework for the GEF Mountain Corridors Project.
- The on-going GEF UNEP Project "Expanding ***FSC*** Certification to the Scale of the Landscape through Incorporating Ecosystem Services, ForCES" **(GEF ID 3951)**, is being carried out in four pilot countries: Nepal, Indonesia, Vietnam and Chile (Carahue in the Araucanía Region, Mechaico River Basin in the Los Lagos Region, and Pumalín Park in the Region of Aysén). Although the Project does not include Chile's Mediterranean ecosystem, it does contemplate developing an instrument for standard FSC certification for ecosystem services (landscape conservation, biodiversity refuge and water quality), which could be promoted and applied in this Project's area of intervention.
- The International Union for Nature Conservancy (IUNC) is in the process of implementing the Project "Ecosystem Protection through Infrastructure and Communities (EPIC)", whose main objective is to catalyse ecosystem management, and take advantage of the multiple ecosystem services, in order to protect vulnerable communities in the face of risks associated with climate change and natural threats. As far as results are concerned, the Project will supply reference data on the following: management

and restoring of degraded ecosystems, and actions for adapting to climate change, among others. This Project will thoroughly review the information generated by the IUNC Project and will incorporate it into its planning as pertinent to each local reality.

85. On the national/regional level, there are various GEF projects and initiatives with related issues and territories, which are of interest to this Project:

- The on-going GEF World Bank Project "Sustainable Soil Management" (GEF ID 4104), has for objective to "develop a national incentives program for promoting sustainable soil management practices, to combat soil degradation, conserve biodiversity, and protect carbon sinks". Of the five ecosystems selected for implementing pilot projects, two ecosystems are of referential interest to this Project (Arid Mediterranean Matorral and Arid Inland and Coastal Sclerophyllous Forests). The Project includes four main activities: (i) to develop technical and institutional mechanisms for supporting SLM, (ii) to implement a national incentives program pilot project in priority ecosystems, (iii) to monitor and evaluate the incentives program in the pilots, and (iv) to develop capacities in different eco-regions. This Project includes among its products to develop a Proposal for Declaration of the instrument of Conservation District for soil, forest and water (Law N°18,378), strongly related to Item 3 of the Mountain Corridors Project. Furthermore, this Project has the technical support of CONAF, as a focal point for the UNCCD, which shows that the level of institutional relationship between the two projects is high, and in fact they have already held coordination meetings, and their institutional participation in the Steering Committee of the Mountain Corridors Project is planned.
- The GEF UNDP Project in its initial phase of execution, "Support to Civil Society and Community Initiatives for Generating Global Environment Benefits through Subsidies and Small-Scale Credit in the Mediterranean Eco-Region" (GEF ID 4939), will be working with associations and/or networks of base civil organizations in order to obtain financing, through small-scale credit, for agricultural practices which promote sustainable management on the scale of the landscape, in order to maintain and improve the flow of ecosystem services in productive landscapes in Chile's Mediterranean eco-region extending from Atacama to Aysén, utilizing a variety of financing mechanisms which exist in Chile. Furthermore, they will implement actions for improving the capacity of community organizations for integrated management of their territory, in a few pilot areas, and participative construction of a vision of the landscape and governance in these areas. The gaps identified during the Project design phase, which justify these objectives, are the following (i) Inadequate capacities among the base organizations to identify and adopt SLM on the scale of the landscape in areas of high biodiversity or ecosystem services value, (ii) Low comprehension and abilities among the social organizations for maintaining carbon reserves on the landscape level, (iii) The communities lack the means and/or motivation for planning, managing and/or coordinating on the landscape level, and (iv) Deficiencies in promoting community efforts, lessons, data and acquired experience. During the design phase of this Project, synergies between both teams in charge were identified, including the following: (i) Improvement of civil organizations' capacities in the realm of best agricultural practices and integral management of the landscape as described in the GEF 4939 Project, will signify a contribution and complement to actions for improvement of municipal employees' and productive stakeholders' capacities to be carried out in this Project, so that both initiatives serve to involve different key local stakeholders within a given territory, (ii) Constructing a vision of a productive landscape and governance on the part of civil society, which is to be carried out in some common territory by both projects under the GEF 4939, will serve as

input to consider when drawing up indicative plans and land-use (Ordinances), which will be implemented in this Project. The advantage comes from the fact that through this initiative, it will be possible to offer legal backup to what the community proposes and to involve the municipality regarding how they wish to manage their own territory, (III) GEF 4939 will be able to finance, through small credits, small-scale agricultural initiatives promoted by the present GEF project for the sustainable use of the territory, on the level of associations of small producers, (IV) the environmental information and monitoring system to be carried out by this Project will serve as input for constructing the landscape vision of the GEF 4939 Project, to be set up in some area common to both projects, (V) this Project's education and awareness program designed for the local communities will help the community organizations with which the GEF 4939 Project will work in the Metropolitan and Valparaíso Regions to have a higher degree of awareness regarding the importance of managing their territories in a sustainable manner and conserving the forests and the associated ecosystem services (in the GEF 4939 Project, only training in best productive practices is planned, not including the value of conserving the location's natural heritage), (VI) there will be a common language for identifying and promoting what are to be considered best productive practices in the realm of agriculture in both projects, (VII) the networks generated under the GEF 4939 Project involving Public Services in charge of financing agricultural activities will be the same for both projects, promoting joint, integrated efforts among the different financing instruments which will make possible sustainable management of common territories under both initiatives, but on different levels (GEF 4939 only with community associations, this GEF Project with small, medium and large producers).

- The on-going GEF-UNDP Project "National Biodiversity Plan for Supporting Implementation of the CBD's Strategic Plan 2011-2020 (GEF ID 4857)", includes objectives and activities related to this Project, such as: halting soil degradation, promoting conservation of biodiversity and ecosystem services, strengthening environmental education, public awareness and access to information about biodiversity. During implementation, the Strategic Plan will be used as the Project's referential framework, making it possible for Chile to progress toward meeting the commitments made under the Biodiversity Convention.
- The completed GEF Project "Regional System of Protected Areas (GEF 1859)" had the objective of implementing an effective, multiple-stakeholder multiple- use regional system of protected areas in the Winter Rainfall Valdivian Forest Eco-Region, testing different conservation strategies and categories of protected areas, in private and native peoples' territories. That Project implemented an ecological-territorial design proposal and governance model for the Conservation Landscape category, using as reference the International Union for Nature Conservancy's Category V. Through this experience, they succeeded in establishing a structure for municipal management of the landscape and implemented a local development council for the territory. Furthermore, that Project took steps and served as a reference for the implementation of the Alhué Municipality Conservation Landscape (a territory highly relevant for this Project) and for the design of the Chepu Conservation Landscape, on the Island of Chiloé, X Region of Los Lagos (financed with Los Lagos Regional Government resources). This Project has incorporated the Conservation Landscape as a LEM scheme and will take into account the lessons learned and experiences of the above-mentioned initiatives when implementing the mountain biological corridor.

- The completed GEF UNDP Project “Biodiversity Conservation in Altos de Cantillana (GEF ID 1725)", had the objective of progressing in consolidating the Chilean National System of Protected Areas (SNASPE), increasing the representativity of Chile’s Mediterranean eco-region. That Project addressed for the first time the issue of planning for conservation of this priority site in the Mediterranean eco-region. They generated base data, established agreements with private landowners for establishing a private park and promoted the establishment of Nature Sanctuaries (today there are two in the area). In addition, they produced seven land management plans for biodiversity conservation, one plan for developing tourism, and one plan for promoting sustainable productive activities. The information, the initiatives and the lessons learned which that Project generated have a territorial and thematic connection with the GEF Mountain Corridors Project, so that they will constitute a significant contribution during this Project’s implementation phase.
- The on-going GEF UNDP Project “Establishment of an Integral National System of Protected Areas for Chile: Financial and Operational Structure (GEF ID 2772)”, has the objective of designing and carrying out the initial implementation of a new, financially sustainable National System of Protected Areas. The Project has promoted implementation of a Conservation Landscape in Alhué Municipality, Metropolitan Region, with the support and participation of the Municipality and the local community. The connection with this Project is both territorial and thematic (the Project includes among its activities implementation of the Conservation Landscape scheme), so that a permanent collaborative working relationship is planned between these two projects.
- The completed Innova-CORFO Project “Sustainable Production Systems for Mountain Ecosystems” had the objective of developing a system of territorial management for mountain ecosystems, as a support for decision-making in generating land management plans and systems of sustainable production, with the emphasis on livestock and tourism. As a result, we now have a diagnosis of the territory, a system of territorial information, and a general methodology for sustainable use of the mountain ecosystem. The connection with this Project is both territorial and thematic. Component three of this Project (implementation of a Conservation District) considers the same physical space (San José de Maipo Municipality), as well as utilization of the best productive practices guidelines developed by that Project. Furthermore, we expect to give continuity to conservation initiatives for biodiversity and ecosystem services, and best productive practices which were designed jointly with private landowners who participated in the Santiago Andes Project.
- The Nature Conservancy (TNC) developed in a participative manner, a Conservation Plan in the Maipo River Basin. As a result, a series of conservation objectives were established (species, ecosystems and ecosystem services) and for each component, a threat analysis was made (pressures and their sources). The territorial and thematic connection with this initiative is strong, especially regarding objectives and territorial focus (mountain zones of high value for ecosystem service and biodiversity conservation). At the present time, TNC and the Council for Clean Production are coordinating work on a territorial management strategy known as Nest+Agua, a strategy whose purpose is to offer protection to this basin territory, its biodiversity and ecosystem services, through reciprocal agreements between producers and users of the basin, to take the form of Clean Production Agreements (CPA’s). This Project will facilitate working out best production practice standards as a basis for establishing these CPA’s.

- The Chilean National Tourism Bureau (SERNATUR) and the EM developed the Guidance Plan for Sustainable Tourism for the Cordón de Cantillana sector, an area of high biodiversity value in the Metropolitan Region. This Plan proposes a series of programs, projects and long-term studies (2023), including sustainable initiatives relating to nature tourism, establishing incentive tools, publicizing activities, etc. The thematic and territorial connection with this initiative is strong, in particular the fact of promoting sustainable productive activities of low impact on biodiversity and ecosystem services. The Project will utilize information generated under this Plan and will coordinate with initiatives identified in this area.
- The Center for Global Change at Chile's Catholic University is in the process of developing the Project "Maipo: Adaptation Plan (MAPA)", where in addition to gathering relevant information about the Basin, will propose actions in the realm of local environment management, protection of the water supply service, promotion of practices which minimize the present impact on the environment, especially for the efficient use of the water resource, among others, with emphasis on adapting to climate change. The GEF Project will utilize said information and the proposals generated, thus enhancing achievement of the objectives, especially in promoting best productive practices.
- In the same manner and in the same realm as above, Adapt Chile is in the process of implementing the initiative "Integrating Climate Change into Municipal Management", initiative with which this GEF Project will be working, incorporating the component of biodiversity and ecosystems protection into municipal management, generating synergy for achieving the objectives of both initiatives, by building on the networks and the efforts already initiated with some municipalities in the Metropolitan Region.
- The Calera de Tango Municipality, with the support of various government institutions, has been carrying out since 2010, a biodiversity conservation program in the "island" hills of Chena and Lonquén, within a Project area called "Pucarás del Maipo". The purpose of this Action Plan is to promote conservation of the flora and fauna species which inhabit this site. This initiative will relate to said Project, given the fact that ecological data relevant to both areas has been gathered, around 15 individual management plans have been established, the methodology utilized for ecological zoning and the indicative land use plan will be revised, as well as work with the local community through education and awareness campaigns; not to mention using as a reference the local environment management experience which the municipality has been carrying out since 2005 in the realm of biodiversity conservation, an issue which they voluntarily incorporated into their MECS process and which is presently in the "maintaining excellence" stage.
- The Institute of Ecology and Biodiversity (IEB) and the Austral University are developing, since 2008, a program called "Wine, Climate Change and Biodiversity Chile", whose project area includes all of Central Chile's Mediterranean eco-region and whose purpose is to promote conservation of the Mediterranean ecosystem incorporating sustainable practices in agricultural landscapes. Through this program, research has been carried out regarding the relationship between the ecological systems' capacity to provide environment services to the wine-grape industry and its susceptibility, to propose improvements in the design of the plantations and management practices to minimize the impact of present agricultural activities on biodiversity, and to develop education in science and ecology in order to increase local knowledge with an emphasis on the value of Central Chile's Sclerophyllous forest and matorral. All of these experiences and lessons learned will be analysed and replicated by this GEF

Project, in order to expand them along similar lines in the Project area and/or interested vineyards, promoting sustainable use of the soil and forests.

SECTION 3: INTERVENTION STRATEGY (ALTERNATIVE)

3.1. Project Rationale, Policy Conformity, and Expected Global Environment Benefits

86. **Project Rationale:** Within the biological mountain corridors, there are a series of anthropic factors which change the natural functioning of these ecosystems, altering their biodiversity, their forests, and the supply of ecosystem services. Urban expansion and increasing population density[9] are the major developments preceding deterioration of these ecosystems. These developments lead to significant human pressures on the environment, becoming important threats: changes in land use patterns, overexploitation of natural resources (soil, forest, water), fires, poaching and extraction of native species, pollution and as a result of all of this, desertification (degradation of arid, semi-arid or sub-humid soils) and loss of biodiversity, forests and their ecosystem services.

87. As part of the Project's baseline, there exists a series of initiatives in different realms, promoted by the Chilean Government and organizations of civil society, both national and international. These initiatives are: in the realm of protected areas, management of the Chilean National System of Protected Areas (SNASPE), through the Chilean National Forestry Corporation (CONAF), other categories of official protection, such as No Hunting Areas and Nature Sanctuaries, the design and implementation of new protected areas, which incorporate sustainable biodiversity use, and where private entities, municipalities and native peoples participate; in the realm of territory-level initiatives, included in the baseline are the implementation of buffer zones and biological corridors, integral management of hydrographic basins, the definition of sustainable production proposals on the ecosystem level (the Santiago Andes Project for mountain ecosystems), and development of collaborative arrangements for the sustainable management of native forest (Model Forest Project).

88. On the institutional level, we find collaboration agreements (private company/public service/municipalities), new administrative structures (municipal bureaus or units with capacities in biodiversity or sustainability), implementation of new certification systems (clean production, organic products, among others), and recognized schemes of local environment management. In the realm of citizen participation and associativity, the local community has been active in several initiatives, through specific round tables, territorial councils, and setting up and managing networks of producers of goods and services (organic produce, nature tourism), among others. Finally, the existing national, regional-sectoral and international financing mechanisms for these initiatives are also part of this Project's baseline. Worthy of note are those resources channelled through the Environmental Protection Fund, the Chilean National Production Development Corporation (CORFO), the National Funds for Regional Development, municipal funds, and the UNDP's small-credit program, among others.

89. Although the initiatives are well received and in some cases a significant level of appropriation was observed on the part of beneficiaries and relevant stakeholders, these have often remained at the stage of

[9] A study in population density tendencies in five Mediterranean ecosystems world-wide indicates that between 1990 and 2000, Chile experienced the greatest change, with an increase of 19% (Underwood et al., 2009).

proposals, there being very few activities which actually materialize. Unfortunately, the initiatives that are implemented lose momentum once the projects are completed, due to the fact, among other things, that the beneficiaries do not manage to completely take them over, and/or they are not formally integrated into the institutions which implemented the projects. This generates a feeling of dissatisfaction in the local community and a complicated base scenario for designing and implementing new projects.

90. Effective management toward achieving biodiversity and forest conservation goals on the landscape level encounters numerous obstacles, including the following: 1) regional data on the state of conservation and monitoring of biodiversity and forests is not integrated, 2) concern on the sub-regional and local government levels regarding the importance of conserving biodiversity is only just beginning to emerge, 3) the regional and national level institutional counterparts in general have little influence in the territories, 4) there is a persistent tendency to overexploit natural resources, 5) the environmental information available is not adequate for decision-makers, 6) the institutional capacities for managing biodiversity and the forests is limited, due to the lack of human and economic resources, and 7) the level of inter-institutional coordination and the participation of private entities is only beginning. The GEF Project will make it possible to progress toward overcoming these obstacles.

91. Despite the efforts and investments made by the Government and both national and international organizations in the area of biodiversity conservation, several needs remain. These include the following:

- To develop guidelines for inter-institutional coordination, in order to improve financing mechanisms, reduce operational costs and meet the populations' needs through integrated technical assistance.
- To incorporate into the production development programs and tools, measures which guarantee protection of biodiversity, the forests, and ecosystem services as well as combating desertification.
- To make available several instruments for voluntary certification of sustainable soil and forest management, and conservation of biodiversity and ecosystem services, which guarantee real benefits to small, medium and large producers and landowners.
- To implement permanent participation systems which incorporate local authorities, social organizations and companies, for the purpose of establishing joint governance models for the territory.
- To develop regional monitoring programs for biodiversity, forests, ecosystem services and soil degradation, which make it possible to know what is the current status of the components, as well as their response over time.
- To appreciate the social and economic value and importance of biodiversity, the forests and services in Chile's productive development.

92. **Policy Conformity:** the Project shows coherence in incorporating three of the GEF's focal areas: Biodiversity (BD), Land Degradation (LD) and Sustainable Forest Management (SFM). To address the issue of biodiversity conservation in the Mediterranean ecosystem requires having an integrated vision of the territory, being able to incorporate social, cultural and productive elements in decision-making (these elements are interrelated).

93. Implementation of the strategic objective **BD-2** "To incorporate biodiversity conservation and sustainable use in landscapes, seascapes and productive sectors", will be addressed through validation and application of municipal land-use plans which incorporate biodiversity, forests and ecosystem services, in

potentially 36 municipalities (**output 1.1**). These plans will regulate sustainable land use and management in wilderness areas; data will be generated for assessing the environmental components in their territories (**output 1.2**); and municipal personnel will be trained in environment issues and territorial planning (**output 1.3**). In addition, productive landscapes will be certified over a surface of 500,000 ha within the Project area by means of formal declaration of the instrument "Conservation District for soil, forest and water" (**output 3.1**).

94. **LD-1** "To maintain or improve the flow of agri-ecosystem services, sustaining the subsistence of the local communities", will be addressed through innovative SLM practices, introduced on the field level in pilot farms totalling 250,000 ha, inside and outside of the Conservation District. In order to achieve this, Financial Mechanisms (FM) for biodiversity conservation and SLM will be strengthened and implemented on private lands (**output 2.3**), as well as developing Land Management Plans for soil, water and forests within the pilot area (**output 3.2**). Furthermore, instruments for certifying best production practices for SLM in sustainable markets will be promoted and strengthened, as a means for appropriating actions for diversifying the base financial resource (**output 2.4**). Finally, training and publicising programs in FMs and best practices will be developed for sustainable management of land and forests, biodiversity conservation and soil degradation, with at least 4 activities for publicising lessons learned from the actions implemented (**output 2.2** and **3.3**).

95. **LD-2** "To generate sustainable flows of forest ecosystem services in arid soils, including sustaining the subsistence of those people who depend on the forests" will be addressed through innovative practices in Sustainable Forest Management (SFM) introduced into lands found outside the Conservation District, strengthening and implementing financing mechanisms (FMs) in private lands for biodiversity conservation and SFM (**output 2.3**). A complement to this will be the results of developing the Integrated Land Management Plans for soil, water and forests in the District pilot area (**output 3.2**). In addition, instruments for certifying best productive practices for SFM in sustainable markets will be promoted and strengthened, as a way of appropriating actions for diversifying the base financial resource (**output 2.4**). Finally, information will be shared on technologies and guidelines for best practices in Sustainable Forest Management (SFM), through developing information and training programs on FMs and best practices for sustainable management of soils and forests, biodiversity conservation and soil degradation, with at least 4 activities for publicising lessons learned through the implemented activities (**output 2.2** and **3.3**).

96. **LD-3** "Reduce pressures on natural resources resulting from competition for land use over a wider landscape", will be addressed by means of the same strengthened and implemented financing mechanisms, along with the integrated land management plans in the focal areas LD-1 and LD-2, with the emphasis on promoting an intersectoral atmosphere favorable to integrated landscape management, certifying with existing instruments the "best productive practices" both in SFM and in SLM in sustainable markets (**output 2.3**, **3.2** and **2.4**). In addition, practices of integrated landscape management will be promoted, to be carried out by the local community, which will imply a strong technological extension component and best practices guidelines for integrated natural resource management, included in the training of municipal personnel in matters of the environment and territorial planning (**output 1.3**); applying local environment management schemes for the conservation of forests, biodiversity and ecosystem services in municipal-level decision-making (**output 1.5**); generating a level of communication and coordination between those municipalities participating in the Project (**output 1.4**). The level of involvement and empowerment of the community in these matters will be supported through annual education and awareness programs on biodiversity, forests and ecosystem services, targeting the Project's key local stakeholders (**output 2.5**).

97. **SFM/REDD+-1** “Reduce the pressures on forestry resources and generate sustainable flows of forest ecosystem services", will be addressed through best management practices adopted by the Project’s relevant economic stakeholders in SFM. To achieve this, regional monitoring programs will be carried out to determine the status, pressures and response of key components of the forests, biodiversity, ecosystem services and soil degradation (**output 2.1**). Efforts in support of SFM will focus on financial mechanisms for activities in conservation and forest management on private lands (**output 2.3**), promoting instruments for certifying best productive practices in forest management for sustainable markets (**output 2.4**), and Integrated Land Management Plans for soil, water and forests will be developed in pilot areas within the Project territory (**output 3.2**).

98. The project is aligned with UNEP´s Ecosystem Management Subprogramme, which seeks to integrate an ecosystem approach into development and planning processes; acquire and improve the capacity to use ecosystem management tools; and realign environmental programmes and financing to tackle the degradation of priority ecosystem services. Within this Subprogramme, it fits with Expected Accomplishment (a): “Use of the ecosystem approach in countries to maintain ecosystem services and sustainable productivity of terrestrial and aquatic systems is increased”, Output 1. “Methodologies, partnerships and tools to maintain or restore ecosystem services and integrate the ecosystem management approach with the conservation and management of critical ecosystems”.

99. **Expected Global Environmental Benefits:** on a global scale, the Project will contribute to conservation of forests, biodiversity and environment services present in the mountain zones of the Metropolitan Region and relevant natural areas in the Valparaíso Region, located within the Mediterranean ecosystem in Central Chile, which, despite the high degree of fragmentation and degradation of its ecosystems, is noted for its great richness and level of endemism (for example, 29.4% of continental Chile’s endemic flora species [627] are to be found in the Mediterranean zone, and of these, 6.7% only in the Metropolitan Region, this Region being considered the second in all of Chile in terms of total numbers (Squeo et al., 2012).

100. Regarding fauna species, it has been determined that 50% of the known land vertebrates in Chile live in Mediterranean ecosystems, with levels of endemism of around 50% (Simonetti, 1999). For additional details, see section 2.2. Protection of the ecosystem in these zones will have an impact on the generation of water resources, protection of endemic species and Mediterranean forest formations, protection of azonal ecosystems (high Andean wetlands), soil stabilization, and better ecosystem resilience in the face of global change.

101. SLM practices in productive terrains will make it possible to progress in controlling desertification, with a significant potential for increasing the effect through replicas within the Project area and throughout Chile’s Mediterranean ecosystem. Additional financial resources will be utilized for implementing SLM and SFM activities, with a potential for increasing the number of incentive instrument beneficiaries, and in the surface are managed under sustainability criteria. For example, this can be achieved by investing resources in strengthening and improving the FMs for biodiversity conservation and management and SFM mentioned in the Law 20,238 for Native Forest Recovery and Forest Development, presenting new lines of research for this law’s competitive fund, proposing best practice actions of value within the reality of Chile’s Central Zone Sclerophyllous forest. All of these actions, added to the presentation of an incentives design in line with Law 20,283, will improve the flow of ecosystems services within the landscape and will enhance the anticipated results of the REDD+ (Reducing Emissions from Deforestation and Forest Degradation) in carbon sequestering

by reducing the rate of carbon releasing related to soil degradation and deforestation. A preliminary estimation is for 0,59 Ton C/ha/year, for a forest surface area of over 600,000 ha (CONAF, 2014).

102. The efforts invested in actions implemented in SFM/SLM will lead to benefits such as deceleration of soil and forest degradation by means of recovering soil fertility and its productive capacity, and soil and forest conditions for sustaining best productive practices will be improved. Landscape quality will increase, opening new opportunities for productive initiatives, through evaluating the interactions and compatibility of land use and economic activities, as well as through establishing capacities in local governments involved in the management of the environmental benefits that a well-managed landscape provides to the community.

103. Over the long term, it is expected that planning and implementation of plans for conservation of biodiversity and ecosystem services in private lands, and greater empowerment of local governments regarding the importance of biodiversity and its explicit recognition in local planning instruments, will contribute to facilitating connectivity between fragmented patches of the Mediterranean ecosystem, increasing the possibility of maintaining viable species populations. By means of biological connectivity, seasonal migration and genetic interchange within the landscape will be reestablished. It will become possible to restore those patches of forest, increasing habitat availability for those species restricted to the forest and with a limited capacity for dispersion.

3.2. Project Goal and Objective

104. The goal of this Project is to contribute to the conservation of forests and biodiversity of worldwide significance, through incorporating sustainable management and use of the territory, reducing pressures on natural resources from productive activities, generating sustainable flows from the forests, ecosystem services and biodiversity.

105. The Project's objective is to consolidate public and private initiatives for globally conserving significant biodiversity and multiple ecosystem services in mountain areas of the Chilean Mediterranean ecosystem in the Metropolitan and Valparaíso Regions. A summary of the indicators for measuring achievement of this objective are detailed below, by component:

106. **Component 1**, regarding strengthening of local environmental governance capacity: Number of municipalities who have land-use plans (Municipal Ordinances) developed and validated, evaluation of biodiversity and ecosystem services made throughout the Project area, intermunicipal coordination and training of personnel carried out, and local environment management instruments utilized for promoting conservation of biodiversity and its ecosystems services in mountain areas of the Mediterranean eco-region (MR and part of Region V).

107. **Component 2**, regarding promoting best practices for the sustainable management of land and forests: Number of monitoring programs implemented, for biodiversity conservation, forests, ecosystem services and soil degradation; publicising activities on biodiversity FMs and SLM/SFM implemented and promoted; financing mechanisms for biodiversity and SLM/SFM on private lands strengthened and implemented within the Project area; instruments for certifying best productive practices in sustainable markets promoted and strengthened; biodiversity and ecosystem services education and awareness programs targeting relevant stakeholders implemented.

108. **Component 3**, regarding Conservation District: Surface area formally recognized as a Conservation District legislation within the Project area, Integrated Land Management Plans for Natural Resources established and implemented on lands within the Conservation District, and activities for sharing the lessons learned during implementation of concrete actions within the pilot areas carried out.

109. Details of the indicators per product expected are given in Appendix 4 (Project Results Framework).

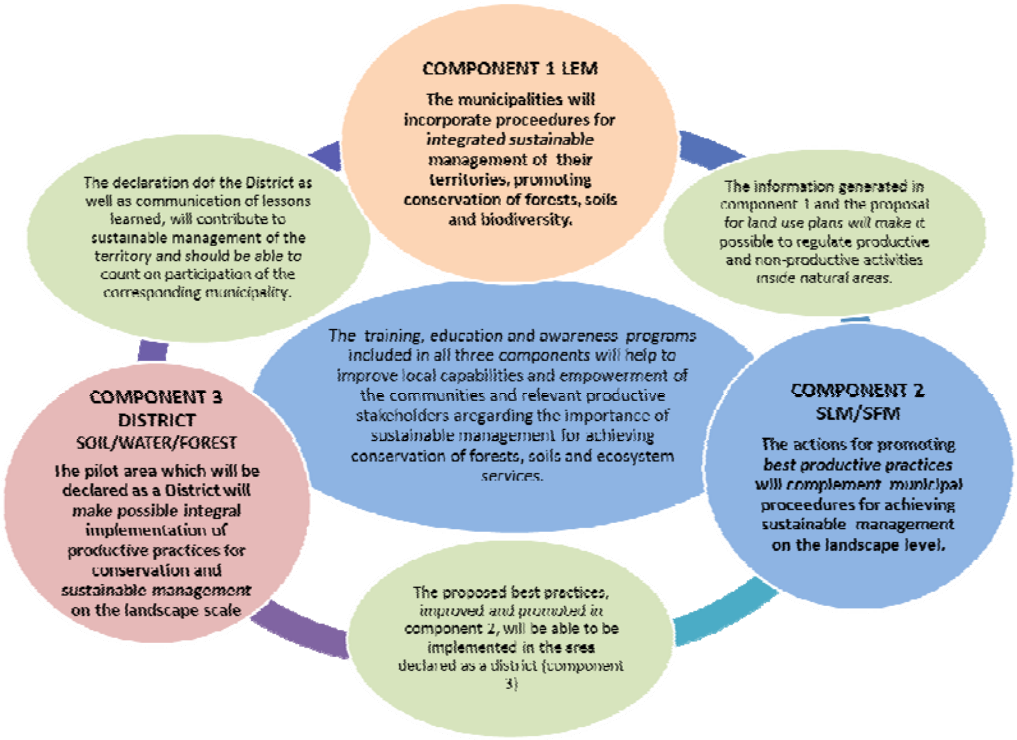
3.3. Project Components, Expected Results and Activities

110. This Project consists of three interdependent components (see Figure 2). The main purpose of Component 1 is that Municipal Environment Departments (MED's), regardless of their hierarchy in the municipal staff structure, apply updated information on biodiversity and ecosystem services components, as well as recommendations on protection and sustainable management of forests and soils, in decision-making on the municipal level. The GEF contribution will make it possible to incorporate protection of the municipal's natural heritage into the daily routine of a local government, in addition to protecting and conserving relevant ecosystems, such as those associated with the Mediterranean Eco-Region in Central Chile, through promoting sustainable use of the territory, and in part, reducing the pressures from different productive sectors, thus contributing to achieving the GEF BD-2 and LD-3 focal-area objectives.

111. As a complement to this objective, in component 2, we expect, through the GEF contribution, to be able to improve conservation of soils, forests, and ecosystem services in the biological mountain corridors within the Project area, by means of developing and implementing best practices and financial instruments which promote sustainable management of soils and forests and affect in some measure the fight against desertification and deforestation, contributing to reducing soil degradation (LD-1, LD-2 and LD-3), as well as conserving multiple ecosystem services which the forests provide (SFM/REDD+-1). This second component will come into play on the level of the main productive activities present within the territory such as agriculture, livestock, tourism and mining, attempting to minimize the impact which these activities have on the natural environment.

112. In this respect, and with the intention of integrating financial mechanisms and coordinating best practices in one sector of the Project, the purpose of Component 3 is to declare and implement a pilot area under the legislation called "Conservation District for soil, forest and water", for sustainable management of the territory and to combat desertification. Although this legislation has existed in Chile since 1963, it has never been utilized, so that the GEF Project will make it possible to take up the challenge of implementing this innovative vehicle for integrated landscape management, combining conservation activities and mechanisms for sustainable production.

Figure 2: Relationship between Project Components



113. In Appendixes 4 and 5, the Logical Framework and the Work Plan are presented, with details of the activities, outcomes and indicators for each component. These components are described below, with their expected outcomes and outputs:

Component 1: Developing local environment governance capacities, development and knowledge management on biodiversity conservation and sustainable land use (US$ GEF: 2,034,140; COF: 7,483,235)

114. The purpose of this component is to promote protection and conservation of forests, soils, biodiversity and ecosystem services, through incorporating these issues into local environmental governance capacity, making sustainable development of these territories possible; and to generate improvement in knowledge about the zone's natural heritage and its value, on the part of local government and the community, promoting in this manner its care and protection. In Chile, local environment management has been on the increase over the past 10 years, where municipal authorities, with assistance from the Environment Ministry, have incorporated environment issues, with different degrees of intensity and investment, into their daily municipal routine. This effort has been strengthened thanks to the Environment Base Law (Law 19,300 modified by Law 20,417) from 2010, where in addition to establishing the Environment Ministry, it requires that the municipalities throughout Chile exercise environmental management.

115. Along the same lines and as a way to promote local environmental governance capacity, in 2009 the Environment Ministry launched the Municipal Environment Certification System (MECS), beginning in 3 pilot municipalities in the Metropolitan Region. Thanks to its success, to date there are 120 certified municipalities throughout Chile (Education and LEM Division, Environment Ministry, 2013). This voluntary system, based on the international standards ISO 14001 and the EU Eco-Management Auditing System (EMAS), makes it possible for the municipalities to appear within their territories as models of environment management, where the

municipal organization, its infrastructure, its personnel, its internal procedures and the services it provides to the community, all integrate the environment factor into their daily routine. However, to date this system has not imposed obligations regarding protection and sustainable management of forests, soils and rural and urban biodiversity, and this constitutes a major challenge for this Project.

116. The expected outcome of this component is that the Municipal Environment Departments (MED's) apply updated information about the components of biodiversity and ecosystem services as well as recommendations for their local-level protection and management, in decision-making regarding land use in mountain territories, mainly where there are native vegetation or natural components. The outputs required for achieving this outcome follow.

Output 1.1: Local scale land use plans developed and linked to GIS system of the Project area.

117. The Project area includes wilderness areas of relevance to the ecosystem, which form part of the 36 municipal territories. These natural areas will be the main focus of this GEF Project. In some of them, local land-use plans have been established (named Municipal Ordinances); however, these have centred mainly on more conventional aspects of the environment (waste disposal, air pollution, acoustic pollution, pollution of ground waters, among others), without taking into account forest, soil and biodiversity protection.

118. In Chile, there are no national or municipal ordinances which promote protection of soils and forests, or regulate the use of natural areas outside those of the Chilean National System of Protected Areas (SNASPE). The GEF Project seeks to innovate in this matter and its implementation will make it possible, for the first time in Chile, to establish standards of land use which must be applied in such wilderness territories, through a Municipal Ordinance Model (MOM). This MOM will have its legal underpinning in the form of an indicative ecological plan, which will include recommendations for sustainable use, protection and recovery of these territories, to be provided by the Environment Ministry, applicable in particular to new productive activities which land and forest users may wish to initiate in these territories. The GEF contribution will make it possible to increase those territories with sustainable management, integrating biodiversity, which will assist in some measure to achieving the BD-2 focal-area objective.

119. In order to construct this land-use plan and MOM, information will be gathered regarding biodiversity and ecosystem services throughout the Project area, (output 1.2), which will make possible an environmentally sustainable territorial plan (indicative ecological plan), with a regional perspective, but with local-level application. This plan will provide territorial use recommendations (protection, restoration or sustainable use), which will serve as impute for the MOM.

120. The resulting MOM would regulate the way in which different activities can be carried out within the wild areas, in order to achieve conservation of soils, forests and the ecosystem services that these areas provide.

121. This model will be validated and applied, thanks to the GEF contribution, by several municipalities within the Project area, and thereafter, it is expected that it will be replicated throughout the Project area, and throughout Chile. To this end, the model will be constructed with the participation of the municipalities; it will be widely shared and publicized; all in order to guarantee its correct implementation, as well as its sustainability and replicability. The Project includes a training program targeting the local stakeholders involved directly or indirectly with the Project, that is to say local judges, inspectors and other municipal employees, the police, and community and public services personnel, for the purpose of guaranteeing wider

knowledge of the information generated regarding biodiversity and ecosystem services; ecological planning and the resulting ordinances; and the roles of each entity according to their respective fields, among others

122. The indicator for achievement of this output is: Number of municipalities with ordinances for regulating land use in wilderness areas and management for biodiversity conservation, validated and applied.

123. The target upon Project completion is to have at least 5 municipalities with municipal ordinances developed and applied. This number was arrived at by taking into account the complexity of implementing, for the first time in Chile, a local regulatory framework in natural areas, where no previous norms existed, in addition to the difficulties that will be encountered to effectively control of the application of this instrument (trained personnel, 4x4 vehicles, GPS) and the resistance that may be generated on the part of private landowners.

Output 1.2. Local scale assessments on the biodiversity components and ecosystem services of the Project area

124. Overall, environmental data has been generated for only around 50% of the regional surface area, which makes it impossible to assess the conservation status of its components or the ecosystem services that provides to the community. Such data, in most cases, is dispersed among various institutions and academic research centers, such as baseline studies for the environment components in areas of high biodiversity value; ecological zoning; indicative land use plans; land management plans, etc.; all of the above developed using differing criteria, making it impossible to generate unified data.

125. On the local level, the municipal environment information is insufficient and the maps currently available are on regional scales of 1:250,000 and 1:100,000, except in very specific zones where greater efforts have been made. Incomplete information constitutes a serious obstacle when it comes to making informed decisions regarding biodiversity conservation. Generating updated and more detailed information will bring benefits that strengthen municipal environment management, improving response times and making decisions on a more solid base.

126. For these reasons, the GEF contribution will make it possible, through improving information on the wilderness areas and generating an evaluation system for environmental components, to strengthen local environmental governance capacity and decision-making in accordance with the objectives of biological corridor conservation, contributing to achievement of the BD-2 focal-area objective regarding sustainable landscape management as well as to the SFM objectives improving information on forest area resources and connectivity for their improved management. Baseline information will be improved by carrying out a diagnosis of the condition of local environmental components on a scale of 1:25,000 (ecosystems, species communities, condition and tendencies, biodiversity, ecosystem services, threats). Improvements will be made to classification and characterization of forest communities in the Project area; those ecosystems which have a direct relationship with the environmental benefits provided by the forest areas will be identified (internationally recognized as the ecosystems which generate and provide the most ecosystem services to the community); and those which constitute regional priorities, will be identified and protected. Among these, for example, is the supply of water, a scarce element in this semi-arid Region (a 40% reduction is expected over the next 50 years); air quality, given the fact that this Region is a zone saturated with air pollutants; and carbon sequestering, due to the fact that national goals include promoting actions which reduce carbon release into the atmosphere.

127. Furthermore, the interaction between natural areas and economic activities will be evaluated, in particular expansion of agricultural areas and urban expansion into forest areas. Capacities within local government will be generated for the purpose of incorporating into their abilities the sustainable management of forests and ecosystem services. With this information, a contribution will be made to supporting programs related to soil and forest management, including key aspects of conservation, and finally, ecological planning of the territory with emphasis on integrating the forest areas underlining the importance of maintaining and improving ecosystem flows in forest ecosystems together with interaction with agricultural production in the neighboring areas.

128. The achievement indicator for this output is: Percentage of the total Project area with evaluation of biodiversity and ecosystem services provided by the biological mountain corridors.

129. The target upon Project completion is: 100% of the surface of the Project area assessed. On the basis of the information generated, there will be available a Biodiversity and Ecosystem Services Evaluation System for the biological mountain corridors. To achieve this, it will be necessary to call upon the willingness of public services to supply information gathered previously, and the support of landowners to allow access for gathering data.

Output 1.3: Carrying out a pilot project to enhance personnel capacities in the environmental departments of 36 municipalities

130. In order to reinforce local environment governance in the matter of forest, soil and biodiversity conservation, this Project will make it possible to carry out training activities (both in the classroom and in the field) targeting employees of the 36 municipalities involved, mainly the technical teams assigned to the Infrastructure Units or Divisions, Planning and Environment Departments, in matters such as providing ecosystem services, biodiversity conservation, productive practices protocols on sustainable management of soil and forests (components 2 and 3), municipal environment management schemes (output 1.5.), as well as training in applying Ordinances and the use of GIS tools resulting from outputs 1.1. and 1.2, in theory as well as in practice.

131. At the present time, personnel training is available in traditional environment matters such as management of solid domestic waste, current legislation, water and energy efficiency, among others; however, training activities in matters related to sustainable forest and soil management or local biodiversity are scarce and infrequent. Therefore, this GEF Project will make it possible to reinforce the capacities of the 36 municipalities considered within the Project area, through developing a training program targeting municipal employees which includes sustainable territorial management (related to objectives BD-2 and LD-3), through providing knowledge on conservation of forests and their ecosystem services, as well as territorial environment planning, best productive practices to avoid or reduce soil degradation, ordinances for regulating the different land uses, and the use of updated information regarding the environmental components as well as their evaluation by means of the monitoring systems planned under product 2.1. Furthermore, the GEF contribution will make it possible to reinforce some more vulnerable municipalities with human resources, and assist municipal associations in formulating projects for strengthening local environment management.

132. To this aim, graduate degrees, courses, workshops, field trips, information exchange trips and/or seminars on the above-mentioned issues will be rendered, for which agreements will be reached with the Under-Secretariat for Regional Development (SUBDERE), within their area of municipal support, with

universities and other entities. These planned activities will make it possible to learn about both the theoretical aspects of the issues addressed, and best practices already developed in Chile or abroad and which are potentially replicable within the Project area.

133. The achievement indicator for this output is: Number of municipalities with personnel trained in biodiversity, ecosystem services and sustainable territorial planning (ecological planning).

134. The target upon Project completion is to have at least 20 municipalities with trained personnel. The training programs will try to reach all the municipalities within the Project area, and a good participation rate (around 60%) is expected.

Output 1.4: Coordination mechanism set in place for municipalities in the mountain areas

135. Despite the fact that some municipalities within the Project area have had successful experiences in the realm of biodiversity (4 out of 36), these have not been adequately shared, and insufficient coordination has prevented the municipalities from being able to guarantee extending environmental conservation practices to the landscape level, through the local governments. The GEF Project will make it possible to establish coordination mechanisms for sharing the successful experiences of some of the Metropolitan and Valparaíso Region municipalities, and to learn about environmental conservation actions by different municipalities. They will have, for the first time, standardized general criteria for programming their efforts in the area of sustainable soil and forest management, biodiversity and ecosystem services. Such criteria will be developed jointly with the Environment Ministry through this Project. Consequently, an entity will be established for monitoring its programming, directly connected with the monitoring network from output 2.1, in addition to the outputs 1.1 and 1.3.

136. In order to achieve this, the municipalities will designate an official counterpart, who will be responsible for assisting and collaborating in the meetings and different instances to be developed within the Project framework. This coordinating entity, which will be implemented thanks to the GEF contribution, will provide an opportunity to discuss Project matters, share information and publicize progress by means of a web page; make known initiatives carried out by the municipalities involved, indicating the components of those initiatives and the respective status of the results. The idea of this platform is to make the information openly available for all those who participate in the Project, in addition to providing environment information and monitoring the status of the forests and ecosystem services within the Project area, as well as to work in a coordinated manner, contributing to achieving the LD-3 focal-area objective, promoting integrated landscape management practices in the local communities (municipalities and other stakeholders).

137. In addition, as a way to reinforce the coordination actions, this Project will make it possible to work toward creating a proposal for an environmental governance model applicable in municipalities and other organizations which may wish to associate toward the joint management of a natural area or biological corridor. The purpose of this model will be to enhance conservation and sustainable integral management of territories with relevant biodiversity, by a group of voluntary municipalities and/or organizations, in order to make continuous management possible over time, as well as joint efforts in favor of maintaining the biological corridor or natural area and contribute to a decrease in soil degradation (focal area LD-3 and BD-2).

138. Different associativity alternatives will be investigated (Municipal Association, Corporation, Foundation or others), analyzing the already existing initiatives with similar objectives, such as the Cordillera Park Association, or the one created through the GEF SIRAP Project (ID 1859), where work was carried out through

a municipal association for managing a Conservation Landscape, whose purpose was sustainable development of a territory while promoting best productive practices and municipal management. The GEF contribution will make it possible to formally apply associativity in the Project area, which guarantee its members' commitment to, and the ability to manage financing for, achieving the objectives and for management sustainability.

139. The achievement indicator for this output is: Nº of municipalities which participate in a coordinated manner within the Project area.

140. The target upon Project completion is to have at least 10 municipalities participating in a model of municipal coordination for the Project area. All of the municipalities will be invited to participate in this activity, however it is likely that some of them for whatever reasons will not be able to participate actively.

Output 1.5: Preparation of an upgraded version of the municipal environmental management certification scheme that will include requirements for sustainable land use (SCAM/Ecocomuna)

141. In seeking to improve municipal management, it is also necessary to strengthen, implement and promote the use of Local Environment Management (LEM) schemes fostered by the Environment Ministry, in the municipalities within the Project area. One of the already existing schemes which the GEF contribution should help to strengthen, is the Municipal Environment Certification System (MECS), in which several of the municipalities within the Project area (20 out of the 36) already participate, though at differing levels (basic, intermediate, excellence, and maintaining excellence). This voluntary system has requirements for institutional transversality in environmental matters, and strategies for assessing waste, education, and water and energy efficiency, but until now it has not included biodiversity management or sustainable development of the territory as requisites for obtaining certification.

142. The contribution of the GEF Project will make it possible to strengthen the present certification system, incorporating, within volunteer municipalities, a new environment management scheme, the Conservation Landscape, which is being implemented since 2013 as a pilot project in the Municipality of Alhué (a municipality within the Project area), whose purpose is to promote sustainable use of those territories with relevant biodiversity, forests in particular, complementing the efforts made in the State protected areas. The Conservation Landscape is a territory with a significant natural and cultural heritage for the Region and/or the country, vulnerable because of different pressures which threaten its condition, whose community are proposing a form of social and economic development which integrates protection of this heritage.

143. Another scheme to be promoted and supported in its implementation for the first time in Chile through the GEF contribution is the Sustainable Commune (Ecocomuna), its concept and model presently in the process of participative construction in Chile, and whose purpose is to constitute a socio-environmental system in which the public, private and community sectors can develop jointly a municipality environment strategy which makes it possible for them to improve or preserve the territory's present and future environmental conditions, with a global perspective, and promoting actions in water and energy efficiency, sustainable consuming, protection for the environmental heritage, and waste appreciation, among other actions. The main difference between these two schemes is that the Conservation Landscape is limited to municipalities with relevant biodiversity in wilderness areas, whereas the Sustainable Commune can be set up in more altered environments.

144. The relationship between these three schemes for strengthening LEM is that the municipalities which have the option of adopting these schemes must first belong to the MECS. In the case of the Conservation

Landscape, a minimum level of certification is not mandatory. On the contrary, in order to be a Sustainable Commune, the municipality must have acquired the first level of excellence in the MECS. To date, the implementation of these schemes has depended on the political will of the highest elected authority in the municipality and of the availability of municipal funding, since no outside funding exists for implementation. Therefore, the GEF contribution will be crucial for putting into play different municipal actions in favor of integrated territorial management, contributing to decreasing soil degradation (LD-3).

145. The achievement indicator for this output is: Number of municipalities which apply schemes for strengthening local environment management (LEM) for biodiversity and ecosystem services conservation in municipal-level decision-making (strengthened MECS's, Conservation Landscapes, and Sustainable Commune).

146. The target upon Project completion is to have at least 5 municipalities with LEM schemes for biodiversity conservation and sustainable territorial management. This target takes into account the complexity of implementing for the first time in most of the municipalities, local scale-level biodiversity management, in addition to the commitment of all the local government authorities. Any of the three schemes mentioned can be implemented, it being understood that the Sustainable Commune may not materialize because of the fact that its implementation is complex and long-term, clearly beyond the temporal scope of this Project.

Component 2. Implementation and Promotion of Best Practices for the Sustainable Management of Landscapes, for Biodiversity and Ecosystem Services Conservation. (US$ GEF: 2,206,821; COF: 13,379,174)

147. The main objective of this component is to generate within the Project area a favorable scenario to conservation of forests, soils and the associated ecosystem services, through promoting best production practices with multiple stakeholders, making it possible to decrease/mitigate the pressures and threats and the effects of soil degradation, promote more sustainable means of making a living and improve peoples' quality of life.

148. Desertification (soil degradation in arid and semi-arid zones) is a complex process which makes itself shown directly and indirectly on many different levels and which in Chile affects more than 60% of the national territory (47.3 million Hectares currently in a desertification process, affecting 1.5 million Chileans (8.5% of the population)[10].

149. Desertification has unleashed a hydrological alteration process and land use changes within the Project area, promoting deforestation and soil erosion. The degradation and loss of native forest has reduced habitat availability in critical ecosystems as well as the provision of ecosystem services that are critical for the Region, such as Carbon capture and water retention and supply. Productive activities have adapted, expanded and intensified as a result of desertification. Intensive monocultures have replaced the forests on lower and medium level mountain areas, and technified irrigation has transformed fragile soils on slopes within the area of agricultural production.

[10] It is estimated that this process has signified a loss of agricultural productivity of 32% in the last decade and has contributed to annual migration of 3% of the population in the affected zones (Parliamentary Diagnosis Unit, 2012).

150. Within the Project area, 435,730 ha are in an advanced state of desertification, with highly eroded soils, there being 56.1% and 43.9% of these soils in a state of severe and very severe erosion respectively (CIREN, 2010).

151. The expected outcome of this component is that the scenario for conservation of biodiversity and other key ecosystem services be improved in the biological corridors, through implementing best practices for sustainable management of the landscapes and financial incentive mechanisms, in particular SLM / SFM and the need to combat desertification, contributing to the objectives of the focal areas BD-2, LD-1, LD-2, LD-3 and SFM/REDD+ -1. The outputs required to achieve this outcome are detailed below:

Output 2.1. Monitoring system for biodiversity conservation and SLM/SFM with public and private stakeholders in the Project area

152. With the aim of determining the status, pressure and response of key attributes of the forests, ecosystem services and soil degradation within the Project area, the GEF contribution will make it possible to implement regional monitoring programs in order to evaluate the progress toward a more favorable scenario for conservation and the fight against desertification of the biological mountain corridors. Since at present there is only dispersed information regarding the status of the environmental components, ecosystem services and soil degradation in the Region, the regional monitoring programs implemented thanks to the GEF contribution will integrate that information for the purpose of generating an open platform for multiple stakeholder decision-making, as well as constituting a source of data for long-term research. Implementation and utilization of the monitoring programs will make it possible to be informed of the status of the components of biodiversity and ecosystem services within the Project area. Furthermore, these monitoring programs will make possible awareness building and disseminating about the need to conserve forests, soils, and ecosystem services as well as the importance of promoting the SLM/SFM through financing mechanisms, contributing to conservation of the multiple ecosystem services which the forests provide (SFM/REDD+ -1).

153. The design of the monitoring programs will take into account the necessary mechanisms for updating and maintenance, and upon Project finalization these will be located in the Environment Ministry.

154. The indicator for this output is: Number of regional monitoring programs for determining the status, pressure and response of key attributes of biodiversity, ecosystem services, and soil degradation.

155. The target upon Project completion for this output is to have available the following:

- 1 integrated regional environment monitoring program for biodiversity and ecosystem services, which will track different environment components (forests, species/communities) and ecosystem services (water supply, carbon capture, and air quality);1 integrated regional environment monitoring program for soil degradation, which will provide an integrated index of soil degradation on the basis of several ecological and economic indicators; and
- The information produced by the monitoring programs will support the MED's GIS systems and the regional public services.
- At least 5 public and at least 4 private entities utilising the Project's monitoring programs in decision-making (biodiversity, ecosystem services and soil degradation).

Output 2.2. Strategy for improved dissemination and application of existing financial resources as incentives for biodiversity conservation among private land owners in the project area

156. The Chilean institutional framework, made up of the governmental institutions, fulfills specific responsibilities and is in charge of implementing subsidies with direct and indirect impact on people, families, farming communities, their territories and the ecosystem goods and services which biodiversity provides, fundamental for the well-being of the population and the productivity of agriculture and livestock production. In Chile, these subsidies are channelled through different kinds of FMs (reimbursable and non-reimbursable, and small-scale credits) and for different purposes (environmental, productive and social development, territorial management), there being over one hundred of these through which approximately 0.7% - 0.9% of the Gross Domestic Product (GDP)[11] is spent. The operational structure of the FMs, their purpose, beneficiaries, procedures for competing and the implementation mechanisms are complex and heterogeneous, which complicates their implementation, particularly in rural zones (under-utilization of sectoral resources).

157. Furthermore, local information about the FMs is scarce, and they are deficient in local pertinence. In the face of such obstacles, the GEF Project will make it possible to implement programs for training and information regarding FMs and best practices, for conservation of biodiversity, ecosystem services and soil degradation, which will reinforce already existing training and information programs and which will make possible a significant increase in the use of the FMs in the territory, contributing to the fight against soil degradation, through conservation of the continuous flow of services which the forests and the agri-ecosystems provide (contribution to focal areas LD-1 and LD-2).

158. The Project will carry out local extension and training programs targeting multiple stakeholders (private landowners, intermediate FM operators, forestry creditors and extension workers, municipal employees involved in the program for local development projects [known as PRODESAL in Chile] operated by the National Institute of Agricultural Development [INDAP], and decision-makers) regarding the availability, purpose, characteristics, competitive system, subsidized best practices, and environmental and productive benefits from a select number of FMs which facilitate conservation of forests, soils, ecosystem services and the fight against desertification through best practices in SLM/SFM, mainly FMs utilized by public services under the Agriculture Ministry. Working up training and informational materials, such as manuals, technical guidelines for operators, extension workers and landowners, and holding training and information workshops together with the public services involved, will be fundamental for achieving an increase in coverage and targeting of sectoral resources in the mountain areas included in the Project.

159. The indicator for this output is: Number of training and information programs about FMs and best practices implemented, which target key local stakeholders, for conservation of biodiversity, forests, and soil degradation.

160. The target upon Project completion is to have at least five annual training and extension programs developed on FMs and best practices in SLM/SFM (1 per year).

Output 2.3. Program for Promoting, Strengthening and Implementing Financing Mechanisms (FMs) which Support Biodiversity Conservation and Sustainable Management of Soils and Forests

[11] Analysis of Support Policies for Small and Medium Enterprises in Chile, Marco Dini and Giovanni Stumpo, Productive Development Series, Nº 136, (CEPAL, 2002).

161. Promoting and offering incentives for a productive activity, by means of FMs, represents an institutional form of mobilizing resources, promoting development, incorporating knowledge and techniques, improving the producers' quality of life, and in a direct or indirect way, achieving objectives of sustainable production, conservation of biodiversity and other ecosystem services, control of soil degradation, and promoting SLM/SFM.

162. The FMs for promoting forest-agriculture-livestock production with an environmental focus, or of environmental relevance, are those which have a direct impact on deteriorated agricultural soils, soils with forestry potential, and on the availability of irrigation water for agriculture. In relation to these three areas, worthy of note are the FMs associated with the SIRSD-S, Native Forest Recovery and Forest Development based in Law 20,238, and promotion of Private Investment in Irrigation and Drainage (Law Nº 18,450)[12]. Although the present system of incentive instruments constitutes a valuable and important effort on the part of the Chilean State to contribute to equality and sustainability in the social, productive and environmental system (Bañados, 2013), the legal and reglamentary framework, and therefore the FMs, show substantial deficiencies in their implementation. Among these is to be noted the lack of technical assistance, and lack of support during application for these incentives, implementation and tracking (both in quantity and quality)[13].

163. In the case of forestry, Law 20,238 for Native Forest Recovery and Forest Development, the only FM which includes direct complementary incentives for preservation of biodiversity in native forests and xerophytic formations, has operational deficiencies in its General Regulations which have been described and can be summarized as follows:

- entry barriers for small forest owners wishing to participate in the competitive system the Law provides, and in the disbursement of resources;
- table of incentive values which are not adjusted to the real operational costs of the activities subject to subsidy;
- new non-wood activities, as well as ecosystem services, need to be incorporated into the incentives law[14] ; and
- preservation activities are not considered financeable under the Law as it stands.

164. All of these elements imply resources focusing on critical areas for conservation of biodiversity and ecosystem services in the Mediterranean Region, as well as incorporating forest areas into the SFM system.

165. The GEF contribution will make it possible to develop a specific program for strengthening and implementing the biodiversity FMs and SFM referred to in Law 20,238 for Native Forest Recovery and Forest Development, contributing to achieving the objectives in focal areas LD-1, LD-2, LD-3 and SFM/REDD+ -1. In order to fulfill this objective, regarding strengthening FMs, the Project will provide a proposal of research lines

[12] Areas to be developed under this instrument are, for example, infiltration for aquifer replenishment and support for sustainable agriculture.

[13] As of now, forest owners receive only one day of service. According to the Budget Bureau diagnosis (DIPRES, 2013), at least 3 visits are required, minimum, for approval of a management plan.

[14] Such as those mentioned in Art. 2º Nº 20: all those goods and services which do not include trees or wood resources and which are present or can be developed in the interior of a native forest from the native species which make it up. Included in this category, but not exclusively, are such products as: mushrooms; food plants; wild fruits from bushes or trees; plants for medicinal, chemical or pharmaceutical use; wild fauna; vegetable fibers; and tourist services.

for the Competitive Fund for Research into the Law, will make a proposal of best practices and improvements for the table of values for conservation and SFM activities, and will support designing of complementary incentives to Law 20,283 associated with REDD+ (Reducing Emissions from Deforestation and Forest Degradation).

166. SLM refers to any action which makes it possible to recover and maintain the earth's capacity to fulfill human needs, whether these be productive and/or of conservation, utilizing both technology and traditional knowledge (> appropriation capacity). The Project will carry out a diagnosis of landowners and prior incentives within the Project area[15], as a way of identifying the typology or profile of the agriculture and livestock producers and to prioritize activities which have implementation subsidies (these include landowners involved in the local development program under the INDAP – Municipalities agreement).

167. Based on the information and the experience compiled during the Project's first phase regarding best productive practices, land plans will be drawn up for conservation of biodiversity and ecosystem services, and pre-existing plans will be implemented, on private landholdings whose owners have expressed interest and willingness to adopt the use recommendations and solutions which are mountain-corridor-conservation friendly. With the strengthened FMs, a process of accompanying the landowners will be carried out so that they can apply for and have access to the financial incentives which will make it possible to implement SFM activities; furthermore, best practices will be implemented, with GEF resources, in pilot lands.

168. Another way to support and promote the implementation of farm activities in harmony with SFM will be through design and development of a Portfolio of Projects for Environmental Compensation, within the framework of the Environmental Impact Assessment System (EIAS), within strategic Project areas. The idea is to channel the compensations for investment projects, once they have passed the SEIA evaluation, of those companies which need to comply with the current environmental norms regarding forest management and conservation, either by creating new zones with vegetation, or simply improving them by applying silvicultural techniques.

169. The indicator for this output is: Number of FMs for biodiversity and SLM/SFM on private landholdings which have been strengthened and implemented within the Project area.

170. The target upon Project completion is to have available:

- at least 2 strengthened FMs for Biodiversity and SFM, considering improvement and adaptation of subsidized activities in accordance with the general regulation and cost table contained in Law 20,283;
- at least 4 implemented FMs for Biodiversity and/or SLM/SFM, considering the set of subsidized activities in the Program for Soil Recovery (SIRSD-S), Forestry Law 20,283 and Irrigation (Law Nº 18,450); and
- at least 50,000 ha with conservation plans for forests, biodiversity and ecosystem services, drawn up and/or implemented within the Project area, which promote sustainable management of soils, forests and biodiversity on private landholdings within the Project area.

Output 2.4. Support program to explore market options for best practice compliant products from the Project area

[15] One of the deficiencies of the FM is "lack of adequate regional distribution" (INFOR-UNDP, 2009), especially in zones with highly degraded soils (Bañados, 2013).

171. Development of the Project's Component 2 requires compatible SLM and SFM practices, which can be applied on the landscape level, and which integrate multiple stakeholders (small, medium and large-scale producers) in an associative manner. It is mandatory that these practices be verified in the field, certified by competent entities, and have the necessary conditions for replicability in the territory.

172. In order to achieve this goal, the GEF Project will make it possible to develop and implement a strategy for promoting and strengthening instruments for certifying best production practices for SLM/SFM and biodiversity, in order to contribute to a reduction of the productive pressures which cause soil degradation and unsustainable forest management (LD-1, LD-2, LD-3 and SFM/REDD+ -1). The first step will be to carry out an updated survey of producers of goods and services associated in SLM, SFM and other sustainable activities (nature tourism, among others), which have valid certification awarded by some State department or private institution[16] or have potential for certification[17].

173. Furthermore, the strategy for output 2.4 includes the incorporation of SLM/SFM into existing certification instruments (Clean Production Agreements [CPA's] under the Ministry of the Economy), support for adaptation and creation of new certification instruments (Life – Chile standard certification in development), and promotion, through a marketing plan, of products obtained from SLM/SFM within the Project area. A CPA is an agreement between an enterprise sector and the competent public entities, whose purpose is to improve the companies' productive and environmental conditions, among other issues to be considered in the agreement. Life Certification is a voluntary mechanism which makes it possible for companies to improve their performance by transversally including biodiversity in their environmental management and/or carrying out direct and effective actions for biodiversity protection and conservation. FSC is currently preparing standards for certification in biodiversity protection, and others which certify the ecosystem service of providing water quality.

174. The indicator for this output is: Number of instruments promoted and strengthened which certify best productive practices in SLM/SFM for sustainable markets.

175. The target upon Project completion is to have available:

- at least 2 instruments implemented in pilot cases and their results promoted. It is in the Project's interest to promote organic production through the SAG organic certification label (Law 20,089), and to promote adaptation of Life and/or FSC certification standard in Chile.; and
- at least 2 instruments strengthened within the Project area and their results promoted, utilizing the Ministry of the Economy's CPA's.

Output 2.5. Education program on the need to conserve biodiversity and combat desertification for relevant local stakeholders

176. One major challenge to the Project during its implementation phase is to achieve an adequate level of local and institutional appropriation of the GEF initiatives, which will increase the possibilities of continuity and

[16] For example, organic produce Law 20,089, Clean Production Agreement –CPA, Rainforest Alliance Certification, Global GAP, Sustainability Code for Wine, Sustainable Water Management, Regulation 2092/91, Sustainable Tourism Destination Seal, among others.

[17] For example, producers using Best Agricultural Practices – BAP – recognized by the National BAP Commission of the Agriculture Ministry.

replication over the long term. Improving the level of knowledge and awareness of local stakeholders will be a key aspect in the implementation of education and awareness programs which stress the value of forest conservation, biodiversity and other ecosystem services, especially among the municipal staff (component 1), community representatives and public servants involved. At the present time, although several education and awareness initiatives exist regarding the natural heritage, these have not yet been sufficient to convince the community in general to value and care for their environment.

177. Therefore, the GEF contribution will make it possible to continue and strengthen different actions in the realm of education and awareness, in order to give the community a better understanding of the importance of forest conservation and associated services, and of the problems caused by soil degradation brought on by bad practices, taking on themselves the mission to protect their own natural heritage – the idea being that we care for that which we know about. To achieve this, extensive awareness programs will be carried out, utilizing didactic materials such as documentaries, posters, guides for species recognition, among others, and educational activities through workshop-talks targeting children, youth and adults, and reconnaissance excursions to the natural areas in their own municipalities. Implementation entails prior validation of the education and awareness programs with counterpart institutions, as well as permanent monitoring and evaluation; implementation will contribute to objective LD-3, disseminating relevant information for integrated management of the landscape on the part of the local communities.

178. The indicator for this output is: Number of annual education and awareness programs on biodiversity and ecosystem services, targeting the relevant local stakeholders (municipalities, community, public services).

179. The target upon Project completion is to have available: At least 5 education and awareness programs (1 per year) regarding biodiversity and ecosystem services for strategic Project localities.

Component 3. Pilot-scale application of Integrated Conservation Districts for Soils, Forest and Water legislation (US$ GEF:1,146,890; COF: 4,789,995)

180. The natural characteristics of the soil and the geomorphology of the mountainous areas of the Metropolitan Region, together with the use history of the territory's biotic and abiotic resources, have produced high levels of soil degradation, leading to a process of severe desertification of the soil and loss of cover vegetation, with repercussions on this globally significant biodiversity, on productive activities and on the population's quality of life.

181. The Conservation District is a binding legal instrument permitting access to the Agriculture Ministry's financing mechanisms[18] applicable to lands located in eroded areas or under imminent danger of erosion, to be declared by supreme ministerial decree, and which results in mandatory application of techniques and programs for conservation and improvement as indicated by the Agriculture Ministry, concerning soils, forests and water. The Conservation District has been analysed as an alternative for promoting territorial sustainability within the Project area on the landscape level, through focusing the FMs and technical assistance in lands which voluntarily join the Conservation District, as a way of implementing practices of sustainable management of soil and forests, and integrating biodiversity and other services which the forests provide in agri-ecosystem landscapes.

[18] Law 18,378 of 1984, art 3 and 5, empower the Agriculture Ministry to create a figure by means of a Ministerial Decree.

182. The expected outcome from this component is that, by means of the GEF contribution, for the first time in Chile, the Integrated Conservation District for soil, forest and water be established and implemented, in 500,000 ha within the production/conservation pilot areas, contributing to the objectives of the focal areas BD-2, LD-1, LD-2, LD-3 and SFM/REDD+ -1. The outputs required to achieve this outcome are detailed below:

Output 3.1. Declaration of one pilot-scale areas as soil, forests and water conservation districts.

183. In order to give recognition to the Conservation District legislation, the Project will facilitate within the territory the participative definition of the district target (objective of the District), will draw up a Master Plan which incorporates sustainable management of soil, forests and biodiversity, will validate best practices in conservation and improvement of natural resources with the involved stakeholders, and will submit to the Native Forest Consultative Council[19] the proposal for the Conservation District for recognition via an Agriculture Ministry Decree.

184. The indicator for this output is: Surface area formally recognized as a Conservation District for soil, forest and water within the Project area.

185. The target upon Project completion is to have: at least 500,000 ha formally recognized as a Conservation District and which has a District Master Plan, within the Project area.

Output 3.2. Conservation plans and activities for the pilot-scale areas.

186. Within the landholdings ascribed to the Conservation District, the Project will make it possible to draw up and/or implement, with permanent tracking and technical assistance, Integrated Land Management Plans for soil, water and forests, both in landholdings which practice planning (those involved in the Innova-CORFO Project, Santiago Andes) and in new interested landholdings, by means of FMs for SLM and SFM.

187. The indicator for output 3.2 is: Surface area with Integrated Land Management Plans for soil, forest and water within the Conservation District pilot area.

188. The target upon Project completion for output 3.2: 200,000 ha of the District with integrated management plan activities implemented, revised and adapted to the District Master Plan.

Output 3.3. Dissemination of lessons learned in the implementation of the pilot-scale areas.

189. The lessons learned in the Conservation District implementation phase, in particular those lessons coming out of participative definition of the district goal, key aspects of the Ministerial District Decree procedures, and implementation of farm initiatives, will be validated by key stakeholders and made known within the territory, thanks to the GEF contribution.

190. The indicator for output 3.3 is: Number of extension activities regarding the lessons learned during implementation of the pilot level land plans.

191. The target upon Project completion for output 3.3 is: to have at least 4 extension activities implemented within the Project area.

[19] Article 33, Law 20,283.

3.4. Intervention Logic and Key Assumptions

192. This Project's intervention rationale is based on the generating of global and regional environment benefits through interventions in mountain sites of high conservation value, within the Central Chilean Mediterranean ecosystem. This rationale includes identifying and addressing existing obstacles, strengthening the environmental management capacities of the Public Services and Municipalities present within the Project area, and implementing different initiatives with the permanent participation of public services, local authorities, and representatives of the communities involved. This intervention rationale will make it possible to fulfill the Project's objectives and guarantee their sustainability over time. Among the most important obstacles are the following: 1) insufficient information available about the environment, 2) scarce knowledge about biodiversity on the part of many stakeholders, 3) shortcomings in Chilean legislation regarding natural resource management, financing and protection in the presence of productive activities which utilize these resources in an unsustainable manner, and 4) lack of territorial ecological planning and local management which takes into account the forests, biodiversity and ecosystem services (ES's), among others.

193. Overcoming these obstacles will make it possible to promote sustainable management of land and forests within the intervention area, to value and recognize within a regulatory framework the significant areas for biodiversity and the ES's (from the local/municipal to the regional level), and propose use agreements and norms through Municipal planning and regulation instruments (municipal ordinances), among other actions.

194. The intervention rationale includes establishing collaboration agreements with public services and local municipalities, for implementation of the Project's initiatives. Work will be carried out constantly with the person directly responsible for each institution, guaranteeing institutional participation as well as sufficient conditions for appropriation and sustainability of the initiatives over the long term. On the Municipal level, the Project will promote implementation of different LEM schemes which incorporate management and conservation of biodiversity and ecosystem services, such as the Municipal Environment Certification System (MECS) and adoption of other Environment Ministry scheme (Conservation Landscape, Sustainable Commune), as well as strengthening local norms regarding biodiversity, ecosystem services and SLM/ SFM.

195. The Project anticipates fulfilling its objectives by means of the following outputs:

1.1 Local scale land use plans developed and linked to GIS system of the project area;

1.2 Local-scale assessments on the biodiversity components and ecosystem services of the project area;

1.3 Carrying out a pilot project to enhance personnel capacities in the environmental departments of 36 municipalities;

1.4 Coordination mechanisms set in place for municipalities in the mountain areas;

1.5 Preparation of an upgraded version of the municipal environmental management certification scheme that will include requirements for sustainable land use (SCAM/ECOCOMUNA);

2.1 Monitoring system for biodiversity conservation and SLM/SFM with private and public stakeholders in the project area;

2.2. Strategy for improved dissemination and application of existing financial resources as incentives for biodiversity conservation among private land owners in the project area;

2.3 Program for Promoting, Strengthening and Implementing Financing Mechanisms (FMs) which Support Biodiversity Conservation and Sustainable Management of Soils and Forests

2.4 Support program to explore market options for best practice compliant products from the Project area;

2.5 Education program on the need to conserve biodiversity and combat desertification for relevant local stakeholders;

3.1 Declaration of one pilot-scale areas as soil, forests and water conservation district;

3.2 Conservation plans and activities for the pilot-scale areas;

3.3 Dissemination of lessons learned in the implementation of the pilot-scale areas;

196. During Project design, institutional counterparts from the Agriculture Ministry, the Environment Ministry, Municipalities, companies, research centers and organizations of civil society participated. Discussion workshops were organized and reconnaissance trips were made to the field. This made it possible to arrange cofinancing of the Project and to have a favorable scenario for Project implementation and future sustainability.

197. Success of the different initiatives rides on the assumption that the government and local authorities will embrace Project measures and recommendations for the following: developing management standards for wilderness areas, developing plans and programs which establish basic and preventive criteria for biodiversity conservation (Law 19,300 art. 70 letter i), declaring for the first time in Chile the legislation of Conservation District, and developing municipal ordinances for environmental management.

198. One of the main intervention approaches is the use of State financial and incentive mechanisms to promote SLM/SFM. It is hoped that during Project implementation, developing pilot experiences with the use of State incentive instruments will make it possible to integrate and strengthen best practices in SLM/SFM into the productive development policies and programs. Furthermore, it is expected that for the first time in Chile, the instrument of Conservation District for soil, forest and water be declared and implemented for promoting best practices and decreasing soil degradation.

199. Success in this case will depend on the following:

- there is a favorable disposition on the part of the institutions for informing collaboratively, continually and pertinently, about FMs;
- there is a high level of interest on the part of landowners for participating in extension activities regarding implementation of these mechanisms;
- Public Services are willing to discuss and incorporate better techniques for biodiversity conservation and SLM/SFM into the existing FMs;
- there is interest and commitment on the part of landowners for participating in and supporting the initiatives; and
- there is political will for improving some of these instruments as well as declaring a District within the Project area.

3.5. Risk Analysis and Risk Management Measures

200. An analysis of possible situations which could affect fulfillment of Project objectives and its sustainability appears in the table below. The level of impact refers to the potential for impact if this risk were to occur, rather than the probability that it might occur.

Table 10. Risk Factors and Possible Mitigation Measures

Risk	Level	Mitigation Measures
The Mayors' interest level is insufficient for strengthening municipal environment management and for applying ordinances which regulate sustainable use of the territory.	Low	The Project includes a communications and public relations strategy for encouraging the participation of local authorities in the Project and the support of Government authorities. In addition, it enhances recognition of local environment management through financing municipalities' environmental initiatives; supports management activities through synergy with municipal associations; provides dedicated personnel for drawing up projects and working with staff in municipal environment departments from the project design stage, in order to take their observations into account and empower them with the initiative.
The level of support of high Government authorities and their teams is insufficient for achieving Project objectives.	Medium	The strategy to be used for obtaining sufficient support of the authorities and their teams is to call into play the synergies which this initiative has with several Government Conventions, Policies, Programs and Plans in favor of biological conservation. Through this Project, it will be possible to fulfill at least in part some of Chile's commitments in this realm, which should generate some of the authorities' interest and support. In the case of the different public services' personnel, work will be carried out under a commitment between the Environment Ministry and the different State institutions, through collaboration agreements, where the responsibilities and deadlines for each party are defined, as well as the measures needed so that said personnel incorporate the activities to which their particular service or department has committed into the collective performance indicators (annual program carried out by each public service, with institutional goals which upon fulfillment, translate into bonuses added to the monthly salary). Furthermore, the authorities will be kept informed of the Project's progress and partial results and information communicated to the community about these.
Changes in local government authorities and personnel, at the end of 2016, and at the national level in March 2018 (election dates), may affect the continuity of Project activities initiated under the previous (present) governments.	Medium	In order to minimize this risk, collaboration agreements have been and will be drawn up, by this Project, with all the municipal services and associations, for a period which includes the whole of the execution phase, that is to say until the end of 2019. Furthermore, activities will be carried out for presenting this initiative to the new authorities, informing them about the activities already carried out and the benefits of their participation.
Local environment management is highly dependent on the interest shown by the elected Mayor in environmental issues, which makes it difficult to guarantee sustainability and management improvements in the medium and long term.	Medium	The Project cannot alone assume total responsibility for averting this risk. However, efforts will be made to strengthen instances for recognition of local environment management in the form of possible financing for initiatives which will benefit the municipality. Furthermore, the Project will propose strengthening the environment units within the municipal structure, making it possible to create a higher-level position for the person in charge of the environment, and making it mandatory that his/her opinion be taken into account in municipal decision-making. Another action in this regard is through awareness-building and work with the community, to whom the Mayor's commitment to environmental management will be made known and emphasized, in the pilot municipalities.

The Regional Policies for Territorial Planning and Development do not mention the sustainable use and management of the territory.	Low	In order to minimize this risk, the Regional Government, since the Project design phase, has been included as a key partner and stakeholder. This is the institution which decides on policies for territorial planning and development in each Region. At the present time, their regional strategy includes sustainable planning, and through this Project, some of their strategic objectives will be fulfilled.
Financing for initiatives which promote sustainable territorial development is insufficient. Furthermore, when evaluating projects submitted for regional public funding by institutions or organizations that apply and commit themselves to schemes that would help strengthen local environmental management (Conservation Landscapes and progress in MECS's), they are given no recognition.	Low	In order to improve financing for initiatives which contribute to sustainable development of a territory, the Project expects to carry out efforts with the highest authorities of the Environment Ministry, the Regional Government, and the Under-Secretariat for Regional Development, in order to promote recognition of local environment management schemes when they are submitted for available regional financing (priority or additional points for municipalities who implement local environment management).
Political will is insufficient for applying regulation, through ordinances, for land use in wilderness areas.	Medium	In order to diminish this risk, the Environment Ministry will be in charge of this initiative, approving by Ministerial Decree an indicative plan for mountain area land-use standards, in accordance with the regional ecological zoning that will be carried out as one of this Project's activities. This Decree will make it possible to have a legal basis for applying Municipal Ordinances, which regulate land use and can be applied in all interested municipalities.
The community does not sufficiently know or value its natural heritage and the services it provides to us.	Low	The Project will contribute to generating awareness regarding the importance of biodiversity and the ecosystem services it provides us, and in what ways it benefits the population. The Project cannot on its own be responsible for changing this situation, but it will make a contribution through the education and awareness strategies that it will be applying in some townships, guided by the idea that you protect what you are familiar with.
The participation of municipal employees, public services, and productive stakeholders is not sufficient for fulfilling the Project's objectives.	Medium	In order to avoid or minimize this risk, these people will constantly be invited to participate in different activities organized by the Project, such as workshops, seminars, courses on subjects of interest, and support will be obtained from the authorities of each institution by means of representatives they will name to participate in the actions organized by the Project.
Public services are unwilling to incorporate and publicize recognized best practices proposed by the Project.	Low	The public services competent in promoting and publicizing productive practices have been involved since the Project's design phase, and their participation will continue on different levels throughout implementation. The plan is for all best practices which this Project promotes be developed within the framework of agreements and decisions by these same services. In addition, most of these already have included in their strategic plans or institutional goals, promoting sustainable productive practices in accordance with the Government policies and commitments on these matters.
Implementation of initiatives for promoting biodiversity conservation and sustainable use of soil and forests is rare and/or little known.	Medium	In order to generate promotion and replicability of the different initiatives of this kind, the plan is to draw up and implement a communications and publicity strategy regarding the Project's products, especially regarding the pilot practices which will be carried out within the Project area. Furthermore, the training activities targeting productive stakeholders, local governments and communities will be publicized.
The government services involved with the Project do not act in a coordinated	Medium	Articulation and coordination between the different public services has been incorporated since the Project's design phase and is to be maintained during implementation, through participation of key public services in the steering and

manner, nor do they generate synergy among their initiatives.		technical committee, taking into account their opinions in the implementation of initiatives, as well as in work committees on different subjects, sharing knowledge of those initiatives of each service which could be enhanced by those of another institution. In addition, recognition of the legislation of Conservation District for soil, forest and water is proposed, as a way of seeking articulation between the different Agriculture Ministry services, for applying existing financing instruments in favor of minimizing soil degradation.
Consumers lack knowledge about products from within the Project area which are generated using environment-friendly productive techniques and processes, so that this market is not attractive for producers.	Medium	The Project will work on design and implementation of a strategy which promotes a "green market" for local produce, with an analysis of supply of this produce, work in networks, support for the existing groups, marketing of community products, and efforts for increasing demand. Furthermore, the Project will utilize the UNEP's experience in previously implemented projects on bio-trade, referring to activities of collection, production and marketing of goods and services derived from native biodiversity, within a framework of environmental, social and economic sustainability.
Meteorological phenomena, especially reductions in rainfall patterns and increases in temperature, generate long periods of drought within the Project area. This occurs along with Increased number of fire events within the Project area, which destroy extensive mountain areas.	Medium	The climate risk factor has been incorporated into this Project, in the form of adaptation strategies such as promoting best productive practices which minimize water consumption (hydric efficiency in forest-agricultural-livestock production), as well as conservation of the tree mass and sustainable practices in forest and soil, in addition to protecting and conserving key zones which make it possible to conserve the water supply service. The majority of forest fires are, intentionally or by accident, manmade, often due to negligence such as irresponsible tourism: open fires or cigarette butts. Within the education and awareness activities targeting the community, this subject will be treated as one of the most important threats to biodiversity conservation. Furthermore, one of this Project's key service partners is the Chilean National Forestry Corporation (CONAF), in charge of controlling forest fires, and has priority over some of the Project's mountain areas.
The initiatives implemented and promoted by the Project have no continuity once the Project has completed its execution phase.	Medium	Within this Project's design, the idea of sustainability over time is proposed for all its actions, independently of Project termination. Biodiversity management and conservation will be incorporated into the LEM instruments as a mandatory component for obtaining municipal environment certification. The remaining LEM schemes recognized and promoted by the Ministry, as well as model ordinance for land use, will also incorporate this factor which will remain over time and can be extended to other Regions in Chile. The MED's will remain over time and will be able to replicate the experiences from this Project. Additional plans are to strengthen financing instruments which promote sustainable management of soil and forests, to incorporate new forest management standards into the Native Forest Law, as well as to replicate the Conservation District legislation in other areas in the Region and in Chile. Furthermore, the plan is to turn over the monitoring system for biodiversity and service to the EM once the Project is completed, as well as a web page where the data is updated and detailed information is available regarding all the Project's products so that they can be replicated.

3.6. Consistency with National Priorities or Plans

201. The Project is consistent with the Chilean national laws, policies and strategies, specified in paragraph 2.4 of this document.

202. The Project incorporates in its objectives, components and outcomes, the definitions for "conservation of the environmental heritage" and "sustainable development" contained in the Environment Base Law (Law 19,300 from 1994, modified by Law 20,417 from 2010).

203. The Project will implement specific programs and activities which are coherent with the objectives of the Chilean Environmental Policy for Sustainable Development (1998). In Objective 1, recover and improve environment quality, the Project will strengthen Local Environmental Management (LEM) by drawing up ordinances which incorporate biodiversity and ecosystem services of the territory. Under Objective 2, prevent environmental deterioration, the Project will implement within its environmental education strategy, a series of education and awareness programs on biodiversity, ecosystem services and sustainable land and forest management (SLM and SFM), targeting relevant stakeholders (municipalities, community, public services, producers). Under Objective 3, to promote and protect the environmental heritage and sustainable use of its natural resources, the Project will implement in areas of high environmental value, activities of conservation, recovery of degraded soils, and sustainable management of native forests, utilizing incentive mechanisms and certification instruments.

204. For Objective 4, introduce environmental considerations into the Chilean productive sector, the Project will implement a program for promoting and developing certification instruments which support SLM/SFM, clean production, and biodiversity and ecosystem services conservation. For Objective 5, involve the public in environmental management, the Project incorporates opportunities for local participation: in implementing the Conservation District and the Conservation Landscape scheme, and in a system for monitoring ecosystem services and biodiversity. Under Objective 6, strengthen regional and national environmental institutionality, the Project plans to strengthen LEM in some of the 36 municipalities within the Project area, through reinforcing capacities, developing ordinances and implementing mechanisms for inter-municipal coordination. Finally, under Objective 7, perfect environmental legislation and develop new management instruments, the Project will support implementation of LEM schemes in pilot municipalities, which will incorporate management and conservation of forests, biodiversity and ecosystem services (Conservation Landscapes, MECS's and Sustainable Commune).

205. Regarding the National Biodiversity Strategy (NBS, 2003), the Project has defined as its intervention area the conservation priority ecosystems in the Metropolitan Region, and promotes through components 2 and 3, a series of activities which directly support the general NBS objective, which is to conserve biodiversity and promote its sustainable management. In regards to the NBS's specific objectives, the Project will promote modified habitat and ecosystems recovery, through forest and soil recovery activities. In order to generate changes in behaviour and decision-making on the part of stakeholders regarding biodiversity use, the Project will implement education, training and awareness programs on biodiversity and ecosystem services. As for non-biodiversity-extractive alternatives, the Project will promote and offer technical assistance for the use of incentives, and certification of organic products and other activities, such as nature tourism. In order to reinforce actions in research and generation of knowledge on biodiversity, the Project will implement

monitoring programs for determining the status, pressures and response of key biodiversity attributes and ecosystem services as well as soil degradation.

206. The project is aligned with Chile's UNDAF 2015 – 2018 Outcome 10: Public policy on natural and energy resources management strengthened with participation of civil society and affected groups. It is consistent with the indicator "Instruments (laws, regulations and programmes) aligned with multilateral environmental agreements signed by the country (in particular CBD and UNCCD).

207. The Project is consistent with the Regional Strategy for Biodiversity Conservation of the Metropolitan Region (RBDS-MR), in its main strategic axes 1.- Culture for biodiversity conservation, 3.- Conservation in natural areas of high biodiversity value, 4.- Biodiversity conservation in rural and urban areas, and 6.- Information management for biodiversity conservation, since the Project will implement activities in extension, environmental education, training of stakeholders, implementation of SLM/SFM practices, and development of regional monitoring programs for biodiversity, ecosystem services and soil degradation.

208. Regarding the National Action Plan to Combat Desertification and Drought (2002, PANCD in Chile), the Project is consistent with the objective: "to improve the livelihood of the population residing in the affected zones, through SLM". The Project will implement a program for strengthening and promoting incentive instruments for SLM and SFM. Landowners with soil deterioration problems within the Project area will receive training, technical assistance and incentives.

209. The Project is coherent with the National Action Plan against the Effects of Climate Change (2008 – 2012), action line 4.1.2.2 Biodiversity, action3: Restoration programs for deteriorated systems, and action line 4.1.2.3, action 7: Promoting efficient water use in agriculture. Also with Santiago's Plan for Adaptation to Climate Change for the Metropolitan Region, adaptation measure 9: Reduction of demand for water in agriculture, and adaptation measure 10: Implementation of a structure for water management for the Maipo/Mapocho Basin. Project activities include: Recovery of degraded soils in ecosystems with biodiversity priority, promoting best productive practices in agricultural systems, and promoting a multiple stakeholder clean production agreement in the Maipo Basin.

210. The Project is consistent with the Action Plan for Biodiversity Protection and Conservation, in the Context of Climate Change (EM, 2013), in its transversal initiative: To guarantee connectivity, and focalized strategic initiatives: 3.- Establishing a System of Conservation District, 9.- Establishing a Program for Assisted Protection of Highland Ecosystems, and 20.- Strengthening the system of private protected areas, investigating the incentives and action mechanisms subsidized by the State. The Project will implement activities for conservation and best practices which qualify for incentives in priority ecosystems which constitute the Metropolitan biological corridor.

211. As for the Strategy for Forests and Climate Change (CONAF), the Project is coherent with their objective: to promote the mitigation which forests and soils subject to forest planting provide, in order to counteract the effects of climate change. The Project will facilitate access by native forest owners to technical assistance, training, and permanent assistance in the implementation of best practices in SFM, in addition to monitoring the ecosystem service regarding carbon capture which the Project will carry out, constituting another contribution to this strategy.

212. The Project is coherent with the general objective of the National Policy for Protection and Conservation of Glaciers, "To preserve and conserve Chile's glaciers" and with the strategic guideline 5.1.- Value and

knowledge of glaciers, emphasizing their importance in generating ecosystem services for productive activities; and will integrate the monitoring which is carried out of the glaciers, within the Project area, into the biodiversity monitoring system on the ecosystem level.

213. The Project is coherent with the National Strategy for Green Growth (2014), strategic guideline A.- Implementation of instruments for Environmental Management, and strategic guideline B.- Promoting the Market for Environmental Goods and Services. The Project will make it possible to establish an open information system, with mapping and characterization of significant biodiversity, three key ecosystem services (provision of water quantity, air quality and carbon sequestration). Furthermore, the Project will promote in the mountain biological corridor both SLM and SFM, environmental education, and certification of best productive practices, conservation, and clean production.

214. The Project is coherent with the Clean Production Agenda to 2020, strategic guideline 1) Clean production agreements and certification, and strategic guideline 4) Publicizing and creating capabilities. The Project will support drawing up of best practices standards in SLM/SFM and the procedures for their formalization as clean production agreements.

215. In accordance with the National Strategy for Water Resources 2012 – 2025, the Project is coherent with strategic guideline 1.- Efficient and sustainable management. The Project will support integrated management of the water resources in the Maipo Basin, testing by means of a pilot project a clean production agreement (NEST+Aguas) between multiple stakeholders in the basin, in addition to contributing by monitoring the Ecosystem Service of water supply, which the basin ecosystems with more natural vegetation provide.

216. The Project objectives are consistent with the strategic guidelines established by the National Rural Development Policy 2014-2024 it its “Environmental Sustainability of the Rural Territory” regarding Field of Action: Biodiversity and Ecosystem Services, Hydrological Systems, Soil Resources, Environmental Liabilities and Environmental Education.

217. The Project is consistent with the National Institute of Agricultural Development (INDAP)’s 2010 – 2014 Strategic Plan, regarding strategic objectives: 1.- Support the development of capacities among small-scale agricultural producers, both men and women, and 2.- Contribute to performance quality improvement of small-scale male and female agricultural producers’ productive factors, through implementing training programs, and promoting financing mechanisms for SLM/SFM and for the training program itself.

218. The Project is coherent with the National Tourism Strategy (2012 – 2020), in its Strategic Sustainability Axes. The Project will support the initiatives for sustainable nature tourism, agri-tourism or other similar activities, through promoting certification instruments, publicizing information about incentive instruments and training in best practices.

219. The Project is consistent with Mountain Partnership’s general objective, “to promote sustainable development of mountainous regions” and “to protect their ecosystems”. The Project’s regional monitoring programs will make it possible to learn about the status of biodiversity, ecosystem services and soil degradation within the mountain biological corridor. This information will make it possible to design and implement strategies for conserving these ecosystems, implement activities for SLM and SFM, and finally, to bring benefits to the population through State incentives.

220. The Project is coherent with the Regional Development Strategy for the Metropolitan Region (2012 – 2021), in its strategic guideline 5.4 (Santiago, a clean and sustainable region), and its operational objectives

1.1, 2.2 and 3.1, though the following actions: implementing programs for promoting financing mechanisms for SLM/SFM and the training program for best productive practices, as well as plans and activities for conservation of biodiversity and its ecosystem services within the mountain biological corridor.

3.7. Incremental Cost Reasoning

Base Scenario (without GEF support)

221. At the beginning of 2010, a series of modifications to Chile's environment legislation came into effect (Law N°20,417 modifying Law N°19,300 – Environmental Base Law-), which improve related institutionality. Among other advances, this new law empowers municipal governments to have an active role in environmental management. This has generated a series of actions which seek to improve environmental management in the townships. However, there are several obstacles to overcome for these efforts to be more effective. At the present time, the municipalities restrict their efforts in the environmental management to urban issues; they have no regulatory instruments for land use outside urban limits, in wilderness areas, nor do they have plans and programs from national institutions which can support them in establishing intervention norms for rural areas, especially in those less altered. Furthermore, the environment law has assigned additional tasks to the municipalities, without assigning additional resources; nor has it modified environmental institutionality so as to give more weight to environmental management, subordinating environment teams, where they exist, to the units responsible for waste disposal and clean-up. Issues of biodiversity conservation are currently excluded from environment management as carried out by the majority of the municipalities, even where they include territories of biodiversity relevance. There is no organized information about biodiversity and ecosystem services on a scale which would facilitate conservation management by the municipalities. One of the problems which they face is the accumulation of negative environmental impacts within their territories, derived from scarce promotion of environment-friendly productive practices within the system of production development incentives.

222. The Environment Ministry, aware of these constraints and difficulties, has begun to develop a series of actions for solving them. They have designed a certification program for municipal environment efforts (MECS), in order to promote learning about different environmental issues and environmental education within the education system. At the same time, they have begun to implement an awareness and public consciousness program regarding the need to protect biodiversity, targeting basic social organizations, municipalities and both urban and rural schools. In addition, they have made efforts in the area of modifying legislation which regulates municipal actions, in order to perfect institutionality. Finally, in the last few years, they have been making efforts with State institutions which implement instruments for developing environment-friendly practices, in order to perfect these, detecting limitations, perverse incentives and other defects. Clearly, the issues associated with protecting biodiversity and combating soil and forest degradation are the ones with the least coverage.

223. The initiatives and actions mentioned above attempt to improve the functioning of the mountain area biological corridors, and to strengthen local capacities, together with gathering data necessary for the municipalities to be able to assume environmental planning and actions, through implementation of pilot projects.

224. In summary, the expected outcome's most relevant aspects can be summarised as follows:

- Municipal environmental management, on the local level (LEM) is mandatory by law, but the municipalities still face various challenges (for example, lack of human resources and institutional capacity) in order to be able to fulfill this mandate. This requires strengthening capacities in all 36 municipalities within the Project area, in order to achieve better conservation of their biological diversity and the application of sustainable productive practices. At the present time, 20 of the 36 have been certified under the current Municipal Environment Certification System (MECS). The Project will contribute to strengthening the MECS certification, incorporating into the certification requirements, actions in management and conservation of biodiversity and ecosystem services, as well as promoting implementation of other LEM schemes such as, for example, Conservation Landscapes and Sustainable Commune. Furthermore, it will make it possible to improve institutional capacities on these issues through training and promoting protection of relevant biodiversity areas present in each municipality, indicating sustainable uses for their territory.
- Incentive Mechanisms for strengthening support for biodiversity conservation and sustainable land management among private landowners, given the fact that most of the Region's territory is private property. Some of the landowners already have land plans, the result of previous projects carried out by the Chilean Government, but these have not been implemented because of lack of financial support. This Project will address the need to improve, publicize and promote existing financing mechanisms as incentives for biodiversity conservation among the private landowners within the Project area, such as the benefits from the Fund for Native Forest Conservation, Recovery and Sustainable Management's Regulation. This will require publicity, tracking during the formulation and application process, and implementation of the conservation projects approved. All of this will help in certifying best production practices both in recovering deteriorated soils and in forest conservation in the face of the requirements of sustainable markets. These efforts go hand in hand with actions for improving awareness and establishing capabilities among members of the local community (that is, landowners, students, companies, etc.).
- Conservation District legislation, which, according to Chilean legislation, can be established in public or private locations; however, this legislation, which could serve to focus public funds for restoring agri-ecosystems, has not yet been applied. These funds are intended for preventing soil erosion or recovering deteriorated soils. This Project will activate this category for the first time in Chile, on pilot sites covering over 500,000 Hectares. The instrument is intended for focusing Agriculture Ministry incentives on degraded territories. Soils in this condition which are prioritized by the Ministry will have a conservation management plan drawn up, will be set up in Conservation District, and will have priority for financing on the part of the different Agriculture Ministry divisions. Among the obstacles which have impeded prior implementation of this instrument is the lack of the regulation describing the instrument; the need for identifying private landowners willing to undertake restoration management; the requirement for developing a Conservation/Restoration Management Plan for the targeted territory; and the limited experience in introducing biodiversity-friendly practices into the present forestry-agriculture-livestock technologies.

225. The three elements described above will be developed within components 1, 2 and 3, respectively, and will complement each other. Nonetheless, without the incremental contribution from the GEF fund, progress of these actions will be slow and pressure on the areas of wooded forest remnants from competition for land use will continue unabated. Likewise, it is expected that the present rate of habitat fragmentation and

biodiversity loss will continue. Without the GEF incremental funds, the Municipalities, organizations of civil society and private landowners, within the Project area, will not have the strategic instruments necessary nor the key capacities to be able to plan and manage their multiple-production landscapes, with integrated production, sustainability and the global environment benefits. Therefore, in order to adequately complement the present investments, the incremental GEF contribution is designed to address many of the short-comings identified above with the purpose of achieving those global environmental benefits.

Alternative Scenario (with the GEF support)

226. With the GEF contribution, actions will be undertaken which will make it possible to overcome the obstacles, addressing the solutions' complexities, which are due to misunderstanding of the legal, environmental and social processes, in addition to creating and developing actions which generate change.

227. The leading idea behind this proposal is to promote a heterogeneous series of complementary interventions in the 36 adjacent municipalities for protecting an equally diverse mosaic of forest and non-forest areas in different states of conservation/ degradation, and in so doing, increase habitat connectivity between those forest fragments, while redirecting the competing pressures for land use within and around them.

228. This GEF Project would be incremental to the present efforts being made by the Chilean Government through promoting best practices among the involved local communities, for the purpose of helping them to develop or adapt their productivity while guaranteeing long-term sustainability of their environment and of its global environment values. The introduction of new conservation protocols for carrying out income-generating activities will contribute to replacing present destructive subsistence practices which affect biodiversity, and compensate the community for the costs which derive from the loss of access through resource restriction.

229. The GEF support will also contribute to improving sustainability of the community's present resource use practices, or establish new development and conservation links in order to demonstrate the value added through biodiversity conservation, which includes a wide range of activities, from improvements in agricultural practices to practices more favorable to biodiversity, related incentives, and sustainable management of the native forest. Furthermore, the combination of tools and knowledge established by the Project, involving both local and national governmental structures, holds an important potential for improving implementation of the Project's lessons, throughout Chile.

Global Benefits

230. This Project includes protection of the biological mountain corridors in the Chilean Mediterranean Eco-Region, considered one of the world's biodiversity hotspots. The Project will give support to concrete, urgent actions to assist in conservation of this ecosystem in danger of extinction. It will provide direct benefits to the municipalities which have areas of high biodiversity value, both in Metropolitan Region (MR) and the Valparaíso Region (V). The Project's surface area of impact is estimated to extend over approximately 1,187,344 Hectares. Within the Project area, activities will be carried out for gathering and up-dating data on the environmental components, covering 100% of the Project's mountain corridors, in addition to developing an integrated monitoring program for status changes in the environmental components, which will serve for follow-up and control of public policies regarding natural resources conservation.

231. The number of municipalities participating in the MECS will increase, with municipal land-use plans (Ordinances) developed and applied; with personnel trained in environmental issues and territorial planning;

participating in a common environmental governance model in coordination with other municipalities; and applying LEM schemes in their territories outside their urban limits. They will be promoting best productive practices for SLM/SFM, together with promoting financing mechanisms which have been revised and strengthened in order to include concrete activities for management and conservation of biodiversity, ecosystem services and soil degradation. The Conservation District will be established over a surface area estimated at 500,000 ha, an area which for the first time will have at its disposal a management plan which includes integral conservation/restoration for agri-ecosystems, and which will focus different financing instruments from the Agriculture Ministry for its implementation.

232. All of these actions will contribute to increasing the resilience of the Chilean Mediterranean ecosystem in the face of changes and pressures of anthropic and environmental origin, improving its conservation status on a world scale. Therefore, it can be seen that the global benefits of this Project will include restoration of biodiversity habitats which are unique in the world; establishment of connectivity between fragmented ecosystems; slowing down of soil and forest degradation; and reduction of rates of carbon release into the atmosphere, by means of improvements in the natural processes of carbon capture and storage.

233. The table below links the expected outputs of the GEF Secretariat focal areas with the corresponding indicators for the activities developed in this Project's Logical Framework.

Table 11: Global Benefits from the Project

Focal Area Objectives	Expected Outcomes	Expected Outputs	Corresponding Log Frame Indicator
	FA	FA	
BD-2	**2.1** Increase in sustainably managed landscapes that integrate biodiversity conservation	**2.2** Municipal Land Use Plans that incorporate Biodiversity and Ecosystem Services (One potential of 36 within the Project area)	**1.1.** no. of municipalities with ordinances for regulating land use in wilderness areas and management for conservation of biodiversity, validated and applied. **1.2.** Percentage of the Project's total surface area with evaluation of biodiversity and ecosystem services which the biological mountain corridors provide. **1.3.** no. of municipalities with personnel trained in biodiversity, ecosystem services and sustainable territorial planning.
		2.3 Certified production landscapes (pilot 500,000 ha)	**3.1.** Surface area formally recognized as a Conservation District for soil, forest and water within the Project area.
LD-1	**1.2** Improved agricultural management	**1.2** Types of innovative SLM practices introduced field level in 250,000 ha pilot	**2.3.** no. of FMs for biodiversity and SLM/SFM on private lands strengthened and implemented within the Project area. **3.2.** Surface area with Integrated Land Management Plans for soil, water and forest in a Conservation District pilot area.
		1.4 Appropriate Actions to diversify the financial resource base**.**	**2.3.** no. of FMs for biodiversity and SLM/SFM on private lands strengthened and implemented within the Project area. **2.4.** no. of instruments promoted and strengthened for certifying good productive practices for SLM/SFM in sustainable markets.
	1.3 Sustained flow of services in agro-ecosystems	**1.5** Information on SLM technologies and good practices guidelines disseminated	**2.2.** no. of dissemination and training programs implemented regarding FMs and best practices for sustainable land and forest management, biodiversity conservation and soil degradation. **3.3** no of dissemination activities on lessons learned in the implementation of pilot area.
LD-2	**2.2** Improved forest management in drylands	**2.2** Types of innovative SFM practices introduced at field level.	**2.3.** no. of FMs for biodiversity and SLM/SFM on private lands strengthened and implemented within the Project area. **3.2.** Surface area with Integrated Land Management Plans for soil, water and forest, within the Conservation District pilot area.
		2.4 Appropriate Actions to diversify the financial resource base.	**2.3.** no. of FMs for biodiversity and SLM/SFM on private lands strengthened and implemented within the Project area. **2.4.** no. of instruments promoted and strengthened for certifying good productive practices for SLM/SFM in sustainable markets.
	2.3 Sustained flow of services in forest ecosystems in drylands	**2.5** Information on SFM technologies and good practices guidelines disseminated	**2.2.** no. of dissemination and training programs implemented on FMs and good practices for sustainable management of soils and forests, biodiversity conservation, and soil

			degradation. 3**.3** no of dissemination activities of lessons learned in the implementation of pilot area
LD-3	**3.1** Enhanced cross-sector enabling environment for integrated landscape management	**3.1** Integrated Land Management Plans developed and implemented.	**2.3.** no. of FMs for biodiversity and SLM/SFM on private lands strengthened and implemented within the Project area. **3.2.** Surface area with Integrated Land Management Plans for soil, water and forests in a Conservation District pilot area.
		3.3 Appropriate Actions to diversify the financial resource base.	**2.3.** no. of FMs for biodiversity and SLM/SFM on private lands, strengthened and implemented within the Project area. **2.4.** no. of instruments promoted and strengthened for certifying good productive practices for SLM/SFM in sustainable markets.
	3.2 Integrated landscape management practices adopted by local communities	**3.4** Information on INRM technologies and good practices guidelines disseminated	**1.3.** no. of municipalities with personnel trained in biodiversity, ecosystem services and sustainable territorial planning. **1.4.** no. of municipalities participating in a coordinated manner within the Project area. **1.5.** no. of municipalities applying schemes for strengthening local environment management (LEM) for conservation of biodiversity and ecosystem services, in decision-making on the municipal level (strengthened MECS's, conservation landscapes, sustainable commune). **2.5.** no. of education and awareness programs on forest, biodiversity and ecosystem services, for relevant local stakeholders (municipalities, community, public services).
SFM/REDD+ -1	**1.3** Good management practices adopted by relevant economic actors	**1.3** Types of services generated through SFM.	**2.1** no. regional monitoring programs for determining the status, pressure and response of key attributes of biodiversity – ecosystem services and soil degradation. **2.3.** no. of FMs for biodiversity and SLM/SFM on private lands strengthened and implemented within the Project area. **2.4.** no. of instruments promoted and strengthened for certifying good productive practices for SLM/SFM in sustainable markets. **3.2**. Surface area with Integrated Land Management Plans for soil, water and forest in the Conservation District pilot area.

3.8. Sustainability

234. Project sustainability, understood to signify the continuity of its benefits once its execution stage is finalized, has been taken into account since the activities of each component were designed, incorporating those factors which impact the sustainability conditions of the interventions that are expected to be developed. In this manner, several factors have been incorporated for guaranteeing said continuity, and these are explained below:

235. Factors related to political support for the Project. Long-term political support, at all levels (local, regional and national) is necessary for achieving the Project's objectives and to assure continuity of its proposals. This is true for all three of its components, activities such as strengthening local environmental governance capacity, including regulating natural areas with relevant biodiversity linked to GIS systems; modifying the Regulation of the Native Forest Law in order to promote sustainable use of the forest and reduce soil degradation; and declaring, for the first time in Chile, an instrument for conservation of soil, water and forests. For this reason, the Project's actions will be supported by different institutions, through their inclusion in program documents, given the Project's coherence with the objectives of different Chilean Government strategies, plans, policies and programs.

236. On the local level, it is important to reach agreements with the Municipal Councils and the Mayors and to include LEM actions in their respective Municipal Development Plans (known as PLADECO in Chile) or other LEM instruments. On the regional level, the Project's actions are in line with the Regional Strategies for Biodiversity Conservation, led by the Regional Governments and the Environment Ministry Regional Secretariats; with the Regional Development Strategy and agreements reached between the Environment Ministry and the Regional Governments. On the national level, it is of relevance that the Project's proposals are in line with the National Policy and Strategy for biodiversity conservation and the Program for ecosystem conservation, among others.

237. Factors related to developing capacities for sustainability among the Project's stakeholders, such as generating and strengthening institutional capacities in the realm of protection of biodiversity ecosystem services, guaranteeing coherence between the stakeholders' capacities and the Project's objectives. In this manner, the Project's component 1 consists of an integrated training program targeting municipal personnel which makes it possible to strengthen local environmental governance capacity and to continue and replicate the initiatives implemented during Project execution. This program or strategy will include, in addition to strictly technical activities as in GIS technologies, actions contributing to improving the level of awareness and the involvement of personnel regarding the importance of conservation, sustainable development and the social benefits it entails. Another factor which promotes the sustainability of actions undertaken, is to be able to articulate the different stakeholders, promoting coordination, creating spaces for dialogue, transferring responsibilities, and the involvement of the different stakeholders involved with the Project in all of its components.

238. Factors related to involvement of the beneficiary population, which include socio-cultural aspects, gender equality and community participation. These three factors were taken into account during the Project's design phase and will be considered during establishment of strategies for communication, education and awareness developed under component 2, as well as the participation of productive stakeholders within the Project area. What is proposed is of direct benefit to the community, through education and awareness actions in the pilot areas. In relation to gender issues, the Project will support women through the INDAP's financial mechanism (for small producers), where especially will be benefited women´s households. Because, they are the majority of applicants for activities related with certified products and also internationally, women have been identified as a key element in communicational strategies to overcome environmental barriers.

239. Factors related to Project design, which include, first of all: that the relevant stakeholders have good access to the information generated by the Project. To this end, it is proposed that all the Project's results be

classified and catalogued into a GIS platform, and that they be published in some form that expedites their communication and replicability, in addition to monitoring biodiversity and services status beyond Project completion. Second: technology and appropriate transfer thereof, wherein best practices for sustainable management of soils, forests and biodiversity proposed and implemented by the Project are clear, explicit and in accordance with the local reality, will be adjusted to their surroundings, and their easy application will be sought.

240. Third: the economic and financial aspects which make possible the sustainability and implementation of some actions have also been included. In this respect, efforts will be made to identify sources of financing as well as establishing or recognizing some alternatives which make it possible to implement practices both in local governments and at the production level. Fourth: technical cooperation between different services has been incorporated since the Project's design phase, where there would exist active participation of different representatives of public services and local governments, for the purpose of empowering them of the initiative and carrying out synergic actions, making their continuity possible. And fifth: the location of the pilot actions will constitute a key factor toward making their viability and their replicability possible. It is vital that the selection criteria for the pilot areas include aspects such as access, means of transport, economic, social and environmental conditions, as well as political interest and support, which will make it possible to carry out, within the stipulated deadline, the different activities, and measure their impact.

241. In summary, all actions to be implemented by the Project will be undertaken with the following sustainability principles in mind:

- Encouragement of a sense of appropriation
- Empowerment of the stakeholders involved
- Promotion of the desired cultural changes
- Awareness on the part of the different stakeholders
- Communication regarding experiences and agreements
- Adaptation to the surroundings, compatibility with local development processes, reality and gradualism

3.9. Replication

242. The replicability of Project initiatives, understood to be the Project's ability to produce a demonstration effect and to be adopted as a model experience for other zones in Chile engaged in similar activities, supposing a multiplication effect of its benefits thanks to its capacity for constituting a reference model, will be present in the design of every activity that is carried out. In this manner, in addition to generating necessary changes on the legislative and regulatory level, improving capacities and other factors which make sustainability possible, the Project will implement various demonstration activities in pilot areas beginning in its second year of execution, in order to promote their replicability in other Project areas, as well as throughout the nation.

243. In general, the Project will make it possible to progress in three realms of environmental management of great interest to Chile: make a relevant quantitative leap in all aspects of local environmental management, especially in biodiversity conservation; generate information on biodiversity and ecosystem services and create a local and regional level monitoring system, all linked to GIS management system; and perfecting

existing instruments for production development so as to support the fight against soil, water and forest degradation. Progress in these three realms is necessary throughout Chile, so that the Project is including actions for facilitating access to information by those interested parties on the national level.

244. Collaboration alliances with the different public services, local governments, productive stakeholders and the community, as well as strategies for publicizing of results and demonstration pilot actions, have as their prime objective replicability of the successful Project initiatives, as well as the lessons learned, so that those who wish to apply any of the methodologies developed by this Project do not make the same mistakes and are successful in their own endeavours. In order to promote replication of Project experiences, it is necessary to organize, classify and catalogue all the processes and results of the actions carried out during the execution phase, and their permanent dissemination beyond Project termination.

245. On the local level, all the initiatives which will be developed in order to strengthen municipal environment governance capacity will be replicable by other municipalities throughout the country. To this end, the schemes fostered by the Environment Ministry for this purpose will include management and protection of the natural heritage, whose requirements will be applicable to all the municipalities in Chile who wish to utilize them, not just those within the Project area. The same concept will apply to the Model Municipal Ordinance for sustainable territorial management.

246. On the regional level, the methodologies to be applied for gathering information about biodiversity and ecosystem services, ecological zoning, sustainable territorial planning and biodiversity monitoring system proposals, will be reached by consensus with representatives of the academic world and competent public services, so that there be backing and support in the selection of said methodologies, guaranteeing that they be replicable in other zones in Chile. In the same manner, the ministerial program for indicative ecological territorial planning of the zones with relevant biodiversity within the Project area, will serve as an example to be replicated in other regions.

247. As for the proposals for best productive practices and land plans for sustainable management of soil and forests which will be promoted and implemented during Project execution, these too will be reached by consensus with the competent bodies and the academic sector, in addition to validating the already existing practices which can be enhanced or improved. Their replication is based on the fact that these practices comply with requisites from different sectoral programs and strategies, so that these public services can circulate them and incorporate them into their proposals, in addition to obtaining financing for their application, through the financing mechanisms which exist in Chile. In this manner, too, the proposals and modifications to regulations which are carried out for the purpose of improving the current incentives will have a nationwide application. Furthermore, the pilot projects implemented during the Project's execution stage will be communicated to other productive stakeholders, through field samples, cost-benefit details and training on the methods used, so that they can be replicated on their properties, too.

248. Regarding the instrument of Conservation District for soil, forest and water, never before utilized in Chile, its application will make it possible for its process for formal declaration, establishment of a district master plan among the competent bodies, the implementation of its activities and other actions for achieving this instrument's objective, to constitute a reference and an example to be followed in order to have this legislation declared in other Chilean zones. This is one of this Project's challenges, and it will involve many sectors and numerous stakeholders.

3.10. Public Awareness, Communications and Mainstreaming Strategy

249. To increase concern for and awareness of biodiversity and its ecosystem services is one of this Project's prime objectives, since, as has been stated above in section 2.3, the lack of knowledge of biodiversity and sense of its value and importance is one of the underlying causes of the continuous deterioration of the area's biological corridors.

250. The Project proposes to draw up a strategy for building public awareness and consciousness, which includes carrying out an annual communications program regarding the need to protect biodiversity and its ecosystem services, targeting mainly the relevant local stakeholders: landowners, municipalities organizations, business people, public staff, and other stakeholders identified in section 2.5 (stakeholders analysis). All of this for the purpose of increasing participation and involvement of these stakeholders, regarding the importance and the conservation of the mountain ecosystems that are present in their municipalities' territories.

251. Each program will be developed according to what audience it targets. For example, a program is planned for productive stakeholders, located within the areas of influence of the high-biodiversity-value areas, on techniques and case experiences of best-practice implementation, together with the procedures for requesting and obtaining resources through the financing mechanisms the Project will be divulged; another program targets local communities, to teach about their own municipal' biodiversity.

252. Regarding sustainable production campaigns will also be carried out for promoting consuming of products processed in accordance with the concept of green economy, or products processed using environment-friendly practices. Associated with these campaigns, clear and direct messages will be communicated which emphasize the environmental benefits of consuming in a way which is respectful of the need to protect biodiversity.

253. The Project will develop guidelines and manuals for orienting the municipal personnel's labours in environmental management, leaflets, audiovisual materials and publications which communicate the results of the pilot cases in biodiversity management and protection. Exchange of experiences among key stakeholders will take place through workshops, seminars and information events. One effective strategy for mainstreaming and empowering stakeholders in biodiversity protection will be through field trips for reviewing the work being carried out in the intervention sites. These visits will be immediately followed by reflection sessions for analysing how the lessons learned in the pilot sites can be utilized for improving local environment management governance capacity and productive activities.

3.11. Environmental and Social Safeguards

254. Important social and environmental benefits are anticipated from this multi-focal Project, whose purpose is to protect a significant part of the Mediterranean ecosystem present in the mountain zones of the Metropolitan Region. This territory appears as a mosaic of varying uses: agriculture and livestock production, mining exploration and extraction, and human settlements, all dependant on the ecosystem services that the mountain ecosystems provide. The strategy of integrating forests, biodiversity and ecosystem services into the instruments which support best production practices with economic incentives, and into the local government planning which regulate land use, will contribute to restoring and conserving the soils and forests as well as the vulnerable species in the Mediterranean ecosystem, and as well will promote the idea in society of the importance of protecting biodiversity and ecosystem services for sustainable development.

255. Regarding safeguards, the Project will adopt the following environmental safeguards: (i) prior identification of conservation priorities and objects (species/ecosystems/ecosystem services) on the sub-ecoregional and administrative levels (Region, municipality); (ii) respect for standing international agreements in the area of biodiversity, combating desertification and climate change effects, as well as the national, regional and municipal policies and programs; (iii) establishment of strategies for sustainable management of soil and forests, based on LEM and the normative framework for natural resources; and (iv) keeping a strategic focus on threat control and continuous monitoring of biodiversity, ecosystem services and soil and forest degradation.

256. Regarding social safeguards (including cultural ones) the Project will include the following: (i) respect for the traditional practices of the communities present in the Project's intervention area; (ii) respect for property rights and legitimate possession of land, and of those rights associated with the use of land and natural resources; (iii) consideration for the interests and objectives of the stakeholders involved within the Project area; (iv) permanent supply of information to the local communities, facilitating permanent information and participation mechanisms; and (v) transparency in managing information about any aspect of the Project, such as territorial focalization, Project duration and specific interventions, beneficiaries and resources related directly to Project implementation.

SECTION 4: INSTITUTIONAL FRAMEWORK AND IMPLEMENTATION ARRANGEMENTS

257. This Project is directed by the Environment Ministry (EM), which will act as executing agency, in alliance with the implementing agency (UNEP) and the Agency for International Cooperation (AGCI), which will provide administrative support to the EM. Its objectives address the concern and interest that these three institutions share for protection and conservation of fragile ecosystems such as the Mediterranean ecosystems in Central Chile.

258. From the Project design phase, a directing board was created, incorporating different governmental and non-governmental institutions, in order to include the main stakeholders involved in the realms of biodiversity and sustainable management of forests and soils, incorporating their opinions and agreements. In the same manner, for the execution stage a Project Steering Committee (PSC) will be established, presided by an Environment Ministry representative in collaboration with the Project Operational Coordinator (POC) and a UNEP representative, and will include different partners (see details of the external structure in Appendix 10), who will meet at least twice a year. The PSC's main functions will be to assure compliance with the Project's objectives, carry out tracking of its activities, offer strategic guidance and supervise compliance with the annual work plans, collaborate in inter-institutional coordination, and guarantee the active participation and compliance with the commitments acquired by the institutions they represent, as well as revising the reports of Project evaluation, monitoring and tracking, at mid-term and at the end of the process.

259. The Project partners (members of the PSC and other strategic partners), will contribute to implementation of the different activities included in the Project, cofinancing initiatives in all three components, as well as providing information, technical and institutional support, and assistance in implementing pilot projects. Their collaboration will be formalized through agreements whose duration will extend through the five years of Project execution (2015-2019). In this respect, Technical Boards (TB's) will be

set up, to be directed by specific technical coordinators, in order to support managing and decision-making in the different realms of the Project.

260. The Environment Ministry will be in charge of guaranteeing correct Project execution, coordinating, monitoring and evaluation of Project objectives' fulfillment. For this purpose, it will designate one of their staff professionals as the Project Operational Coordinator (POC), who will preside over the Project Management Unit (PMU) and will coordinate with the implementing and executing agencies, and any other ministerial staff member at the Division Head level or above who will be presiding over the PSC.

261. The Agency for International Cooperation, in its administration support role, will be in charge of administrating the Project's funds and accounting, hiring of the executing team (see internal structure in Appendix 10), as well as arranging for outside consultancies, in addition to the acquisition of all goods and services necessary for accomplishing the Project's objectives. Furthermore, it will be in charge of executing some of the Project's education and awareness activities, financed by strategic partners. This agency will act in coordination with the Environment Ministry, which will supervise it through the Project Operational Coordinator (POC).

262. UNEP, as the implementing agency, will be in charge of Project supervision, tracking and evaluation, including supervision of the mid-term and final evaluations, and revising and approving semester and annual reports (both financial and technical). It will as well offer guidance regarding global environment benefits (GEB), analysis and technical support in pertinent fields, and other liaison and coordinating actions necessary for correct Project implementation.

263. The Project Management Unit (PMU) will be responsible for operational planning, managing the budget and the execution of all Project activities, as well as drafting terms of reference and selecting the necessary outside consultancies. It will prepare the coordination meetings with the different partners and the PSC, as well as the Project's annual plans, evaluation and monitoring reports and others as needed. The PMU will consist of the Project Operational Coordinator (POC), the three division coordinators and the administrative assistant. The PMU will report to the executing and implementing agencies.

264. The Project Operational Coordinator (POC) will be the Environment Ministry's representative and will be in charge of the Project's technical and administrative direction, coordination and operational planning, and will coordinate with the executing and implementing agencies. In addition, she/he will provide technical guidance for the different Project components, coordinate with the strategic partners, and select executing staff as well as every consultancy which is necessary for fulfilling the Project's goals.

265. The three division coordinators, Local Environment Management (LEM), Biodiversity (BD), and Sustainable Management of Forests and Land (SFM/SLM), will be in charge of executing and monitoring all activities within their technical area, coordinate the respective teams as well as the pertinent external consultants, provide technical assistance, supervise fulfillment of the targets for each area and liaise with the POC.

266. The Supporting Professionals will be part of the technical divisions, under the supervision of the technical coordinators, and must execute the pertinent actions in order to meet the stipulated targets per area and/or component.

267. The Logistic Support (LS) will provide support to the POC and division coordinators in all administrative matters associated with Project execution. He/she will be in charge of organizing meetings or other activities,

hiring services by PMU mandate, keeping the POC agenda, keeping meeting minutes, coordinating PMU activities, calling meetings and confirmations, receiving and distributing mail, among other functions.

268. The person in charge of Information, Education and Communication (IEC) will provide support to the POC and division coordinators in everything related to Project communications activities and be in charge of executing the education and extension strategy.

SECTION 5: STAKEHOLDER PARTICIPATION

269. During the Project design phase, a series of technical meetings and consultations were held with different key stakeholders in order to incorporate their views into the Project regarding the design of each component's products, activities, the logical framework, identification of synergies with other initiatives, coherence with policies, plans and/or programs, identification of shortcomings and needs, diagnosis of threats, activities already carried out or to be carried out within Project realms, compiling information gathered within the area, collaboration and participation agreements, among others. An analysis of the most relevant stakeholders, their potential impact on the Project, synergies and contributions are detailed in Section 2.5 and synergies with other GEF and non-GEF initiatives in Section 2.7.

270. During this stage and with the intention of involving the main stakeholders in the details of Project design, a directing board was created, by incorporating the Environment Ministry, through two divisions (Natural Resources/Biodiversity, and Education/LEM), the Environment Ministry Regional Secretariat (SEREMI EM) for the Metropolitan Region, the Agriculture and Livestock Department (SAG), the Sendero de Chile, Foundation, the Chilean Regional Government (GORE), the Chilean National Forestry Corporation (CONAF), and the NGO, The Nature Conservancy (TNC). This Board met monthly and bimonthly, following the details of the Project's progress.

271. Various technical meetings took place with different stakeholders representing public services, the academic world, and both national and international NGO's. At these meetings, the initiative was made known, synergies were identified with other existing actions, information gathered within the Project area was obtained, and work was carried out on design and methodology for the }outputs of each component.

272. Regarding involvement of the local governments (municipalities), working meetings were held with two municipal associations present within the Project area (the Cordillera Park Association and the Rural Municipalities Association [AMUR]), which represent 22 of the 36 municipalities present in the Project area. In addition, a participative workshop was held (methodology known as World Coffee), where all the people in charge of the environment from the municipalities involved were invited to attend, the Project was presented, and work groups were organized to provide their views on the scope of the Project and to enrich its outputs and activities, especially regarding component 1 which deals with strengthening local environment governance capacity.

273. Also during Project design, both physical and virtual meetings were held, with representatives of different GEF initiatives (finalized, in the design phase, and on-going), with which synergies will be established.

274. As a result of this whole consulting process, the interest and will to participate in the execution phase as well was confirmed, through technical boards for the different outputs, tracking tools and monitoring of the Project's actions, cofinancing of the activities, synergy with the initiatives, among other considerations.

Concerning the stakeholders whose participation is vital for fulfilling the Project's objectives, this was formalized through collaboration agreements to extend throughout the Project's execution phase, in addition to cofinancing commitments, the texts of which appear below in Appendix 12.

275. The following table indicates key stakeholder participation during the Project's execution phase and the number of people per stakeholder who participated during the Project design phase:

Table 12. Stakeholder Participation

Key Stakeholders	Participation in the Project	Participants in Project design phase (classified by gender)	
		Women	Men
Government Agencies. National Level			
EM. Natural Resources and Biodiversity Division	Ministerial counterpart in all Project stages. Directs the initiative. Seeks support and cofinancing of actions.	1	1
EM. Education and LEM Division	Strengthening LEM (comp. 1) and cofinancing actions.	4	1
EM. Research Division	Technical support in the realm of valuing ecosystem services.	4	1
National Assessts Ministry (NAM)	Support in implementation of practices for biodiversity conservation in public mountain properties (Component 2) and cofinancing.	2	3
Agriculture Ministry (MINAGRI)	Promoting best practices in the different productive activities in which the Project will work (component 2), key role in fulfilling the component 3 objective, and cofinancing actions.	0	1
Council for Clean Production (CCP)	Promoting and implementing Clean Production Agreements (CPA's), in different productive areas (component 2), and cofinancing actions.	0	4
Chilean National Production Development Corporation (CORFO)	Possible financing of best productive practices projects related to components 2 and 3.	1	0
Chilean National Forestry Corporation (CONAF)	Key stakeholder for product 2.2, on sustainable forest management, and cofinancing of related actions, in addition to support for component 3.	0	3
Institute of Agricultural Development (INDAP)	Support in promoting best practices in agriculture among small-scale producers (component 2), financing related activities, and participation in implementation of component 3.	2	0
Chilean National Tourism Bureau (SERNATUR)	Technical support in the area of best practices for the tourism sector (component 2)	0	1
Under-Secretariat for Regional Development (SUBDERE)	Technical support and cofinancing of initiatives for strengthening LEM through municipal associations (component 1).	2	2
Government Agencies. Regional Level			
Chilean Regional Government (GORE)	Technical support and key stakeholder for cofinancing different Project products contained in components 1 and 2.	0	1
Environment Ministry Regional Secretariat SEREMI EM MR	Technical support for strengthening LEM, biodiversity and education (Component 1 and part of component 2) and cofinancing of activities in the Metropolitan Region.	5	1
Valparaíso R. Environment Ministry Regional Secretariat SEREMI EM V	Technical support for strengthening LEM, in biodiversity and education (comp. 1, and part of component 2) in all six of the Valparaíso municipalities.	0	1
MR Agriculture SEREMI	Promoting best practices in the different productive areas in which the Project will intervene (component 2), key role in fulfilling the objective of component 3, and cofinancing actions.	1	0
MR SAG	Key role in promoting best practices in the different productive areas in which the Project will intervene (component 2), key role in fulfillment of the objective of component 3, and cofinancing actions.	1	1
MR CONAF	Support for product 2.2, on sustainable forest management, and co-financing of related actions, in addition to support for component 3.	0	1
Rural Municipalities Association (AMUR)	Key stakeholder for strengthening local environment management (component 1)	0	2
Association of Cordillera Park Municipalities	Key stakeholder for strengthening local environment management (component 1)	1	0

Government Agencies. Local Level			
Municipalities within the Project area (36)	Key stakeholders for implementation of all actions for strengthening local environment management fostered by the Project, plus articulation with productive stakeholders and the community (component 2).	10	9
National NGO's			
Sendero de Chile Foundation	Support for actions in tourism, education and LEM, and co-financing.	2	3
Chile Sustainable Program	Support for strengthening LEM in San José de Maipo Municipality (comp. 1) and promoting best productive practices (components 2 and 3).	1	0
Foundation for Overcoming Poverty. Country Service	Support for strengthening LEM (component 1) and cofinancing activities.	1	0
Fundación Chile	Technical support for activities in component 2 (certification and best practices)	2	1
AdaptChile	Support for work with municipalities for strengthening LEM (component 1)	0	2
International NGO's			
The Nature Conservancy (TNC)	Technical support and cofinancing activities, mainly productive activities and education (component 2), and gathering data in monitoring BD and ES's.	2	2
Wildlife Conservation Society (WCS)	Technical support for promoting a portfolio for biodiversity compensations (component 2, activity 2.3.4.)	2	0
EPIC of the IUNC	Support in supplying information regarding management for conservation of biodiversity and ecosystem services (component 1, product 1.2)	1	0
Academic Institutions			
U. de Chile. Agronomic Sciences Faculty.	Technical support and cofinancing activities, mainly productive activities (comps. 2 and 3), and in monitoring biodiversity and ecosystem services.	0	1
U. de Chile. Ecology and Biodiversity Institute	Possible technical support in monitoring and conservation of biodiversity and ecosystem services.	0	1
U. Mayor. Center for Natural Resources Studies (OTERRA)	Possible technical support for sustainable forest management.	0	1
U. Católica de Chile. Center for Global Change	Possible technical support for promoting best productive practices in the realm of water conservation.	0	1
U. Mayor. Center for Eco-Toxicogical Research (CIE)	Support in management of the *Cerro El Roble* natural area (conservation actions)	1	1
U. Católica de Chile. Center for Sustainable Urban Development (CEDEUS)	Possible technical support in monitoring and conservation of biodiversity and ecosystem services.	0	1
U. Católica de Chile. Dept. of Agrarian Economy.	Possible technical support in monitoring and conservation of biodiversity and ecosystem services.	0	1
Other GEF Initiatives			
GEF ID 1377 (executed 2001-2006)	Utilization of information gathered in the Project area foothills, and methodological analysis	1	1
GEF ID 1725 (executed 2005-2010)	Utilization of information gathered in the Project area foothills and coast and methodological analysis	1	1
GEF ID 2772 (on-going)	Synergy with methodology utilized for LEM Conservation Landscape scheme in Alhué Municipality (located in the Project area)	0	2
GEF ID 4104 (on-going)	Synergy in methodology for promoting sustainable land management	0	2
GEF ID 3807 (on-going)	Synergy in methodology for monitoring ecosystem services	1	0
GEF ID 3807 (executed 2009-2012)	Revision of methodology utilized for quantifying ecosystem services and SLM/SFM activities	s/i	s/i
GEF ID 2391 (on-going)	Revision of methodology utilized for promoting bio-commerce	s/i	s/i
GEF ID 4857 (on-going)	Revision of coherence with the biodiversity management proposals on the national level	1	0
GEF ID 3951 (on-going)	Synergy with methodology for monitoring ecosystem services and possible implementation of FSC certification	1	0

GEF ID 4939 (on-going)	Synergy with local community activities and activities with the municipalities	2	1
GEF ID 1859 (executed)	Revision of methodology utilized and products obtained in strengthening LEM, and promoting best productive practices	1	1
	Total participants in design stage by gender	**54**	**56**

SECTION 6: MONITORING AND EVALUATION PLAN

276. The project will follow UNEP standard monitoring, reporting and evaluation processes and procedures. Substantive and financial project reporting requirements are summarized in Appendix 8. Reporting requirements and templates are an integral part of the UNEP legal instrument to be signed by the executing agency and UNEP.

277. The project M&E plan (Appendix 7) is consistent with the GEF Monitoring and Evaluation policy. The Project Results Framework presented in Appendix 4 includes SMART indicators for each expected outcome as well as mid-term and end-of-project targets. These indicators along with the key deliverables and benchmarks included in Appendix 6 will be the main tools for assessing project implementation progress and whether project results are being achieved. The means of verification and the costs associated with obtaining the information to track the indicators are summarized in Appendix 7. Other M&E related costs are also presented in the Costed M&E Plan and are fully integrated in the overall project budget.

278. The M&E plan will be reviewed and revised as necessary during the project inception workshop to ensure project stakeholders understand their roles and responsibilities vis-à-vis project monitoring and evaluation. Indicators and their means of verification may also be fine-tuned at the inception workshop. Day-to-day project monitoring is the responsibility of the project management team but other project partners will have responsibilities to collect specific information to track the indicators. It is the responsibility of the Project Manager to inform UNEP of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.

279. The project Steering Committee (PSC) will receive periodic reports on progress and will make recommendations to UNEP concerning the need to revise any aspects of the Results Framework or the M&E plan. Project oversight to ensure that the project meets UNEP and GEF policies and procedures is the responsibility to the Task Manager in UNEP-GEF. The Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.

280. At the time of project approval 100% percent of baseline data is available. Any possible baseline data gaps will be identified and addressed during the first year of project implementation. Project supervision will take an adaptive management approach. The Task Manager will develop a project supervision plan at the inception of the project, which will be communicated to the project partners during the inception workshop. The emphasis of the Task Manager supervision will be on outcome monitoring but without neglecting project financial management and implementation monitoring. Progress vis-à-vis delivering the agreed project global environmental benefits will be assessed with the PSC at agreed intervals. Project risks and assumptions will be regularly monitored both by project partners and UNEP. Risk assessment and rating is an integral part of the Project Implementation Review (PIR). The quality of project monitoring and evaluation will also be reviewed

and rated as part of the PIR. Key financial parameters will be monitored quarterly to ensure cost-effective use of financial resources.

281. UNEP will be responsible for managing the mid-term review/evaluation and the terminal evaluation. The Project Manager and partners will participate actively in the process. The project will be reviewed or evaluated at mid-term (tentatively in PY 3 as indicated in the project milestones). The purpose of the Mid-Term Review (MTR) or Mid-Term Evaluation (MTE) is to provide an independent assessment of project performance at mid-term, to analyze whether the project is on track, what problems and challenges the project is encountering, and which corrective actions are required so that the project can achieve its intended outcomes by project completion in the most efficient and sustainable way. In addition, it will verify information gathered through the GEF tracking tools. The project Steering Committee will participate in the MTR or MTE and develop a management response to the evaluation recommendations along with an implementation plan. It is the responsibility of the UNEP Task Manager to monitor whether the agreed recommendations are being implemented. An MTR is managed by the UNEP Task Manager. An MTE is managed by the Evaluation Office (EO) of UNEP. The EO will determine whether an MTE is required or an MTR is sufficient.

282. An independent terminal evaluation (TE) will take place at the end of project implementation. The EO will be responsible for the TE and liaise with the UNEP Task Manager throughout the process. The TE will provide an independent assessment of project performance (in terms of relevance, effectiveness and efficiency), and determine the likelihood of impact and sustainability. It will have two primary purposes:

i. to provide evidence of results to meet accountability requirements, and

ii. to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP and executing partners.

283. While a TE should review use of project funds against budget, it would be the role of a financial audit to assess probity (i.e. correctness, integrity etc.) of expenditure and transactions.

284. The TE report will be sent to project stakeholders for comments. Formal comments on the report will be shared by the EO in an open and transparent manner. The project performance will be assessed against standard evaluation criteria using a six point rating scheme. The final determination of project ratings will be made by the EO when the report is finalized. The evaluation report will be publically disclosed and will be followed by a recommendation compliance process.

285. The direct costs of reviews and evaluations will be charged against the project evaluation budget.

286. The GEF tracking tools are attached as Appendix 15. These will be updated at mid-term and at the end of the project and will be made available to the GEF Secretariat along with the project PIR report. As mentioned above the mid-term and terminal evaluation will verify the information of the tracking tool.

SECTION 7: PROJECT FINANCING AND BUDGET

7.1. Overall Project Budget

287. The overall Project budget is presented in detail in Appendix 1 (budget by Project component, by year, and by UNEP budget category) and in Appendix 2 (cofinancing by origin and by UNEP budget category). The additional cost necessary for fulfilling the Project objective and the corresponding global benefits is $ 32,609,605 US of which $ 5,657,201 (17.35%) constitutes the amount requested from the GEF. Co-financing amounts to $ 26,952,404 US, equivalent to 82.65% of the total amount required.

288. A summary of the GEF budget by result is as follows:

Financing Plan Summary for the project (USD)			
	Project Preparation (PPG)	**Project Grant**	**Total**
GEF	$ 150,000	$ 5,657,201	$ 5,807,201
Co-financing	$150,000	$ 26,952,404	$ 27,102,404
Total	**$300, 000**	**$ 32,609,605**	**$32,909,605**

Project Framework Summary (USD)					
Components	**GEF-financing**		**Co-financing**		**Total**
	$ (a)	**%**	**$ (b)**	**%**	**c=a+b**
1. Local Environmental Management (LEM)	$2,034,140	36	$7,483,235	27.8	$ 9,517,375
2. Sustainable Land and Forest Management (SLM/SFM)	$2,206,821	39	$13,379,174	49.6	$ 15,585,995
3. Conservation District	$1,146,890	20	$ 4,789,995	17.8	$5,936,885
Project Management Cost	$269,350	5	$ 1,300,000	4.8	$ 1,569,350
Total project cost	**$5,657,201**	**100**	**$26,952,404**	**100**	**$32,609,605**

7.2. Project Co-financing

289. Co-financing by budget line is presented in Appendix 2. Co-financing by expected outcome is presented in the following table:

Table 13. Co-financing by Project Outcome

PARTNERS	CO-FINANCING BY COMPONENTS				
	Component 1	Component 2	Component 3	Project Management cost	Total (USD)
Chilean Environment Ministry	2,400,000	2,400,000	586,327	1,300,000	6,686,327
Council for Clean Production	0,000	389,136	0,000	0	389,136
National Forestry Corporation	217,000	217,000	217,000	0	651,000
Agriculture and Livestock Department (SAG), Metropolitan Region	545,455	1,332,000	1,332,000	0	3,209,455
Institute of Agricultural Development (INDAP), Metropolitan Region	347,500	6,000,000	1,000,000	0	7,347,500
Municipality of Alhué	591,050	0,000	0,000	0	591,050
Municipality of Calera de Tango	747,273	0,000	0,000	0	747,273
Rural Municipalities Association (AMUR)	880,291	0,000	0,000	0	880,291
Cordillera Park Association	718,939	718,939	718,940	0	2,156,818
Agronomy Faculty, University of Chile	359,454	359,454	359,456	0	1,078,364
Forestry Faculty, University of Chile	526,273	526,273	526,272	0	1,578,818
La Parva (Sky Company)	0,000	48,182	0,000	0	48,182
Fundación Chile (NGO)	0,000	318,182	0,000	0	318,182
La Florida (Mining Company)	0,000	920,008	0,000	0	920,008
UNEP	150,000	150,000	50,000	0	350,000
Total	**7,483,235**	**13,379,174**	**4,789,995**	**1,300,000**	**26,952,404**

7.3. Project Cost-effectiveness

290. The profitability of this Project is based on maximizing the impact of the present investments by the Environment Ministry, the Agriculture Ministry, the Municipalities, other Public Services, NGO's and private landowners, in addition to achieving recognition of the provision of multiple benefits generated by the mountain ecosystems. In the interest of achieving this, the Project will provide specific technical and political assistance to the main stakeholders on both the municipal and regional levels, with tools for territorial environment management and training in biodiversity and ecosystem services conservation matters; also, for the community and landowners, techniques for managing soil and forests, and training in financing mechanisms for implementing best practices for land and forest conservation. Without the Project's contributions, it is very likely that the funds presently available will not reach the relevant local stakeholders nor will they be disbursed adequately for promoting best management practices in the mountain corridors of the Mediterranean Eco-Region in Chile's Central Zone.

291. In considering Project profitability, it is important to keep in mind that one key Project focus is communication and replicability of the lessons learned beyond just the intervention areas, by working in close collaboration with local, regional and national authorities in such a way as to maximize the impact of the expected results within the Project area and throughout Chile. Although present efforts involve considerable investments within the Project area (see Project Baseline, Section 2.6 and coherences with national plans or priorities in Section 3.4), the technical tools needed for adequately orienting decision-making and the capacities for territorial environment regulation on the level of municipal management are lacking.

292. Furthermore, present national incentive programs for soil and forest management have not yet developed an adequate technical adaptation or applicability in accordance with the needs of Mediterranean-type ecosystem management. Therefore, the Project will carry out activities for addressing these fundamental issues, articulating the main stakeholders and mobilizing the available funding. In this way, the Project will prove itself to be profitable, conducting the required changes, not only within the direct intervention sites, but also in sectors outside the Project area with similar characteristics, within Chile's Mediterranean zone, utilizing strategic investments combined with national incentives plans and programs.

293. In addition, this Project involves providing multiple benefits through global understanding of the synergies and links between all of them. Valuing, understanding, conservation and sustainable management of the mountain ecosystems will contribute to improving the biological corridors and the flow of ecosystem services in natural and productive landscapes, improving in this way the lives of the local communities, guaranteeing the supply of relevant environmental services (water supply, air quality, and carbon capture) in an area of over 1,100,000 Hectares. A GEF investment of US$ 5.6 million catalysing co-financing by Chilean institutions of over three times this amount, US$26.95 million, for protecting biodiversity and ecosystem services in mountain ecosystems, has to be considered a profitable investment. Through this incremental contribution and the Project's potential for replicability, the available funds will contribute at the same time to restoring biodiversity habitats unique in the world; establishing connectivity between fragmented ecosystems; slowing down of soil and forest degradation; and reducing the rate of carbon release to the atmosphere, by means of improving the natural processes of carbon capture and storage.

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APPENDIXES

Appendix 1: Budget by Project Component and UNEP Budget Lines

See Excel file included

Appendix 2: Co -financing by Source and UNEP Budget Lines

See Excel file included

Appendix 3: Incremental Cost Analysis

BASELINE	ALTERNATIVE	INCREMENT
(A)	(B)	(B) - (A)
COMPONENT 1: Local environmental governance capacity development and knowledge management on biodiversity conservation and sustainable land use.		
Without the GEF intervention, strengthening of capacities in Local Environment Governance within the municipalities will be carried out without a scientific basis and without the development of appropriate tools and instruments for his local management to incorporate protection of biodiversity and its services.	With the GEF intervention, it will be possible to generate knowledge on biodiversity and the ecosystem services which the biological mountain corridors provide, on a scale adequate for informing the proposals for appropriate management of the wild territory within the Project area. It will also provide technical and scientific knowledge, to be used by relevant stakeholders and decision-makers on the local and regional levels.	The identified causes and obstacles preventing local governments and relevant stakeholders from protecting biodiversity and ES's in the biological mountain corridors within the Project area are overcome.
COMPONENT 2: Implementation and promotion of best practices for the sustainable management of landscapes for biodiversity and ecosystem services conservation.		
Some monitoring of biodiversity and its ecosystem services will be maintained, but limited, despite present efforts being made in a dispersed and isolated manner by Public Services, NGO's and the academic world.	In the alternative with GEF support, a monitoring system for biodiversity and its ES's will be designed and put into operation, that is robust and has unified criteria for decision-making on the local and regional levels.	Pressures and threats from productive activities on globally relevant biodiversity and ecosystems are reduced.
The financing mechanisms for incentives in practices which are biodiversity-conservation friendly will continue, but without an appropriate scientific-technical basis for improving them, resulting in widespread application of practices which are not environmentally sustainable.	The GEF contribution will make it possible to generate the technical bases necessary for perfecting various financing mechanisms for supporting best practices, making it possible to adequately focus the incentives for biodiversity protection and combating soil and forest degradation on a real basis, within the scenario of the Mediterranean ecosystem. In addition, it will make possible implementation of sustainable practices for their replicability.	
The financing mechanisms and best practices are made known on the national level but with little information available locally; in addition, these have little local pertinence. Sectoral resources are under-utilized.	The GEF Project will make it possible to apply strengthened extension and training on financing mechanisms applicable to best practices for sustainable forest management, biodiversity conservation and soil degradation.	
There exists a series of instruments and experiences regarding certification in best productive practices, but these are poorly known among the relevant stakeholders within the Project area, due to a weak extension strategy and insufficient promotion of	The Project expects to promote strengthened instruments for certifying best productive practices for SLM/SFM in sustainable markets. In addition, it will carry out campaigns for promoting consumption of	

BASELINE	ALTERNATIVE	INCREMENT
(A)	(B)	(B) - (A)
sustainable markets.	products elaborated in accordance with the green economy concept, and will emphasize the environmental benefits from consuming in a way which is compatible with protecting biodiversity.	
Even though education and awareness-building experiences exist in municipalities within the Regions which include areas of high biodiversity value, the level of knowledge and appreciation of the natural heritage and the importance of carrying out best practices for its conservation is generally low. The lack of knowledge and appreciation of its importance is one of the underlying causes of the continuing deterioration of the biological corridors in the area.	The GEF Project proposes to draw up a strategy for generating awareness and public consciousness, through annual extension programs on different experiences in biodiversity conservation carried out in pilot sites, targeting mainly relevant local stakeholders.	
COMPONENT 3: Pilot-scale application of Integrated Conservation Districts for Soils, Forest and Water legislation.		
The legislation on Integrated Conservation District for soil, forest and water continues to go unheeded, with the result that significant territories with soil degradation do not receive adequate incentives and resources that would allow them to undertake management practices that would halt soil and forest degradation.	With the GEF contribution, work will be carried out to provide an adequate technical basis for a proper Integrated Management Plan for territories with deterioration processes, which will make it possible to implement the first Conservation District for soil, forest and water in Chile.	The loss of biodiversity and soil degradation will be adequately resisted, by applying mechanisms already existing in Chilean legislation, activated and implemented.
BASELINE COST **TOTAL: $8,717,409**	**ALTERNATIVE COST** **TOTAL: $26,050,578**	GEF: $5,387,851 Co-financing: $26,400,578 **TOTAL: $31,788,429**

Appendix 4: Project Results Framework

Objectives, Outcomes and Outputs Expected	Indicators	Baseline	Targets	Source of Verification	Assumptions
Strategic Objective: Contribute to conservation of the forests and biodiversity of worldwide significance, through incorporating sustainable management and use of the territory, for diminishing the pressures and making possible a sustainable flow from forests, ecosystem services and biodiversity.					
Project Objective: To consolidate public-private initiatives to conserve globally significant biodiversity and multiple ecosystem services in the mountain areas of Chile's Mediterranean Ecosystem in the Metropolitan Region.	**<u>Strengthening Local Environment Management (Outcome 1):</u>** Number of municipalities with land use plans developed and validated, evaluation of biodiversity and ecosystem services carried out throughout the Project area, intermunicipal coordination and personnel training carried out, and instruments for local environment management utilized to promote conservation of biodiversity and ecosystem services in mountainous areas of the Mediterranean eco-region (MR and part of Region V).	The municipalities do not usually incorporate into local environment management, conservation and management of their townships' natural heritage. The exceptions to this rule are only about 4 municipalities of the 36 within the Project area which have voluntarily implemented initiatives in biodiversity conservation. The LEM schemes fostered officially by the EM do not require management in these areas either. Furthermore, in Chile there is no norm which makes it possible to regulate land use in non-productive rural areas unless they are under an official protection (SNASPE and others).	At least 5 municipalities with municipal ordinances developed and applied. 100% of the surface in the Project area evaluated. At least 20 municipalities with personnel trained in biodiversity, ecosystem services and territorial planning. At least 10 municipalities participating in a model of municipal coordination for the Project area. At least 5 municipalities with LEM schemes implemented to the conservation of soil, forests, biodiversity and sustainable management of the territory.	The Project Monitoring and Evaluation System will generate the following evaluation and monitoring reports: Minutes of the Steering Committee Meetings, of the Technical Board Meetings, Annual Evaluation Reports, Mid-Term Evaluation Report, Final Evaluation Report, Annual Reports of Associated Institutions, and Evaluation of Work on the Pilot Intervention Sites.	The proposed incorporation of management for the conservation of biodiversity, ecosystem services, and territorial environmental planning, is validated and utilized by local governments and competent participating public services. The productive sectors and competent services validate and apply the tools proposed and strengthened by the Project for promoting sustainable forest and soil management and the conservation of relevant areas for protection of the ecosystem Services. There is political willingness to declare for first time in Chile this legislation Conservation District, as well as the existing

	<u>Promoting best practices for sustainable soil and forest management (Outcome 2):</u> N° of monitoring programs implemented for conservation of forests, biodiversity, ecosystem services and halting soil degradation, extension activities on financing mechanisms (FM) for Biodiversity and SLM/SFM implemented and promoted, financial mechanisms for biodiversity and SLM/SFM in private lands strengthened and implemented within the Project area, instruments promoted and strengthened for certifying best productive practices in sustainable markets, education and awareness programs on biodiversity and ecosystem services targeting relevant local stakeholders, implemented.	Lack of information on biodiversity and sustainable soil and forest management through financing mechanisms, in addition to a low level of integration and public access to the existing information, generate an unfavorable environment for biodiversity conservation and for improvement of the quality and sustainability of the livelihoods of the populations in the mountain corridors in the Metropolitan and part of the Valparaíso Regions.	At least one integrated program for monitoring components of forests, biodiversity, ecosystem services and soil degradation implemented, with at least 5 public entities and 4 private ones utilizing these systems.		financing mechanisms, are articulated and enhance each other for implementing practices for recovery of soil, water and forests.
			At least 25 disseminating and training programs developed on financing mechanisms and best practices for SLM/SFM.		
			At least 2 strengthened FMs on Biodiversity and SFM, with at least 4 FMs and/or practices implemented in BD/SLM/SFM, and at least 50,000 ha with conservation plans for biodiversity and ecosystem services drawn up and/or implemented within the Project area.		
			At least 4 instruments implemented and strengthened in the pilot cases, and their results promoted.		
			At least 5 education and awareness programs (1 per year) on forests, biodiversity and ecosystem services implemented in strategic Project areas.		
	<u>Conservation District Pilot Area (Outcome 3):</u> Surface area formally recognized as a Conservation District within the Project area, Integrated Land Management Plans worked	The Conservation District legislation has been analysed as an alternative for promoting territorial sustainability in deteriorated soils within the Project area. To date, we have available the legal review and the proposed document (Project INNOVA CORFO -	At least 500,000 ha recognized as a Conservation District, with a District Master Plan.		
			At least 200,000 ha of the District with activities implemented from the integrated management plans revised and adapted to the District Master Plan.		

	out and implemented in landholdings within the Conservation District, and communications activities on lessons learned from pilot project implementation carried out.	Santiago Andes), but no such District has as yet been formally declared in Chile, despite the existence of relevant legislation (Law 18,378, art. 3 and 5) which has made establishing this since 1984.	At least 4 extension activities of lessons learned implemented.		

Component 1: Local environmental governance capacity development and knowledge management on biodiversity conservation and sustainable land use.						
Objectives, Outcomes and Outputs Expected	**Indicators**	**Baseline**	**Mid-Term Target**	**Target upon Project Finalization**	**Source of Verification**	**Assumptions**
Expected Result (outcome): Municipal environmental departments apply updated information on the biodiversity components and ecosystem services at a local scale for decision making in land use planning.	1.1. Nº of municipalities with ordinances for regulating land use in wilderness areas and management for conservation of biodiversity, validated and applied.	To date in Chile there is no norm which regulates land use in non-intervened rural areas. Present norms only regulate urban areas. During the Project's PPG phase, and according to the EM's Legal Advisor, this institution will formally establish, by means of a Supreme Decree, a plan of ecological zoning standards for the wild areas of high environmental value involved in the Project, and on the basis of that legal platform, a Model Ordinance will be set up subject to validation and application by pilot municipalities. It should be remembered that even though the ministerial power and the mayors' will are favorable to developing these municipal ordinances, their implementation is complex, given the high costs involved in inspecting them (Municipal Inspectors, four-wheel-drive vehicles and	At least 1 municipality with a municipal ordinance established and applied. Model Municipal Ordinance proposed and validated by the EM and Municipal Associations.	At least 5 municipalities with municipal ordinances established and applied.	Decree Municipal Council's approval of the Ordinance- Model of Municipal Ordinance Document and pilot Municipal Ordinances – Record of Inspections -- Publication of the Ordinance in Municipal Web page	The political will exists on the part of the new Environment Ministry for establishing by Decree management standards for the wild areas within the Project area, utilizing the Ministry's power to propose plans and programs which establish basic preventive criteria for conservation of species, habitats, ecosystems, especially the fragile and endangered ones (Law 19,300 art. 70 letter i). Mayors from the involved municipalities have the political will to incorporate these standards into developing municipal

		equipment, problems of access in the mountainous zones).				ordinances for local environment management before the Project is finalized.
	1.2. Percentage of the Project's total surface area with evaluation of biodiversity and ecosystem services which the biological mountain corridors provide.	Overall, data has been gathered for at least 50% of the surface area. Nonetheless, its overall conservation status has not been evaluated nor that of the ecosystem services it provides. The existing information is heterogeneous, gathered under differing criteria and at varying scales.	100% of the Project surface area evaluated.	100% of the Project surface area evaluated.	Document drawn up with survey results and maps for the whole Project area.	There is willingness on the part of the Public Services to provide the data gathered previously. There is support from landowners for access in order to gather data.
	1.3. Nº of municipalities with personnel trained in biodiversity, ecosystem services and sustainable territorial planning.	At the present time, there are several training initiatives for strengthening LEM in Chile; however until now there has been no training in the role of the municipalities in biodiversity and forest conservation and management. Regarding sustainable territorial planning, the instances are limited regarding soils, forests, biodiversity and ecosystem services.	At least 10 municipalities with trained personnel.	At least 20 municipalities with trained personnel.	Annual Records of personnel attendance – Annual Reports of activity implementation - Programs and terms of reference for training activities.	There is interest on the part of Mayors for training their personnel and on the part of the municipal staff, to participate in the different training opportunities for strengthening LEM in this area.
	1.4. Nº of municipalities participating in a coordinated manner within the Project area.	Within the Project area, municipal coordination can been seen in the form of municipal associations and their numerous operational objective; however at the present time there is no system which coordinates the totality of the municipalities in this Project for the purpose of conserving biodiversity and its	At least 4 municipalities participating in a system of municipal coordination within the Project area.	At least 10 municipalities participating in a system of municipal coordination within the Project area.	Report of coordination and communication mechanisms established. List of Municipalities committed. Annual Report of coordinated activities.	The Mayors and municipal LEM staff are receptive to the idea of being part of the proposed network.

		ecosystem services.				
	1.5. Nº of municipalities applying schemes for strengthening local environment management (LEM) for conservation of biodiversity and ecosystem services, in decision-making on the municipal level (strengthened MECS's, conservation landscapes, sustainable commune).	At the present time, 20 of the 36 municipalities within the Project area are participating in MECS's at different levels, are implementing local environment management and have staff in charge of this. However, the instrument does not take into account conservation and management of biodiversity and its services. This instrument will be complemented with these considerations, in addition to fostering two additional schemes (conservation landscape and sustainable commune), which will also incorporate these issues as mandatory.	At least 2 municipalities with LEM schemes for conservation of soil, forests, biodiversity and sustainable territorial management.	At least 5 municipalities with LEM schemes for conservation of soil, forests, biodiversity and sustainable territorial management.	Documents LEM Instruments which incorporate management of biodiversity and services - Recognition of these schemes through Municipal Decree – List of municipalities implementing said LEM instruments identified- Management Progress Reports in implementation and results from these instruments.	The Environment Ministry authorities are willing to incorporate these issues into the LEM instruments which they foster. Mayors from the municipalities involved are willing to incorporate some of these LEM instruments, including forest and biodiversity management among the requirements.
Expected Products (outputs):						
1.1. Local scale land use plans developed and linked to GIS system of the project area						
1.2. Local-scale assessments on the biodiversity components and ecosystem services of the project area						
1.3. Carrying out a pilot project to enhance personnel capacities in the environmental departments of 36 municipalities						
1.4. Coordination mechanisms set in place for municipalities in the mountain areas						
1.5. Preparation of an upgraded version of the municipal environmental management certification scheme that will include requirements for sustainable land use (SCAM/ECOCOMUNA).						

Component 2: Implementation and promotion of best practices for the sustainable management of landscapes for biodiversity and ecosystem services conservation.						
Objectives, Outcomes and Outputs Expected	**Indicators**	**Baseline**	**Mid-Term Target**	**Target at Project Termination**	**Source of Verification**	**Assumptions**
Expected Result (outcome): The scenario for conservation of biodiversity and key ecosystem services is improved in biological corridors by means of the implementation of best practices for the sustainable management of landscapes and financial incentive mechanisms, emphasizing SLM/SFM and the need to combat desertification.	2.1. Nº no. regional monitoring programs for determining the status, pressure and response of key attributes of biodiversity – ecosystem services and soil degradation.	Dispersed institutional efforts exist, monitoring different indicators of biodiversity, ecosystem services, soil and forest, but the information is neither completely public nor integrated, and there is a lack of field tests of the different indicators under study.	1 integrated regional environment monitoring program for forests, biodiversity and ecosystem services. 1 integrated regional environment monitoring program for soil degradation. At least 3 public entities and 2 private ones are utilizing Project monitoring programs in decision-making (biodiversity, ecosystem services and soil degradation).	1 integrated regional environment monitoring program for forests, biodiversity and ecosystem services. 1 integrated regional environment monitoring program for soil degradation. At least 5 public entities and at least 4 private ones are utilizing the Project monitoring programs in decision-making (biodiversity, ecosystem services and soil degradation).	Methodological Document of Monitoring - Reports of Monitoring Results - Web Page installed – Report of annual information flow on the part of the web page administrator.	Stakeholders involved are receptive regarding the usefulness of the proposed systems, and there is a positive attitude regarding monitoring use and feedback.

	2.2. N° of dissemination and training programs implemented on FMs and good practices for sustainable management of soils and forests, biodiversity conservation, and soil degradation.	The financial mechanisms (FMs) and best practices are publicized on the national level but with little information available on the local level; deficiencies also in local pertinence. Sectoral resources are given little use.	At least two annual extension and training programs developed on financing mechanisms and best practices for SLM/SFM.	At least five annual extension and training programs are developed on financing mechanisms and best practices for SLM/SFM.	Document on the extension-training program - schedule of activities - Invitations- guest list-presentations-photographs of activities	There is a positive attitude on the part of the institutions to publicize the FMs in a manner which is collaborative, continuous and is locally pertinent. A high level of interest on the part of the landowners for participating in the extension activities on implementation of these mechanisms.
	2.3. Nº of FMs for biodiversity and SLM/SFM on private lands strengthened and implemented within the Project area.	Although there is a FM for biodiversity conservation and SFM and trained human resources for implementation, the complexity of the Mediterranean vegetation is not therein recognized, and therefore it cannot fulfill its objectives. The FMs for SLM exist, but they require territorial planning and implementation combined in order to fulfill sustainable land management objectives.	0 FMs strengthened in Biodiversity and SFM. At least 2 FMs implemented for biodiversity and SLM/SFM. At least 50,000 ha with plans for conservation of biodiversity and services drawn up and/or validated within the Project area.	At least 2 strengthened FMs in Biodiversity and SFM. At least 4 FMs and/or pilot practices implemented for biodiversity and/or SLM/SFM. At least 50,000 ha with plans for conservation of biodiversity and ecosystem services drawn up, validated and/or implemented within the Project area.	Back-up application forms for FMs Document "Proposal for strengthening FMs for Biodiversity and SFM" Implementation Reports on FMs – Activities Reports on BD and SLM/SFM best practices pilot projects. Documents on Plans for conservation of biodiversity and ES's, and implementation reports for public and private landholdings within the Project area.	The Public Services show a willingness to discuss and incorporate technical improvements in biodiversity conservation and SLM/SFM in the existing FMs. In addition, there is a willingness to target FMs in an individual or combined manner, within the Project area. Clear and expedient information channels are available for applying for FMs. The landowners are committed and receive support for implementation of the FMs, as well as authorizing pilot projects on their land.

	2.4. N° of instruments promoted and strengthened for certifying good productive practices for SLM/SFM in sustainable markets.	A series of instruments and experiences exist for certifying best productive practices, but these are little known within the Project area, due to a deficient extension strategy and insufficient promotion in the marketplace.	At least 1 best practices instrument implemented among the pilot cases and its results promoted (SAG). At least 1 instrument strengthened within the Project area and its results promoted (CPA).	At least 2 instruments implemented among the pilot cases and its results promoted (SAG + Life). At least 2 instruments strengthened within the Project area and their results promoted.	Application Forms Minutes of Extension Meetings - Disseminating Materials -Reports of best practices implemented – Photographic record.	There will be a willingness to strengthen and implement certification instruments. The Public Services and competent institutions are committed to supporting and disseminating implementation of these instruments. There is interest on the part of local stakeholders for improving their productive systems and implementing best practices compatible with the Project's objectives.
	2.5. N° of education and awareness programs on forest, biodiversity and ecosystem services, for relevant local stakeholders (municipalities, community, public services).	Even where education and awareness experiences exist within the Region's priority areas, the level of knowledge regarding the natural heritage and the importance of applying best practices for its conservation is generally low. This is one substantial obstacle to achieving community empowerment regarding conservation of forests, biodiversity and ecosystem services.	At least 2 annual programs (1 per year) designed and implemented, on forests, biodiversity and ecosystem services for strategic Project zones.	At least 5 education and awareness programs (1 per year) developed on the subjects of forests, biodiversity and ecosystem services for strategic Project zones.	Minutes of Program Validation Agreements - Document of Education Programs - Education Materials drawn up – Photographic record of activities – Attendance lists.	There is interest on the part of local and regional authorities for implementing the proposed programs. There is interest on the part of the local community for participating in the activities.
Products expected (outputs):						
2.1. Monitoring system for biodiversity conservation and SLM/SFM with private and public stakeholders in the project area						
2.2. Strategy for improved dissemination and application of existing financial resources as incentives for biodiversity conservation among private land owners in the project area						
2.3. Program for Promoting, Strengthening and Implementing Financing Mechanisms (FMs) which Support Biodiversity Conservation and Sustainable Management of Soils and Forests						
2.4. Support program to explore market options for best practice compliant products from the Project area						
2.5 Education program on the need to conserve biodiversity and combat desertification for relevant local stakeholders						

Component 3: Pilot-scale application of Integrated Conservation Districts for Soils, Forest and Water legislation.						
Objectives, Outcomes and Outputs Expected	**Indicators**	**Baseline**	**Mid-Term Target**	**Target upon Project Finalization**	**Source of Verification**	**Assumptions**
Expected Result (outcome): Integrated Conservation Districts for soils, forest and water effectively established and implemented in some 500,000 hectares of production/conservation pilot areas.	3.1. Surface area formally recognized as a Conservation District of soils, forest and water within the Project area.	The Conservation District legislation has been analysed as an alternative for promoting territorial sustainability in deteriorated soils within the Project area. To date, we have available the legal review and the proposal document (Project INNOVA CORFO - Santiago Andes), but the District has never been formally declared in Chile despite the existence of a Law (Nº 18,378, art. 3 and 5) which has made establishing this since 1984.	At least 500,000 ha are in the process of being recognized as a Conservation District (submitted to the Consultative Council on Native Forest).	At least 500,000 ha are formally recognized as a Conservation District and have a District Master Plan within the Project area.	Presentation made to the Consultative Council and Minutes of the Agreement MINAGRI Decree Minutes of Meetings with Stakeholders Document of the District Master Plan	The MINAGRI has the political will to declare, for the first time in Chile, the Conservation District legislation. The Public Services accept the guidelines from the District Master Plan. The landowners accept having their lands included within this legal protection instrument.
	3.2. Surface area with Integrated Land Management Plans for soil, water and forest in the Conservation District pilot area.	Within the Project area, there are several private landholdings with land use plans. However, there is no major planning on the territorial level with an overall view of the ecosystem which would make it possible to focus financing mechanisms for implementing those plans.	At least 200,000 ha of the District with integrated management plans, revised and adapted to the District Plan.	At least 200,000 ha of the District surface area with activities implemented from the integrated management plans, revised and adapted to the District Master Plan.	GEF Working Agreement Document - Document of Integrated Land Management Plans Support for applications to FMs Minutes of Working Meetings with landowners and field work Report of pilot activities implemented on field Photographic record of activities.	The landowners are motivated and committed to drawing up and implementing Land Plans for integrated management. The Public Services are committed to drawing up and implementing these Plans. The organized implementation of FMs makes it possible to fulfill the objectives of the Land Plan.

	3.3. Nº of dissemination activities of lessons learned in the implementation of pilot area	Since the Conservation District is a legal instrument not utilized by the MINAGRI in Chile, there is no information of any kind about it.	At least 2 informational activities are implemented.	At least 4 informational activities are implemented.	Informational Materials PPT Presentations Photographic Materials Attendance Lists for the activities.	There are Conservation District declared, and Land Plans implemented, from which lessons learned can be extracted.
Products expected (outputs):						
3.1. Declaration of one pilot-scale areas as soil, forests and water conservation districts.						
3.2. Conservation plans and activities for the pilot-scale areas.						
3.3. Dissemination of lessons learned in the implementation of the pilot-scale areas						

Appendix 5: Work Plan and Timetable

1. Component 1: Local environmental governance capacity development and knowledge management on biodiversity conservation and sustainable land use.																						
Outcome: Municipal environmental departments apply updated information on the biodiversity components and ecosystem services at a local scale for decision making in land use planning.																						
Outputs	**Activities**	**Year 1**				**Year 2**				**Year 3**				**Year 4**				**Year 5**				
		1	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	
1.1. Local scale land use plans developed and linked to GIS system of the project area	1.1.1. Information gathering and proposal for ecological planning (indicative management plans)																					
	1.1.2.Drawing up and validation by the EM (Supreme Decree) of management recommendations for each resulting zoning																					
	1.1.3. Construction and validation by the EM and municipal associations of the model environmental ordinance which incorporates territorial ecological planning and management for conservation of biodiversity and ecosystem services, and its application in pilot municipalities																					
	1.1.4. Proposing modification to the Law (MOL) for legal strengthening of environmental ordinances, in the sense of increasing maximum fines and community services																					
1.2. Local-scale assessments on the biodiversity components and ecosystem services of the project area	1.2.1. Gathering descriptive and cartographic data within the area under study (ecosystems, forests, communities, condition and tendencies, biodiversity, ecosystem services, threats)																					
	1.2.2. Identify those biodiversity components (biotic y abiotic) with which the Project will work and propose an evaluation methodology																					
	1.2.3. Analyse the present status of the components of biodiversity and ecosystem services on the regional level and carry out a diagnosis of tendencies and threats																					
1.3. Carrying out a pilot project to enhance personnel capacities in the environmental departments of 36 municipalities	1.3.1. Design the training program for the period of Project execution which incorporates graduate studies, seminars, courses, a manual																					
	1.3.2. Implementation of a training program for municipal employees																					
	1.3.3. Provide work teams for drawing up projects for strengthening LEM, from both Municipal Associations and Municipalities																					

	1.3.4. Establish a LEM manual for biodiversity, ecosystem services and best practices in municipal management.																								
1.4. Coordination mechanisms set in place for municipalities in the mountain areas	1.4.1. Design a coordination model (regular meetings, associations by area or biological corridor, communications channels, among others)																								
	1.4.2. Implement the results of the proposed model for municipal coordination within the Project area																								
	1.4.3. Proposal of a Model of Environmental Governance for Biological mountain corridors																								
1.5. Strategy for strengthening and promoting LEM schemes for management and conservation of soils, forests, biodiversity and its ecosystem services, on the municipal level	1. 5.1. Draw up and validate standards for the LEM schemes for incorporating municipal management of natural resources in municipalities within the Project area, and extending to pilot municipalities																								
	1.5.2. Support implementation of local environment management schemes in pilot municipalities, which incorporate management and conservation of biodiversity and its ecosystem services (Conservation Landscape, MECS and/or Sustainable Commune)																								
	1.5.3. Propose modification to the legislative project (MOL) for strengthening the environment departments within the municipal structure																								
	1.5.4. Formulate and Implement environmental projects in pilot municipalities (FNDR; FPA)																								
	1.5.5. Propose recognition of the LEM schemes (additional qualification points) on the part of the existing regional and national financing instruments (GORE, SUBDERE, FPA)																								

Component 2: Implementation and promotion of best practices for the sustainable management of landscapes for biodiversity and ecosystem services conservation.

Outcome: The scenario for conservation of biodiversity and key ecosystem services is improved in biological corridors by means of the implementation of best practices for the sustainable management of landscapes and financial incentive mechanisms, emphasizing SLM/SFM and the need to combat desertification

Outputs	Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
2.1. Monitoring system for biodiversity	2.1.1 Design and validate monitoring programs (indicators and methodology)																				

conservation and SLM/SFM with private and public stakeholders in the project area.	2.1.2 Carry out data-gathering campaigns for the Project's regional monitoring programs (forests, components of biodiversity, services, and soil degradation)																						
	2.1.3 Evaluate regional monitoring programs																						
	2.1.4 Generate stakeholder capacities and accompany them in the implementation of the programs																						
	2.1.5 Formally transfer the functioning monitoring systems to a public service to guarantee their sustainability over time																						
2.2. Strategy for improved dissemination and application of existing financial resources as incentives for biodiversity conservation among private land owners in the project area	2.2.1 Design and validate annual extension and training programs for sustainable management of soils and forests																						
	2.2.2. Implement annual extension and training programs for sustainable management of soils and forests (operators, landowners, public services)																						
2.3 Program for Promoting, Strengthening and Implementing Financing Mechanisms (FMs) which Support Biodiversity Conservation and Sustainable Management of Soils and Forests	2.3.1. Develop programs for strengthening mechanisms in SFM, including forest recovery, conservation and management to guarantee supply of ecosystem goods and services, and the implementation of SFM practices in pilot areas.																						
	2.3.2. Develop a program for strengthening SLM mechanisms and implement pilot experiences in biodiversity conservation practices and sustainable land management (SLM) within the Project area (Mining, Tourism, Livestock, Agriculture, Ski Resorts, etc.).																						
	2.3.3. Draw up and/or validate land management plans for conservation of biodiversity and ecosystem services (other non- district lands) and implement pilot activities.																						
	2.3.4. Draw up and implement a proposal for a project portfolio for environmental compensations within strategic Project areas, within the EIA System framework.																						
	2.3.5. Monitor and evaluate results of best practices implemented in BD/SLM/SFM.																						

	2.3.6. Investigate possible State wicked incentives for use land in mountain slopes, and overcome obstacles for eradicating																							
2.4. Support program to explore market options for best practice compliant products from the Project area	2.4.1. Implement Strategic Plan from the "green economy" study with stakeholders.																							
	2.4.2. Promote, strengthen and implement instruments for certification which fosters sustainable land and forest management.																							
	2.4.3 Promote the new products, obtained from sustainable land and forest management, within the Project area.																							
2.5. Education program on the need to conserve biodiversity and combat desertification for relevant local stakeholders	2.5.1 Design and validate education and awareness programs with PSC counterparts.																							
	2.5.2 Implement education and awareness program.																							
	2.5.3. Implement Project extension activities.																							

Component 3: Pilot-scale application of Integrated Conservation Districts for Soils, Forest and Water legislation.

Outcome: Integrated Conservation Districts for soils, forest and water effectively established and implemented in some 500,000 hectares of production/conservation pilot areas

Outputs	Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
3.1 Declaration of one pilot-scale areas as soil, forests and water conservation districts	3.1.1. Gather data, define participatively the district goal, draw up the District Master Plan, and validate best practices for natural resources conservation and improvement.																				
	3.1.2. Elaborate a proposal for a District Decree, norms, and member farms, and submit the proposal to the Consultative Council.																				
	3.1.3. Obtain recognition of the proposed District by means of an Agriculture Ministry Decree, and communication to the competent entities.																				

3.2. Integrated Conservation plans and activities for the pilot-scale areas	3.2.1. Revise existing Land Plans in the area and validate in the field.																						
	3.2.2. Select new pilot fields for drawing up integrated land plans for management of soil, water and forests.																						
	3.2.3. Offer support in formulating projects for best practices in SFM/SLM and establish annually a file of applications for MINAGRI financing mechanisms.																						
	3.2.4. Implement, accompany and evaluate pilot activities in integrated management of soil, water and forests.																						
3.3. Dissemination of lessons learned in the implementation of the pilot-scale areas	3.3.1Select and validate lessons learned from implementation.																						
	3.3.2. Design and implement mechanisms for disseminating lessons learned, initiatives implemented in integrated management of soil, water and forests, and financing mechanisms for their implementation, targeting stakeholders.																						

Appendix 6: Key Deliverables and Benchmarks

OUTPUTS	ACTIVITIES	DELIVERABLES	BENCHMARKS
1. Component 1: Local environmental governance capacity development and knowledge management on biodiversity conservation and sustainable land use.			
Outcome: Municipal environmental departments apply updated information on the biodiversity components and ecosystem services at a local scale for decision making in land use planning.			
1.1. Local scale land use plans developed and linked to GIS system of the project area	1.1.1. Gather data and make a proposal for ecological planning (indicative management plans).	Ecological Territorial Planning defined for the whole Project area, with its associated GIS cartography on a scale of 1:25,000.	Documents and cartography available and published on the Project web site beginning in the last quarter of year 2.
	1.1.2. Draw up and obtain EM validation (Supreme Decree) for the management recommendations for each resulting zone.	Environment Ministry Decree for the proposed indicative ecological planning for the whole Project area, validated and published.	Decree approved in the last quarter of year 2.
	1.1.3. Establish and obtain EM and municipal association validation for a model environmental ordinance which includes ecological territorial planning and management for conservation of biodiversity and ecosystem services, and assure its application in pilot municipalities.	Model Ministerial Ordinance drawn up and published, and Municipal Ordinances approved and applied in at least 5 pilot municipalities (Municipal Decrees approved)	Model Ordinance approved by the Ministry in the first quarter of year 3, and ordinances approved and applied beginning in the last quarter of year 3.
	1.1.4. Propose legal modifications (MOL) to assure legal underpinnings for the environment ordinances, in the matter of increasing maximum fines and services to the community.	Proposal for modifying the Law, drawn up by the Environment Ministry and submitted to the approval procedure.	Document available from the first semester of year 1, and proposal submitted during the second semester of year 1.
1.2. Local-scale assessments on the biodiversity components and ecosystem services of the project area.	1.2.1. Gather descriptive and cartographic data within the study (ecosystems, forests, communities, condition and tendencies, biodiversity, ecosystem services, threats).	Associated GIS environment and cartographic data (1:25,000) gathered for the whole Project area.	Documents and cartography available and published on the Project web site from the first quarter of year 2.
	1.2.2. Identify those biodiversity components (biotic y abiotic) with which the Project will work and propose an evaluation methodology.	Biodiversity components, and soil degradation identified, and proposal made for evaluation and subsequent monitoring methodology.	Document available from the first quarter of year 2.
	1.2.3. Analyse the present status of the components of biodiversity and ecosystem services on the regional level, and determine tendencies and threats.	Analysis of the status, diagnosis and threats established for the whole Project area, with its associated cartography included in document 1.2.1.	Document and cartography available and published on the Project web site from the first quarter of year 2 (included n document 1.2.1)
1.3. Carrying out a pilot project to enhance personnel	1.3.1. Design the training program for the duration of Project execution, which includes graduate	Program for strengthening municipal capacities designed for the 4 years of	Document program design available from the fourth quarter

capacities in the environmental departments of 36 municipalities	studies, seminars, courses, manuals, etc.	Project execution.	of year 1.
	1.3.2. Implement training program targeting municipal employees.	Program for strengthening capacities in management and conservation of the territory and its environmental components, implemented in at least 20 municipalities within the Project area.	Annual Reports of program implemented, from the last quarter of year 2.
	1.3.3. Provide work teams for formulating projects for LEM strengthening, working from Municipal Associations and Municipalities.	Professionals for drawing up environment management projects or initiatives, working from municipal associations and/or municipalities.	Personnel contracts and projects drawn up, available from the last quarter of year 2.
	1.3.4. Establish a LEM Manual on the subject of biodiversity, ecosystem services and best practices in municipal management.	Manual of environment practices for municipal management, developed, published and circulated.	Manual available and distribution begun from the second quarter of year 2.
1.4. Coordination mechanisms set in place for municipalities in the mountain areas	1.4.1. Design a proposal for a coordination model (regular meetings, associations by area or biological corridors, communication channels, among others).	Proposal of program for municipal coordination designed for the whole period of Project implementation.	Document available from the first quarter of year 2.
	1.4.2. Implement results of municipal coordination model proposal within the Project area.	Program of municipal coordination established with at least 10 municipalities participating within the Project area.	Annual Reports with implemented coordination activities, from the last quarter of year 2.
	1.4.3. Proposal of an Environmental Governance Model for Biological mountain corridors	Pilot Governance Model implemented with at least 4 municipalities and/or organizations participating.	Annual Reports of progress in implementing governance model, from last quarter of year 3.
1.5. Preparation of an upgraded version of the municipal environmental management certification scheme that will include requirements for sustainable land use (SCAM/ECOCOMUNA)	1.5.1. Draw up and validate LEM schemes standards for incorporating municipal management of natural resources in municipalities within the Project area, and apply in pilot municipalities.	Manual of requirements and protocols for implementation of the new municipal LEM scheme elaborated and disseminated.	Manual available from last quarter of year 1.
	1.5.2. Support implementation of local environment management schemes in pilot municipalities, which include management and conservation of biodiversity and its ecosystem services (Conservation Landscape, MECS and/or Sustainable Commune).	Local environment management schemes in the area of sustainable territorial management implemented in at least 5 pilot municipalities within the Project area.	Annual implementation reports for LEM schemes beginning the last quarter of year 2.
	1.5.3. Propose modification to the proposed legislation (MOL) for strengthening the environment units within the municipal structure.	Proposal for modification of the Law drawn up by the Environment Ministry and submitted for processing.	Document available from first semester of year one, and presentation of proposal during second semester of year one.
	1.5.4. Formulate and Implement environment projects in pilot municipalities (FNDR; FPA)	Projects for strengthening local environment management drawn up and implemented in pilot municipalities	Annual implementation reports of projects beginning the last quarter of year 2.

		within the Project area.	
	1.5.5. Propose recognition of LEM schemes (additional qualification points) by the existing regional and national financing instruments (GORE, SUBDERE, FPA).	Proposal for recognition of LEM schemes for obtaining financing, drawn up and submitted for processing.	Document available from the first semester of year one, and presentation of proposal during the second semester of year 1. Report of results in 12th month of year 1.
Component 2: Implementation and promotion of best practices for the sustainable management of landscapes for biodiversity and ecosystem services conservation.			
Outcome: The scenario for conservation of biodiversity and key ecosystem services is improved in biological corridors by means of the implementation of best practices for the sustainable management of landscapes and financial incentive mechanisms, emphasizing SLM/SFM and the need to combat desertification.			
2.1. Monitoring system for biodiversity conservation and SLM/SFM with private and public stakeholders in the project area.	2.1.1 Design and validate monitoring programs (indicators and methodology).	Programs for monitoring the status of forests, biodiversity, soil degradation and ecosystem services, designed for the Project area.	Document of monitoring program design available from the third quarter of year 1.
	2.1.2 Carry out campaigns for gathering data for the Project's regional monitoring programs (forests, biodiversity components, services and soil degradation).	Components of forests, biodiversity, ecosystem services and indicators of soil degradation being monitored within the Project area.	Monitoring programs being implemented from the third quarter of year 1.
	2.1.3 Evaluate regional monitoring programs.	Monitoring programs (regional and local) implemented within the Project area are evaluated and corrected when necessary.	Annual evaluation reports of the monitoring programs available from the last quarter of year 3.
	2.1.4 Generate stakeholders' capacities and accompany them through program implementation.	Capacities established for using the monitoring programs in at least 5 public and 4 private entities.	Annual activity implementation reports beginning the last quarter of year 3.
	2.1.5 Formally transfer the operating monitoring systems to a public service to assure their sustainability over time.	Monitoring programs developed during the Project are maintained and updated by the Environment Ministry to make the information available for use by different services, institutions and civil organizations.	Transfer of monitoring programs during the last semester of year 5.
2.2. Strategy for improved dissemination and application of existing financial resources as incentives for biodiversity conservation among private	2.2.1 Design and validate disseminating and training programs for sustainable land and forest management.	Training and disseminating program in sustainable management practices for lands and forests and existing financing instruments, designed for the 5 years of Project execution.	Document on program design available from the last quarter of year 1.

land owners in the project area	2.2.2. Implementation of dissemination and education programs for sustainable management of soils and forests (operators, landowners, public services)	Program for strengthening capacities and dissemination in sustainable management of lands and forests implemented.	Annual program implementation reports available from last quarter of year 2.
2.3 Program for Promoting, Strengthening and Implementing Financing Mechanisms (FMs) which Support Biodiversity Conservation and Sustainable Management of Soils and Forests gram for promoting, strengthening and implementing financing mechanisms for promoting sustainable land and forest management.	2.3.1. Development of program for strengthening mechanisms in SFM, including recovery, conservation and management of forests for providing ecosystem goods and services and implementation of practices in SFM in pilot areas.	Mechanisms for sustainable forest management and existing financing mechanisms strengthened and improved, and best practices implemented on pilot sites.	Annual reports of strengthened mechanisms and reports of actions implemented available from the last quarter of year 2.
	2.3.2 .Development of program for strengthening mechanisms in SLM and implementation of pilot experiences in practices for biodiversity conservation and sustainable land management (SLM) within the Project area (Mining, Tourism, Livestock, Agriculture, Ski Resorts, etc).	Mechanisms for sustainable management of land and biodiversity and existing financing instruments strengthened and improved and best practices implemented on pilot sites.	Annual reports of strengthened mechanisms and reports of actions implemented available from the last quarter of year 2.
	2.3.3. Draw up and/or validate land management plans for conservation of biodiversity and ecosystem services (other non-district lands) and implementation of pilot activities.	Land management plans which include conservation and sustainable use drawn up and/or validated, and best practices pilots implemented.	Management plan documents and annual reports of actions implemented, available from the last quarter of year 2.
	2.3.4. Draw up and implement proposal for a portfolio of projects for environmental off-set within strategic Project areas, within the framework of the EIA System.	Proposal for a portfolio of projects for the Environment Ministry developed and submitted to the corresponding authorities.	Document proposal for project portfolio available from the third quarter of year 1.
	2.3.5. Monitor and evaluate results of best practices in BD/SLM/SFM implemented.	Pilot practices in sustainable management of land, forests and biodiversity evaluated and monitored.	Annual monitoring and evaluation reports on pilots implemented, available from the last quarter of year 2.
	2.3.6. Investigate possible State wicked incentives for use land in mountain slopes, and overcome obstacles for eradicating.	Analysis of how to discourage replacement of native vegetation on slope (e.g. monocultures and/or housing construction development).	Report of results and proposal for disincentive measures, available from the third quarter of year 2.
	2.4.1. Implement Strategic Plan and “green economy” study with stakeholders.	Action Plan resulting from diagnostic study of sustainable practices within the Project area implemented.	Action plan implemented beginning in the second quarter of year 1.

2.4. Support program to explore market options for best practice compliant products from the Project area	2.4.2. Promote, strengthen and implement certification instruments which foster sustainable land and forest management.	Instruments which foster sustainable land and forest management and pilot actions developed.	Program for promoting, strengthening and implementing certification instruments implemented from the last quarter of year 1.
	2.4.3 Promote the new products obtained from sustainable land and forest management within the Project area.	Promotion strategy for products obtained from sustainable management implemented.	Promotion strategy implemented from the first quarter of year 3.
2.5. Education program on the need to conserve biodiversity and combat desertification for relevant local stakeholders	2.5.1 .Design and validate education and awareness programs with the PSC and counterparts.	Education and awareness program for local stakeholders on conservation of forests, biodiversity and soils, designed and validated.	Program design available from the last quarter of year 1.
	2.5.2 Implement education and awareness programs.	The value of biodiversity, forests and ecosystem services is known and communicated by the local communities within the pilot areas.	Program implemented from the last quarter of year 1.
	2.5.3. Implement Project extension activities.	Lessons learned, results and data gathered during the whole period of Project implementation, circulated and made known.	Lessons learned, results and Project data circulated from the third quarter of year 1.
Component 3: Pilot-scale application of Integrated Conservation Districts for Soils, Forest and Water legislation.			
Outcome: Integrated Conservation Districts for soils, forest and water effectively established and implemented in some 500,000 hectares of production/conservation pilot areas.			
3.1 Declaration of one pilot-scale areas as soil, forests and water conservation districts	3.1.1. Gather data, define participatively the district goal, draw up a District Master Plan, and validate best practices for conservation and improvement of natural resources.	District Master Plan for sustainable territorial management on the landscape level, developed and validated by local stakeholders.	District Plan document available from the second quarter of year 2.
	3.1.2. Elaborate a proposed District Decree, norms, and member farms, and submit proposal to the Consultative Council.	Proposal for recognition of pilot area as a Conservation District for soil, forest and water, drawn up and processed.	Document for proposal of district legislation within the Project pilot zone available from the second quarter of year 2.
	3.1.3. Acquire recognition of proposed District by means of MINAGRI Ministerial Decree and communicate to the competent entities.	Conservation District proposed, officially recognized, for the first time in Chile.	Ministerial Decree approved and published from first month of year 3.
3.2. Conservation plans and	3.2.1. Revise Land Plans existing within the area and	Land management plans for sustainable	Validated Land Plans available

activities for the pilot-scale areas	validate in the field.	land and forest management existing within the district area, revised and validated.	from the third quarter of year 2.
	3.2.2. Select new pilot lands for drawing up land plans for integrated management of soil, water and forests.	Land plans for sustainable management of soil, water and forests drawn up.	Annual reports on land plans drawn up within the district area, and pilot actions implemented, in the last quarters of years 2, 3, 4 and 5.
	3.2.3. Support project formulation for best practices in SFM/SLM, and construct annually a file of applications for MINAGRI Financing Mechanisms.	Projects for sustainable land and forest management, drawn up and submitted to the existing financing mechanisms.	Annual reports of projects drawn up in the district area, and submitted, in the last quarters of years 3, 4 and 5.
	3.2.4. Implement, support and evaluate pilot activities in integrated management of soil, water and forests.	Pilot activities for sustainable management, implemented and evaluated.	Annual reports of pilot actions implemented available from the last quarters of years 3, 4, and 5.
3.3. Dissemination of lessons learned in the implementation of the pilot-scale areas.	3.3.1 .Select and validate lessons learned from implementation.	Selection of lessons learned regarding actions implemented within the district instrument.	Annual reports of selection of lessons learned, available beginning the last quarter of year 3.
	3.3.2. Design and implement disseminating programs of lessons learned, initiatives implemented in integrated management of soil, water and forests, and Financing Mechanisms for their implementation, targeting stakeholders.	Circulating of lessons learned regarding actions implemented within the district area.	Lessons learned circulated beginning the last quarter of year 3.

Appendix 7. Costed Monitoring and Evaluation Plan (M&E)

The estimated costs of the activities proposed for the Project M&E Plan are presented below. Details are given of activities throughout the five years of Project implementation:

M&E activities	Responsible Parties	Amount Project Budget (US$)	Timeframe
Drawing up proposal for Annual Plan year 1	PMU	No additional cost from Project budget, since this is financed by EM	Carried out among preparatory actions, charged to the EM (second semester 2014)
1st Annual Planning Workshop of the Steering Committee and adjustments to the Project (PSC)	PMU Executing Agency (Agency for International Cooperation - AGCI)	1,500	Within the first 2 months following Project initiation (2015)
1st Report with the adjustments to annual planning and adjustments to the Project	PMU	No cost from Project budget	Until two weeks following the first Planning Workshop
Approval of planning adjustments year 1 and Project adjustments	PSC President UNEP	No cost from Project budget	Third week following first Planning Workshop
1st Workshop for measuring progress and Project performance indicators with the PSC	PMU Executing Agency (AGCI)	1,500	6 months after the first Planning Workshop
1st Progress Report of Annual Plan implementation	PMU	Without cost from the Project budget	1 month after the preceding activity
Approval 1st Progress Report	PSC President UNEP	Without cost from the Project budget	1 month after the preceding activity (month 10 or 11)
Drawing up Annual Planning Proposal year 2 and Progress Report from previous year	PMU	Without cost from the Project budget	Within the first month of year 2
2nd Annual Progress Report Workshop for Project Implementation/Annual Planning with the PSC (year 2)	PMU Executing Agency (AGCI)	1,500	Within the first 2 months of year 2
2nd Report of adjustments to the Project's annual plan year 2 (includes tracking and evaluation)	PMU	Without cost from the Project budget	Up to two weeks after the 2nd Planning Workshop
Approval of Project adjustments year 2	PSC President UNEP	Without cost from the Project budget	Third week following 2nd Planning Workshop

M&E activities	Responsible Parties	Amount Project Budget (US$)	Timeframe
2nd Workshop for measuring progress and Project performance indicators with the PSC	PMU Executing Agency (AGCI)	1,500	Within 6 months following 2nd Planning Workshop
2nd Progress Report on Annual Planning	PMU	Without cost from the Project budget	Within a month following the previous activity
Approval 2nd Progress Report	PSC President UNEP	Without cost from the Project budget	Within a month following the previous activity
Drawing up Annual Plan proposal for year 3 and Progress Report for the previous year	PMU	Without cost from the Project budget	Within the first month of year 3
3rd Annual Project Implementation Report Workshop /Annual Plan with the PSC	PMU Executing Agency (AGCI)	1,500	Within the first 2 months of year 3
3rd Report with adjustments to the Project's annual plan for year 3	PMU	Without cost from the Project budget	Up to 2 weeks following 3rd Planning Workshop
Approval of Project adjustments year 3	PSC President UNEP	Without cost from the Project budget	Third week following 3rd Planning Workshop
Project Mid-Term Evaluation (carried out by an independent consultant)	PMU UNEP	20,000	End of second trimester of 3rd year, June 2017.
Workshop on Mid-Term Evaluation Results / 3rd measure of progress and Project performance with the PSC	PMU Executing Agency (AGCI)	1,500	2 months after the Mid-Term Evaluation (August 2017)
3rd Report of adjustment of key products and results from the M&E plan, derived from the Mid-Term Report	PMU	Without cost from the Project budget	2 weeks after the Workshop for Results of the Mid-Term Evaluation
Approval of Project adjustments	PSC President UNEP	Without cost from the Project budget	Third week after the Mid-Term Evaluation
Drawing up Annual Planning proposal year 4, and Progress Report for the previous year	PMU	Without cost from the Project budget	Within the first month of year 4
4th Workshop for Annual Project Implementation Report/Annual Planning with the PSC	PMU Executing Agency (AGCI)	1,500	Within the first 2 months of year 4
4th Report with adjustments of key Project products and results	PMU	Without cost from the Project budget	Up to 2 weeks after 4th Planning Workshop
M&E activities	**Responsible Parties**	**Amount Project Budget (US$)**	**Timeframe**
Approval of Project adjustments year 4	PSC President UNEP	Without cost from the Project budget	Third week after 4th Planning Workshop

4th Workshop for measuring progress and Project performance indicators with the PSC	PMU Executing Agency (AGCI)	1,500	Within six months following the 4th Planning Workshop
4th Progress Report of Annual Planning	PMU	Without cost from the Project budget	Within a month following the previous activity
Approval of Progress Report	PSC President UNEP	Without cost from the Project budget	Within a month following the previous activity
Drawing up Annual Planning proposal for year 5 and Progress Report for the previous year	PMU	Without cost from the Project budget	Within the first month of year 5
5th Workshop for Project's Annual Implementation Report/Annual Planning with the PSC	PMU Executing Agency (AGCI)	1,500	Within the first 2 months of year 4
5th Report with adjustments to key Project products and results	PMU	Without cost from the Project budget	Up to 2 weeks following 5th Planning Workshop
Approval of Project adjustments for year 5	PSC President UNEP	Without cost from the Project budget	Third week following 5th Planning Workshop
Final Evaluation of Project (carried out by an independent consultant)	PMU UNEP	20,000	End of second trimester of 5th year of Project execution (June 2019)
Workshop for Results of Final Evaluation of the Project with the PSC	PMU Executing Agency (AGCI)	1,500	3 months following the Final Evaluation (October 2019)
Final Project Report	PMU UNEP	Without cost from the Project budget	At least one month before Project finalization
Approval of Final Project Report	PSC President UNEP	Without cost from the Project budget	Together with the previous activity
Audits (5 audit reports are included, to be carried out by the implementing agency)	UNEP PMU	25,000	Annually
M&E activities	**Responsible Parties**	**Amount Project Budget (US$)**	**Timeframe**
Lessons learned	PMU UNEP	Without cost from the Project budget	Annually within each annual planning workshop.
Field visits to the Project pilot sites	PMU National Partners	5,000	Constantly.
Total M&E Cost		**86,500**	

Appendix 8: Reporting Requirements

Requirements for submitting reports	Deadline	Format for report submitted	Responsible Parties
1st Report approved with adjustments to key Project results and products, and Plan for year 1	Up to 3 weeks after the 1st Annual Planning Workshop. (March 2015)	N/A	PMU and POC with approval of the PSC President and the UNEP
Acquisitions Plan (goods and services)	Together with 1st Report with adjustments to key Project results and products.	N/A	PMU with approval of the POC and the Executing Agency
Report of Expenditures with explicative notations	Prepared for the Project's 1st M&E Workshop. (October 2015)	N/A	Executing Agency (EA) with LS support and approval of the POC and the Executing Agency
Request for advance in funds and the details of the planned expenditures, situation report	Per trimester or when necessary	N/A	LS with approval of the POC and the Executing Agency
Project Progress Reports	Second to last month of each year (November every year)	N/A	PMU and POC with approval by the PSC President and the UNEP
Audit Report of expenditures for the year ending	Annually. Submitted for the Annual Report Workshop for the PSC (January-February of each year)	N/A	EA + LS with approval by the POC and the Executing Agency
Inventory of non-consumable goods	Annually. Submitted for the Annual Report Workshop, for the PSC (January-February of each year)	N/A	EA + LS with the PMU's support and approval by the POC and the Executing Agency
Co-financing Report	Annually. Submitted for the Annual Report Workshop for the PSC (January-February of each year)	N/A	EA + LS with PMU support and approval of the POC and Executing Agency
Requirements for submitting reports	**Deadline**	**Format for report submitted**	**Responsible Parties**
Annual Project Implementation Reports	Annually. During the Annual Reporting Workshops at the beginning of each year (January-February of each year).	N/A	PMU and POC with approval by the PSC President and the UNEP
PSC Meeting Minutes	Annually or as needed	N/A	LS with the PMU's support
Final Project Report	At least one month before Project finalization (November 2019)	N/A	PMU with approval by the POC and the Executing Agency

Final Inventory of non-consumable goods		N/A	LS with approval by the POC and the Executing Agency
Letter of Equipment Transfer		N/A	LS with approval by the POC and the Executing Agency
Final Expenditures Declaration	1 month following Project finalization. (February 2010)	N/A	EA with approval by the POC and the Implementation Agency
Project Mid-Term Evaluation	Within the third trimester of 3rd year. (August 2017)	Appendix 9	External Consultancy, under UNEP responsibility
Project Final Evaluation	End of third trimester of 5th year of Project execution. (September 2019)	Appendix 9	External Consultancy, under UNEP responsibility
Audits	Annually	UNEP Format	External Consultancy, under UNEP responsibility

Appendix 9: Standard Terminal Evaluation Term of Reference

At the time of the Terminal Evaluation the **Standard Terminal Evaluation ToR template** will be obtained from the Evaluation Office to make sure the latest version is used.

Appendix 10: Decision-Making Flowchart and Organigram

DIVISION OF RESPONSIBILITIES

This Project will operate under the supervision and conduction of Chile's Environment Ministry, who will act as Executing Agency and preside over the Project Steering Committee (PSC) through a Ministry director-level staff member, and conduct the Project itself with a different Ministry staff member. The UNEP is the Implementing Agency. The Agency for International Cooperation, an public institution collaborating with the Environment Ministry in the area of international cooperation, which will provide administrative support to the EM.

The PSC will be presided over by the Environment Ministry (EM) and will be made up of representatives of UNEP, Santiago Metropolitan and Valparaíso Regional Governments; representatives of the Rural Municipalities Associations (AMUR) and the Cordillera Park; one representative of the SAG; one representative of CONAF; one representative of the MINAGRI; one representative of the MR SEREMI EM and one of the Valparaíso SEREMI EM; one representative of TNC; one CCP representative; one representative of the Executing Agency; one representative of the EM's Education, Citizen Participation and Local Environment Management Division. The executive secretariat of the PSC will be the Project staff's responsibility, presided by the Project Operational Coordinator (POC or Project Manager).

INTERNAL STRUCTURE

The Project Office (PO) will be located in Santiago. The Project personnel who will carry out their duties in that office includes the Project Operational Coordinator (POC); a Local Environment Management (LEM) Coordinator; a Biodiversity Coordinator (BD); a Sustainable Land and Forest Coordinator (SFM/SLM); an Extension, Education and Communications Coordinator (EEC); an Logistic Support (LS) and support professionals for each realm of action.

EXTERNAL STRUCTURE

During Project preparation, a Directorship was formed, headed by the Project's Environment Ministry supervisor, a representative of the Executing Agency, a representative of the Environment Ministry's Division in charge of Education and Local Environment Management, a representative of the SEREMI EM, a SAG representative, one from CONAF, a representative of the NGO TNC, a representative of the Santiago Metropolitan Region's Government; and with the chief of the Project design team filling the role of secretary. This Directorship was informed and consulted regarding the details of the Project's design. These are the relevant stakeholders already consulted during preparation of the PIF.

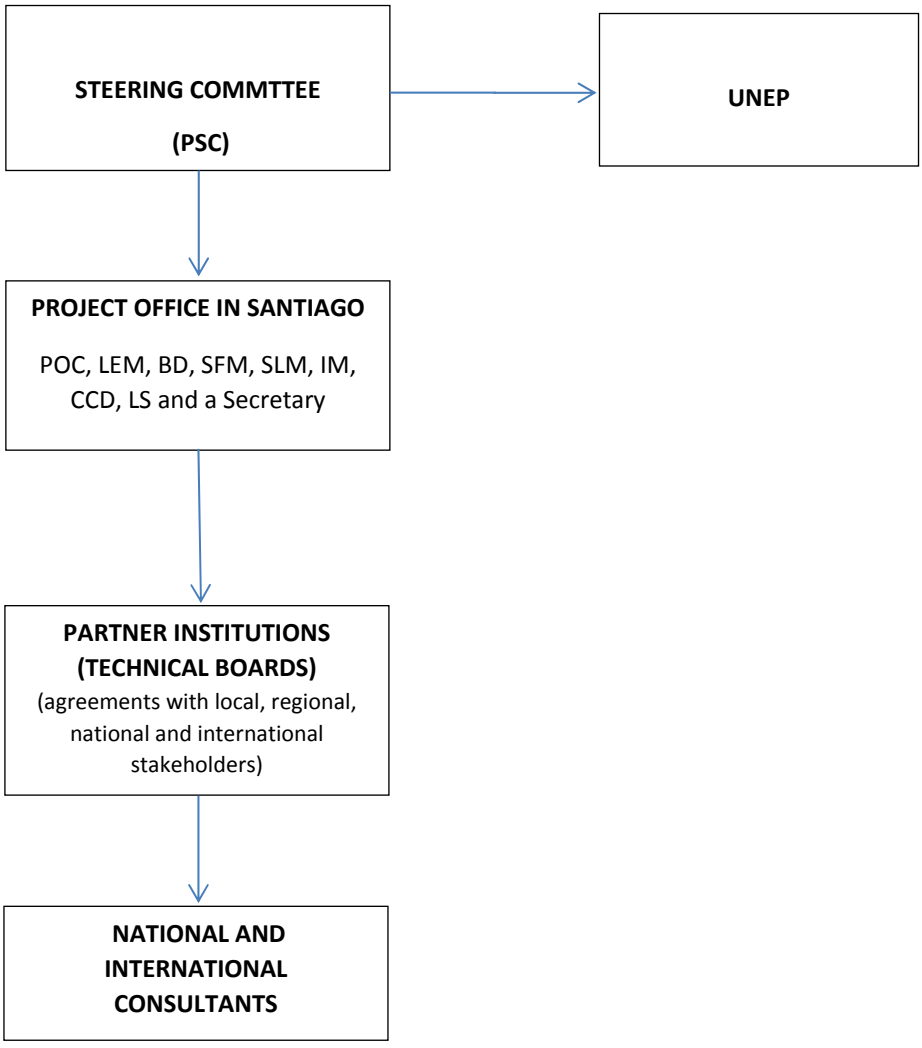
During the recently concluded PPG stage, 47 relevant institutions within the Project area were contacted, and they showed interest in contributing to and participating in Project activities. This is the nucleus for the future PSC. The PSC is the entity which constitutes the Project's main external structure. In addition to the PSC, the Project will work with its partners, who will provide technical assistance in the different Project realms, through technical boards organized by each of the Project division Coordinators.

SUPERVISING MECHANISM

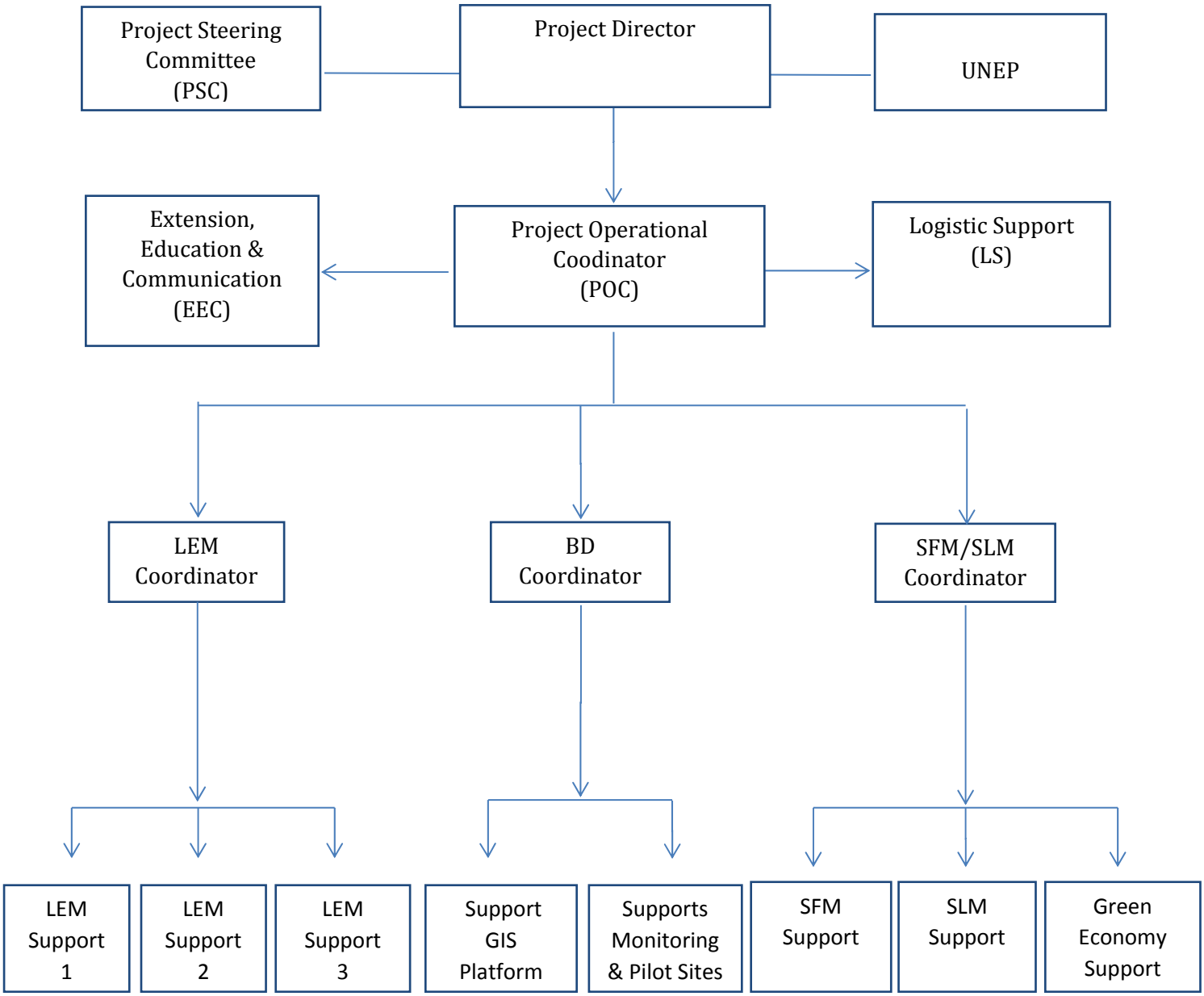
At the beginning of Project execution, the PSC will be established, with the membership mentioned above. It is the PSC which will make the relevant decisions for Project execution; approve Project progress reports and annual operational plans, and assure fulfillment of Project objectives. The PSC will meet at least twice a year and its executive secretariat functions will be the responsibility of the Project Operational Coordinator (POC).

At mid-term (year 3 of implementation), an evaluation will be carried out, by an external consultant, and another evaluation will be made at the end of Project implementation (within the final 6 months). Both evaluations will be reviewed by the PSC before being sent to the UNEP Evaluation and Supervision Unit.

EXTERNAL STRUCTURE



INTERNAL STRUCTURE



Appendix 11: Terms of Reference

POSITION: PROJECT OPERATIONAL COORDINATOR (POC)

Objective: The POC must be an Environment Ministry staff member and representative and will be in charge of technical and administrative direction, coordination and Project operational planning; he/she will also presides the PMU and will coordinate with both the execution and implementation agencies. Furthermore, he/she will provide technical assistance for the different Project components, will coordinate with the strategic partners, and will select the implementation staff and all consultancies necessary for fulfilling Project goals; and will be in charge of tracking and monitoring. All of these tasks will be carried out with the support of the PMU and in conformity with the criteria and guidelines established by the PSC.

Description of Functions:

- Technical and administrative direction, coordination and Project planning, assuring fulfillment of Project objectives.
- Presiding over the Project Management Unit (PMU), establishing internal working procedures, annual management plans, and mechanisms for coordinating the activities between the three components.
- Coordination with partners and the execution and implementation agencies, and management of inter-institutional communications mechanisms.
- Coordination of the Project Steering Committee (PSC). Presentation of Project work plans, monitoring and performance reports.
- Selection of the implementation staff and external consultancies, after consulting the Environment Ministry authority who presides the PSC.
- Budget control (annual budgets), coordination and updating of the Project tracking and monitoring system.
- Technical support to Division Coordinators.
- Coordination of component 3, product 1.5, 2.5 and activities 1.5.1 and 3.1.3.
- Interchange with and tracking of similar initiatives identified under section 2.7, monitoring of partner commitment fulfillment.
- Formalization of collaboration agreements.
- Preparation of reports requested by the UNEP and/or the GEF counterpart.
- Coordination of consultancies for the mid-term and final evaluation reports and annual audits.
- Guaranteeing adequate inter-institutional coordination and the participation mechanisms for interested parties throughout Project implementation.
- Assuring adequate communications regarding Project results and lessons learned.

Contract Duration: For the total period of Project implementation.

Profile: Candidate must be a professional, from the Environment Ministry, with vast experience in staff coordination and projects in similar fields. Experience in managing projects in biodiversity conservation, environmental protection and territorial planning. Leadership and empathy, solid skills in communications and interpersonal relations, a high level of flexibility and capacity for team work. A good level of ability in the

English language (written and spoken), and a graduate degree (MSc or PhD) in Project-related fields, accredited.

Administrative and Employment Dependency: the POC will answer administratively to the Environment Ministry, notwithstanding the fact that costs associated with his/her Project functions will be covered by GEF financial resources.

POSITION: COORDINATOR IN LOCAL ENVIRONMENT MANAGEMENT (LEM)

Objective: This professional will coordinate the LEM support team and assure fulfillment of all activities related to strengthening municipal environment management, included mainly in Component 1, in addition to supporting all activities which require coordination between relevant stakeholders for the products of Components 2 and 3. Furthermore, he/she will take part in the Project Management Unit (PMU).

Description of Functions:

- Coordination of staff for fulfilling the LEM objectives and for implementation of the activities included in products 1.1, 1.3, 1.4, and 1.6, in addition to coordinating fulfillment of activity 1.5.2.
- Coordination of activities regarding the previously mentioned products, with the municipalities, local stakeholders and Project partners.
- Analysis of baseline data obtained regarding the Project area.
- Supervising delivery to the Project web platform of systemized information regarding the products from his/her division.
- Drawing up TR proposals for LEM support consultancies.
- Drawing up annual work plans and budget revisions for LEM activities.
- Identifying and implementing projects for strengthening LEM in pilot municipalities.
- Participation in the Project Management Unit.
- Support for Project tracking, monitoring and evaluation.
- Coordination support for the Project Operational Coordinator and participation in the PSC.
- Articulation and management of activities in common with the other division teams.
- Delivery of progress reports to the POC and cataloguing of management results.
- Support for revising annual plans and performance.
- Support in management control.
- Support in Project extension and education actions and awareness campaigns (product 2.5).

Contract Type and Duration: The contract, with fee-type remuneration, will extend for 58 months, full-time, starting at the beginning of the Project implementation stage.

Profile: Candidate must be a professional who combines experience in: local environment management; strategy design and implementation of projects for biodiversity protection with municipalities; environment management instruments such as environment ordinances; implementation of Municipal Environment Certification System requirements, and knowledge of other LEM schemes. He/She must have demonstrable ability in the English language (written and spoken), and an accredited graduate degree (MSc or PhD) in relation with the division's fields.

Administrative and Employment Dependency: the LEM Coordinator will answer administratively to the Executing Agency and will receive technical guidance and orientation in implementing his/her functions from the POC.

POSITION: BIODIVERSITY COORDINATOR (BD)

Objective: This professional will coordinate the support team in Biodiversity and Ecosystem Services (BD and ES's), assuring fulfillment of the activities in his/her field of action, transversally through Components 1, 2 and 3, mainly regarding territorial data surveys and evaluation of environmental components within the Project area, ecological territorial planning, and systems for monitoring biodiversity, ecosystem services and forests, as well as design and implementation of land management plans and best productive practices in pilot sites. In addition, he/she will take part in the Project Management Unit (PMU).

Description of Functions:

- Coordination of the team for fulfilling the biodiversity objectives, and implementation of the activities included in products 1.2, and 2.1, in addition to coordinating activities 1.1.1, 1.1.2, 1.5.1, 2.3.3, 2.3.4, 2.3.5 and 2.3.6 regarding management of biodiversity and ecosystem services.
- Coordination of activities regarding the previously mentioned products with the municipalities, local stakeholders, Project partners and academics.
- Analysis of baseline data obtained for the Project area and supervision of the design, installation and functioning of the Project associated GIS and the drawing up of appropriate cartography.
- Supervision of the design, installation and functioning of the system for monitoring Biodiversity, Ecosystem Services, and soil and forest degradation, within the Project framework.
- Supervising delivery to the Project's web platform of the cartographic materials and catalogued information of the products in his/her field.
- Drawing up TR proposals for support consultancies in BD and ES's.
- Preparing texts on Biodiversity management and conservation.
- Drawing up annual work plans and budget revisions associated with his/her field.
- Identifying and implementing actions on pilot sites associated with his/her field.
- Participating in the Project Management Unit.
- Supporting Project tracking, evaluation and monitoring.
- Lending coordination support to the Project Operational Coordinator and participating in the PSC.
- Articulating and managing activities in common with the other field division teams.
- Submitting progress reports to the POC and cataloguing the results of his/her work.
- Supporting revision of annual plans and performance.
- Lending support to management control.
- Supporting extension and education actions and awareness campaigns (product 2.5).

Contract Duration: The contract, with fee-type remuneration, will extend for 58 months, full-time, starting at the beginning of the Project implementation stage.

Profile: Candidate must be a professional with experience in the fields of biodiversity management and protection; in the design and definition of strategies for biodiversity assessment and conservation; and with the GIS instruments for environmental planning and sustainable use of the territory, in Chile's Central Zone

ecosystems. He/She must have demonstrable ability in the English language (written and spoken), and an accredited graduate degree (MSc and PhD) in relation with the division's fields.

Administrative and Employment Dependency: The BD Coordinator will answer administratively to the Execution Agency and will receive technical guidance and orientation in implementing his/her functions from the POC.

POSITION: COORDINATOR OF SUSTAINABLE FOREST AND LAND MANAGEMENT (SFM/SLM)

Objective: This professional will coordinate the support team for SFM/SLM and assure fulfillment of the activities related to the fields developed Components 2 and 3, leading in those activities linked to sustainable forest and land management, and follow-up of the effects of those practices implemented. In addition, he/she will take part in the Project Management Unit (PMU).

Description of Functions:

- Coordinating the staff for fulfilling the objectives in sustainable forest and land management and the Conservation District, and implementation of the activities included mainly in the products 2.2, 2.3, 2.4, 3.1, 3.2 and 3.3.
- Coordinating activities related to the above products with local stakeholders, Project partners, academics and municipalities.
- Taking charge of the activities related to the process for formalizing the Declaration of the Conservation District for soil, forest and water.
- Analysis of the baseline data obtained for the Project area.
- Supervising delivery to the Project web platform of catalogued information on the products from his/her field of action.
- Drawing up TR's proposals for support consultancies in his/her field of action.
- Preparing texts on sustainable forest and land management.
- Drawing up annual work plans and budget revisions.
- Identifying and implementing actions on pilot sites.
- Participating in the Project Management Unit.
- Supporting Project tracking, evaluation and monitoring.
- Lending coordination support to the Project Operational Coordinator and participating in the PSC.
- Articulating and managing activities in common with the other field division teams.
- Delivering progress reports to the POC and cataloguing results of his/her work.
- Supporting revision of annual plans and performance.
- Lending support to management control.
- Supporting Project extension and education actions and awareness campaigns (product 2.5).

Contract Duration: The contract, with fee-type remuneration, will extend for 58 months, full-time, starting at the beginning of the Project implementation stage.

Profile: The candidate must be a professional with experience in the field of management and recovery of deteriorated soils and forests which have suffered inadequate handling; in design and definition of strategies

for promoting best practices in productive activities through existing financing mechanisms, in addition to management and knowledge of sustainable use of the territory. He/She must have demonstrable ability in the English language (written and spoken), and an accredited graduate degree (MSc and PhD) in relation with the division's fields.

Administrative and Employment Dependency: The SLM/SFM Coordinator will answer administratively to the Execution Agency and will receive technical guidance and orientation in implementing his/her functions from the POC.

POSITION: EXTENSION, EDUCATION AND COMMUNICATIONS COORDINATOR (EEC)

Objective: This professional will support transversally the other division coordinators in all activities related to Project extension, education and communications initiatives, included in any of the Project components. In addition, he/she will answer directly to the POC and will take part in the Project Management Unit (PMU).

Description of Functions:

- Providing leadership in activities 2.5.2 and 2.5.3, and implementing activities 2.5.1, under the LEM Coordinator, as well as drawing up all materials necessary for the Project's extension activities as such, and any other similar activities to be promoted as part of any other of the Project components.
- Coordinating the Project extension activities.
- Working with the municipalities and other relevant stakeholders for implementing the campaigns defined in the education and awareness strategy and programs.
- Coordinating the actions necessary for setting up and maintaining the Project's web page and any social communications media which are established.
- Organizing, cataloguing and publishing on the web page and any other media requested, all the products obtained from the Project, as well as progress made and other news.
- Coordinating and implementing merchandizing actions and working with a designer and webmaster in activities of all components.
- Coordinating and implementing the actions necessary, including editing, for Project publishing requirements (books, bulletins, papers, etc.).
- Coordinating with other initiatives related to CEPA (Chilean Environmental Education Program).
- Supporting and coordinating the training activities carried out by the division Coordinators.
- Evaluating those programs and activities implemented.
- Drawing up TR's proposals for support consultancies.
- Drawing up annual work plans and budget revisions.
- Participating in the Project Management Unit and in the PSC.
- Supporting Project tracking, evaluation and monitoring.
- Delivering progress reports to the POC and cataloguing results of his/her work.
- Supporting revision of annual plans and performance and management control.

Contract Duration: The contract, with fee-type remuneration, will extend for 56 months, full-time, starting at the month five of the Project implementation stage.

Profile: Candidate must be a professional with experience in the fields of education, awareness and/or communication, preferably with specialized training in similar fields on the graduate level.

Administrative and Employment Dependency: The Coordinator will answer administratively to the Executing Agency and will receive technical guidance and orientation in implementing his/her functions from the POC.

POSITION: LOGISTIC SUPPORT (LS)

Objective: This technician or professional will support the POC and Division Coordinators in all areas related to correct Project operation, meeting the Project's administrative, logistic and activities coordination needs. In addition, he/she will take part in the Project Management Unit (PMU).

Description of Functions:

- Supporting the POC and Division Coordinators in administrative and logistics areas.
- Keeping an updated schedule for the POC.
- Receiving documents, messages, mail and phone calls.
- Coordinating PMU and PSC meetings, keeping attendance records and preparing meeting minutes.
- Making budget and quotation requests.
- Hiring catering services, renting meeting rooms, vehicles or other services needed for Project implementation.
- Lending support for organizing workshops or other events (seminars, courses, training sessions, etc.).
- Sending invitations and receiving attendance confirmations.
- Keeping a detailed record of Project expenditures, requesting fund advancements from the Executing Agency, making petty cash acquisitions and keeping an accounting of implementation staff expenditures.
- Keeping a record of non-consumable goods, writing equipment transfer documents, and lending support for annual and final expenditure reporting to the Executing Agency.
- Writing up contracts and validating them with the Executing Agency.

Contract Duration: This contract, with fee-type remuneration, will extend for 56 months, full-time, starting at the month five of the Project implementation stage.

Profile: Candidate must be a technician or professional with experience in the field of project administration, management and/or coordination.

Administrative and Employment Dependency: The LS will answer administratively to the Executing Agency and will be guided in his/her functions by the POC.

POSITION: SUPPORT PROFESSIONALS IN LEM

Objective: These professionals will support and implement all activities related to strengthening LEM indicated by the LEM Coordinator in charge of this Division.

Description of Functions:

- Implementing all activities included in products 1.1, 1.3, 1.4, and 1.6, in addition to coordinating fulfillment of activity 1.5.2.
- Analysis of baseline data obtained for the Project area.
- Coordinating with relevant stakeholders.
- Lend support to drawing up TR's for the necessary LEM consultancies.
- Supporting drawing up annual work plans and budget revisions for the LEM activities.
- Supporting identification of pilot municipalities and implementing activities.
- Articulating and managing activities in common with the other field division teams.
- Delivering management reports to the LEM Coordinator and organizing and cataloguing results.
- Supporting revision of annual plans and performance.
- Supporting Project extension and education activities and awareness campaigns (product 2.5).

Contract Duration: The contract, with fee-type remuneration, full-time, will extend for 55 months for support LEM 1, 54 months for support LEM 2 and 48 months for support LEM 3.

Profiles: Candidates must have experience in local environment management and/or implementation of projects for environmental protection with municipalities and/or local stakeholders (community organizations, NGO's or others). Knowledge of environment management instruments or schemes (Ordinances, MECS, Conservation Landscapes) is preferred.

Administrative and Employment Dependency: This professional will answer administratively to the Executing Agency and will receive technical guidance and orientation in fulfilling his/her functions from the field Division Coordinator. He/She's operative work place will be on field permanently, located in the Project's pilot sites.

Number of Positions: 3

POSITION: BD SUPPORT PROFESSIONAL IN BIODIVERSITY MONITORING AND TRACKING SYSTEM FOR PILOT SITES

Objective: This professional will support and implement all activities related to the monitoring system for biodiversity and ecosystem services, soil degradation and sustainable management, in addition to following up best productive practice actions and land management plans implemented on the pilot sites, indicated by the Coordinator in charge of the respective fields.

Description of Functions:

- Supporting implementation of activities included in product 2.1 regarding the system for monitoring the status, pressure and response of key attributes of biodiversity and ecosystem services generated through sustainable soil and forest management.

- Lending support to drawing up and implementing land management plans included under product 2.3 in identified pilot sites.
- Coordinating with relevant stakeholders for fulfilling the objectives.
- Lending support in drawing up TR's for the required consultancies, follow-up and evaluation of results.
- Supporting elaboration of annual work plans and budget revisions for the activities associated with monitoring of BD and ES's.
- Supporting identification of pilot areas and implementing activities.
- Articulating and managing activities in common with the other field division teams.
- Delivering management reports to the BD Coordinator and organizing and cataloguing results.
- Supporting revision of annual plans and performance.
- Supporting Project extension and education actions and awareness campaigns (product 2.5).

Contract Duration: This contract, with fee-type remuneration, full-time, will extend for 54 months, starting at the month seven of the Project implementation stage.

Profile: Candidate must be a professional with experience in the field of biodiversity management and protection, in monitoring environmental components; in sustainable productive practices for soil and forest management.

Administrative and Employment Dependency: This professional will answer administratively to the Execution Agency and will receive technical guidance and orientation in fulfilling his/her functions from the Division Coordinator.

POSITION: BD SUPPORT PROFESSIONAL FOR SETTING UP AND MAINTAINING THE PROJECT GIS PLATFORM

Objective: This professional will support and implement the activities related to surveys and organizing and cataloguing the information generated in the Project, in addition to maintaining an updated GIS platform available for whoever should require it, and lend support in other activities indicated by the BD Coordinator.

Description of Functions:

- Lending support for implementation of all the activities included in products 1.2 and 2.1 regarding baseline data surveys throughout the Project area, organizing, cataloguing and analysing them.
- Drawing up the necessary cartography for ecological planning and evaluation of the environmental components of the biological mountain corridors.
- Coordinating with the relevant stakeholders.
- Supporting the generation of capacities in the utilization of GIS tools in pilot municipalities.
- Lending support for drawing up TR's for the necessary consultancies, follow-up and evaluation of results.
- Elaborating cartographic materials and organized and catalogued data for the Project's web platform.
- Lending support in drawing up annual work plans and budget revisions for BD and ES's activities.
- Lending support for identifying the pilot areas and implementing activities.
- Articulating and managing activities in common with the other field division teams.
- Delivering management reports to the BD Coordinator and organizing and cataloguing results.

- Lending support for revising annual plans and performance.
- Supporting Project extension and education actions and awareness campaigns (product 2.5).

Contract Duration: This contract, with fee-type remuneration, full-time, will extend for 56 months, starting at the month five of the Project implementation stage.

Profile: Candidate must be a professional with experience in setting up and maintaining a GIS Platform for biodiversity, ecological territorial planning or other related field, and elaborating cartography.

Administrative and Employment Dependency: This professional will answer administratively to the Execution Agency and will receive technical guidance and orientation in fulfilling his/her functions from the BD Coordinator.

POSITION: SUPPORT PROFESSIONALS IN SLM/SFM

Objective: These professionals will support and implement all activities related to sustainable management of land and water, and the Conservation District, indicated by the SLM/SFM Coordinator in charge of this field of action.

Description of Functions:

- Implementing activities included in the products 2.2, 2.3, 3.1, 3.2 and 3.3.
- The SFM/SLM Coordinator will assign tasks by field, there will be a person in charge of sustainable land management, and another in charge of sustainable forest management.
- Analysis of baseline data obtained for the Project area.
- Lending support for drawing up TR's for support consultancies
- Assisting in drawing up annual work plans and budget revisions.
- Lending support for identifying and implementing the pilot projects.
- Elaborating projects to be implemented, and tracking.
- Training key operators and stakeholders in best practices.
- Lending support in Project tracking, evaluation and monitoring.
- Articulating and managing activities in common with other field division teams.
- Delivering management reports to the SFM/SLM Coordinator and organizing and cataloguing results.
- Supporting revision of annual plans and performance.
- Supporting Project extension and education activities and awareness campaigns (product 2.5).

Contract Duration: These contracts, with fee-type remuneration, full-time, will extend for 56 months for support in SLM and 54 months for support in SFM.

Profiles: Candidates must be professionals with experience in the field of sustainable land and forest management; utilizing techniques for combating land desertification, and recovery of forests and degraded soils; in the design and definition of strategies for promoting best practices in productive activities, and sustainable use of the territory.

Administrative and Employment Dependency: This professional will answer administratively to the Execution Agency and will receive technical guidance and orientation in fulfilling his/her functions from the SFM/SLM Coordinator. He/She's operative work place will be on field permanently, located in the Project's pilot areas.

Number of Positions: 2

POSITION: SUPPORT PROFESSIONAL IN GREEN ECONOMY

Objective: This professional will support and implement all activities having to do with green economy as indicated by the SFM/SLM Coordinator in charge of this field.

Description of Functions:

- Implementing the activities in product 2.4.
- Implementing the results of the study carried out for a green economy strategic plan.
- Promoting, strengthening and implementing the certification instruments which foster sustainable forest and land management, such as the CPA's, Organic Certification, Nest+Agua, LIFE, among others.
- Identifying pilot actions and implementation, plus follow-up.
- Working with key productive stakeholders, and fostering associativity.
- Implementing actions for promoting products obtained from sustainable land and forest management.
- Disseminating practices promoted and lessons learned.
- Analysis of baseline data obtained for the Project area.
- Lending support for elaborating TR's for support consultancies.
- Lending support for drawing up annual work plans and budget revisions.
- Supporting Project tracking, evaluation and monitoring.
- Articulating and managing activities in common with the other field division teams.
- Delivering management reports to the SFM/SLM Coordinator, and organizing and cataloguing results.
- Lending support for revising annual plans and performance.
- Supporting Project extension and education activities and awareness campaigns (product 2.5).

Contract Duration: This contract, with fee-type remuneration, full-time, will extend for 48 months, starting at the second year of the Project implementation stage.

Profile: Candidate must be a professional with experience in such fields as sustainable land and forest management; certifications, green economy, organic production and other related fields.

Administrative and Employment Dependency: This professional will answer administratively to the Execution Agency and will receive technical guidance and orientation in the fulfillment of his/her functions from the SFM/SLM Coordinator.

Appendix 12: Letters of Commitment for Co-financing by Project Partners

See in attached PDF file

Appendix 13: Endorsement Letter of GEF National Focal Point

On file at GEF Secretariat and UNEP

Appendix 14: Draft Procurement Plan

Project title and number: Protecting Biodiversity and Multiple Ecosystem Services in Biological Mountain Corridors in Chile					
UNEP Budget Line		**List of Goods and Services required**	**Budget (USD)**	**Year {Note 1}**	**Brief description of anticipated procurement process {Note 2}**
1100	**Personnel Component**				
1101	**Project Coordinator**	1 full time project coordinator	0	Y 1-5	A professional from the Ministry of the Environment will assume as Project Coordinator, appointed by the Chairman of the Steering Committee (PSC). The salary will be in charge of the Ministry of the Environment.
1102	**Project Staff**				
	LEM coordinator	1 full time project coordinator of Local Environment Management	266,800	Y 1-5	CVs of 2-3 candidates will be reviewed by a President of PSC and project coordinator. Depending upon qualification, experience, etc., the candidate will be selected.
	BD coordinator	1 full time project coordinator of Biodiversity (BD)	266,800	Y 1-5	CVs of 2-3 candidates will be reviewed by a President of PSC and project coordinator. Depending upon qualification, experience, etc., the candidate will be selected.
	SFM/SLM coordinator	1 full time project coordinator of sustainable forest and land management (SFM/SLM) and the Conservation District	266,800	Y 1-5	CVs of 2-3 candidates will be reviewed by a President of PSC and project coordinator. Depending upon qualification, experience, etc., the candidate will be selected.
	Support professional LEM 1	1 full time support professional for activities in Local Environment Management	201,600	Y 1-5	CVs of 2-3 candidates will be reviewed by a project coordinator and LEM coordinator. Depending upon qualification, experience, etc., the candidate will be selected.
	Support professional LEM 2	1 full time support professional for activities in Local Environment Management	194,400	Y 1-5	CVs of 2-3 candidates will be reviewed by a project coordinator and LEM coordinator. Depending upon qualification, experience, etc., the candidate will be selected.

	Support professional LEM 3	1 full time support professional for activities in Local Environment Management	172,800	Y 2-5	CVs of 2-3 candidates will be reviewed by a project coordinator and LEM coordinator. Depending upon qualification, experience, etc., the candidate will be selected.
	Support professional in BD and GIS platform	1 full time support professional for setting up and maintaining the project GIS platform	201,600	Y 1-5	CVs of 2-3 candidates will be reviewed by a project coordinator and BD coordinator. Depending upon qualification, experience, etc., the candidate will be selected.
	Support professional in BD monitoring and pilot sites	1 full time support professional in biodiversity monitoring and tracking system for pilot sites	194,400	Y 1-5	CVs of 2-3 candidates will be reviewed by a project coordinator and BD coordinator. Depending upon qualification, experience, etc., the candidate will be selected.
	EEC coordinator	1 full time project coordinator of extension, education and communications (EEC)	201,600	Y 1-5	CVs of 2-3 candidates will be reviewed by a project coordinator. Depending upon qualification, experience, etc., the candidate will be selected.
	Support professional in SLM	1 full time support professional in sustainable land management	201,600	Y 1-5	CVs of 2-3 candidates will be reviewed by a project coordinator and SFM/SLM coordinator. Depending upon qualification, experience, etc., the candidate will be selected.
	Support professional in SFM	1 full time support professional in sustainable forest management	194,400	Y 1-5	CVs of 2-3 candidates will be reviewed by a project coordinator and SFM/SLM coordinator. Depending upon qualification, experience, etc., the candidate will be selected.
	Support professional in Green Economy	1 full time support professional in Green Economy	172,800	Y 2-5	CVs of 2-3 candidates will be reviewed by a project coordinator and SFM/SLM coordinator. Depending upon qualification, experience, etc., the candidate will be selected.

1120	**Administrative staff**				
	Logistic Support (LS)	1 full time project administrative assistant of Project operation, meetings, logistic and activities coordination and management Cost	106,400	Y 1-5	CVs of 2-3 candidates will be reviewed by a project coordinator. Depending upon qualification, experience, etc., the candidate will be selected.
1200	**Consultants**				
	Annual report translator	1 part time professional in charge of translating annual reports or other necessary document from Spanish to English	4,000	Y 1-4	CVs of 2 candidates will be reviewed by a project coordinator. Depending upon qualification, experience, etc., the candidate will be selected.
	Consultancy N° 1	Mapping and characterization project area (activity 1.2.1)	163,636	Y 1	CVs of 2 or 3 to experts or team will be reviewed by a PMU. Depending upon qualification, experience, geographical distribution, etc., the consultant will be selected.
	Consultancy N° 2	Characterization of ecosystem services on water supply (activity 1.2.1)	18,182	Y 1	CVs of 2 or 3 to experts or team will be reviewed by a PMU. Depending upon qualification, experience, geographical distribution, etc., the consultant will be selected.
	Consultancy N° 3	Characterization of ecosystem services on Air Quality (activity 1.2.1)	36,364	Y 1	CVs of 2 or 3 to experts or team will be reviewed by a PMU. Depending upon qualification, experience, geographical distribution, etc., the consultant will be selected.
	Consultancy N° 4	Characterization of ecosystem services on Carbon Sequestration (activity 1.2.1)	18,182	Y 1	CVs of 2 or 3 to experts or team will be reviewed by a PMU. Depending upon qualification, experience, geographical distribution, etc., the consultant will be selected.
	Consultancy N° 5	Determination and valuation of ecosystem services at local scale (activity 1.2.1)	18,182	Y 1	CVs of 2 or 3 to experts or team will be reviewed by a PMU. Depending upon qualification, experience, geographical distribution, etc., the consultant will be selected.

	Consultancy N° 6	Ecological zoning and indicative planning of the project area (activity 1.1.1)	54,545	Y 2	CVs of 2 or 3 to experts or team will be reviewed by a PMU. Depending upon qualification, experience, geographical distribution, etc., the consultant will be selected.
	Consultancy N° 7	Development of Model Ordinance based on indicative planning (activity 1.1.3)	9,091	Y 2	CVs of 2 or 3 to experts or team will be reviewed by a PMU. Depending upon qualification, experience, geographical distribution, etc., the consultant will be selected.
	Consultancy N° 8	Design of training programs for municipal staff (activity 1.3.1)	3,636	Y 1	CVs of 2 or 3 to experts or team will be reviewed by a PMU. Depending upon qualification, experience, geographical distribution, etc., the consultant will be selected.
	Consultancy N° 9	Development of environmental projects portfolio for municipalities (activity 1.3.3)	14,545	Y 2-4	CVs of 2 or 3 to experts or team will be reviewed by a PMU. Depending upon qualification, experience, geographical distribution, etc., the consultant will be selected.
	Consultancy N° 10	Edition and design of GAL manual (activity 1.3.4)	7,273	Y 2	CVs of 2 or 3 to experts or team will be reviewed by a PMU. Depending upon qualification, experience, geographical distribution, etc., the consultant will be selected.
	Consultancy N° 11	Assistance studies for monitoring systems (activity 2.1.3)	2,727	Y 3-4	CVs of 2 or 3 to experts or team will be reviewed by a PMU. Depending upon qualification, experience, geographical distribution, etc., the consultant will be selected.
	Consultancy N° 12	Design of regional programs in extension and training of land and forest sustainable management (activity 2.2.1)	5,455	Y 1	CVs of 2 or 3 to experts or team will be reviewed by a PMU. Depending upon qualification, experience, geographical distribution, etc., the consultant will be selected.

	Consultancy N° 13	Design of education and promotion programs to community and stakeholders (activity 2.5.1)	9,091	Y 1	CVs of 2 or 3 to experts or team will be reviewed by a PMU. Depending upon qualification, experience, geographical distribution, etc., the consultant will be selected.
	Consultancy N° 14	Development of Distrital management plan and adjustment to property management plans (activities 3.1.1 y 3.2.1)	27,273	Y 2	CVs of 2 or 3 to experts or team will be reviewed by a PMU. Depending upon qualification, experience, geographical distribution, etc., the consultant will be selected.
1600	**Travel**				
1601	Staff Travel & Transport	Expenses for concept of transportation, accommodation and meals of project staff at several meetings, visits to pilot sites and partners, plus accompaniment in national and international internships of stakeholders.	140,360	Y 1-5	Expenses for concept of transportation, accommodation, booking, and meals will be done by the project staff looking for the best prices and quality options.
2300	**Sub Contract for commercial purposes**				
2301	**Sub Contract to private firms**				
	Pilot N° 1	Implementation of environmental governance model (activity 1.5.2)	18,182	Y 3-5	Based on terms of reference, the costs associated in the implementation of the pilot sites include staffing, materials or other operational expenses. These costs will be controlled by the PMU, choosing the best options between price and quality, or the best proposal will be selected by the panel.
	Pilot N° 2	Implementation of environmental initiatives. Strengthening of local environmental management in municipalities (activity 1.6.2)	272,727	Y 2-5	Based on terms of reference, the costs associated in the implementation of the pilot sites include staffing, materials or other operational expenses. These costs will be controlled by the PMU, choosing the best options between price and quality, or

				the best proposal will be selected by the panel.
Pilot N° 3	Implementation of initiatives environmental municipalities instrument (Landscape conservation & sustainable municipality) (activity 1.6.2)	145,455	Y 2-5	Based on terms of reference, the costs associated in the implementation of the pilot sites include staffing, materials or other operational expenses. These costs will be controlled by the PMU, choosing the best options between price and quality, or the best proposal will be selected by the panel.
Pilot N° 4	Implementation of local participatory monitoring system (activity 2.1.2)	72,727	Y 2-5	Based on terms of reference, the costs associated in the implementation of the pilot sites include staffing, materials or other operational expenses. These costs will be controlled by the PMU, choosing the best options between price and quality, or the best proposal will be selected by the panel.
Pilot Nº 5	Implementation of monitoring systems sites for biodiversity (activity 2.1.2)	72,727 234,667	Y 2-5	Based on terms of reference, the costs associated in the implementation of the pilot sites include staffing, materials or other operational expenses. These costs will be controlled by the PMU, choosing the best options between price and quality, or the best proposal will be selected by the panel.
Pilot Nº 6	Implementation health monitoring systems for biological corridors (activity 2.1.2)	90,909	Y 2 & 4	Based on terms of reference, the costs associated in the implementation of the pilot sites include staffing, materials or other operational expenses. These costs will be controlled by the PMU, choosing the best options between price and quality, or the best proposal will be selected by the panel.
Pilot Nº 7	Implementation of sustainable	454,545	Y 2-5	Based on terms of reference, the costs

		management actions of forest and ecological restoration (activity 2.3.1)			associated in the implementation of the pilot sites include staffing, materials or other operational expenses. These costs will be controlled by the PMU, choosing the best options between price and quality, or the best proposal will be selected by the panel.
	Pilot Nº 8	Implementation of good practices for land sustainable management (in mining-ski centres-agriculture, property plans and social environmental conflicts) (Activity 2.3.2)	127,273	Y 2-5	Based on terms of reference, the costs associated in the implementation of the pilot sites include staffing, materials or other operational expenses. These costs will be controlled by the PMU, choosing the best options between price and quality, or the best proposal will be selected by the panel.
	Pilot Nº 9	Implementation of good practices in Clean Production Agreements and green certifications (activity 2.4.2)	27,273	Y 3-5	Based on terms of reference, the costs associated in the implementation of the pilot sites include staffing, materials or other operational expenses. These costs will be controlled by the PMU, choosing the best options between price and quality, or the best proposal will be selected by the panel.
	Pilot Nº 10	Implementation of promoting and marketing actions of green products in the project area (activity 2.4.3)	26,577	Y 3-5	Based on terms of reference, the costs associated in the implementation of the pilot sites include staffing, materials or other operational expenses. These costs will be controlled by the PMU, choosing the best options between price and quality, or the best proposal will be selected by the panel.
	Pilot Nº 11	Implementation of good practices in land and forest sustainable management. Conservation District (activity 3.2.4)	145,454	Y 3-5	Based on terms of reference, the costs associated in the implementation of the pilot sites include staffing, materials or other operational expenses. These costs

					will be controlled by the PMU, choosing the best options between price and quality, or the best proposal will be selected by the panel.
3200	**Group Training**				
3201	**Training**				
	Group training	Training of municipal staff with foreign experiences in local environmental management (3 international internships benefiting a total of 30 personnel) (under activity 1.6.2)	125,455	Y 2-4	Several workshops will be held which include meals, accommodation and transport for participants. It may include accommodation in some cases. Local quotations of the best option will be selected
	Group training	Training of municipal staff with foreign experiences in local environmental management (2 international internships benefiting a total of 20 personnel) (under activity 1.6.2)	18,182	Y 2-4	Several workshops will be held which include meals, accommodation and transport for participants. It may include accommodation in some cases. Local quotations of the best option will be selected
	Group training	Training in pilot experiences. Visits, lessons learned of implemented activities by the Steering Committee PSC (monitoring and evaluation activities of the Project)	5,000	Y 3-5	Several workshops will be held which include meals, accommodation and transport for participants. It may include accommodation in some cases. Local quotations of the best option will be selected
	Group training	Transportation of the Steering Committee (PSC) meetings (activity S&E project) and visits between municipalities for coordination (under activity 1.4.2)	7,500	Y 1-5	Several workshops will be held which include meals, accommodation and transport for participants. It may include accommodation in some cases. Local quotations of the best option will be selected
	Group training	Stakeholders training with foreign experiences in forest, land and biodiversity sustainable management (2 international internships benefiting a	66,909	Y 2-4	Several workshops will be held which include meals, accommodation and transport for participants. It may include accommodation in some cases. Local

		total of 16 personnel) (under activity 2.2.2)			quotations of the best option will be selected
	Group training	Stakeholders training with national experiences in forest, land and biodiversity sustainable management (2 national internships benefiting a total of 16 personnel) (under activity 2.2.2)	14,545	Y 2-4	Several workshops will be held which include meals, accommodation and transport for participants. It may include accommodation in some cases. Local quotations of the best option will be selected
	Group training	Visits to implemented pilots in the Conservation District area (under activity 3.2.4)	5,455	Y 3-5	Several workshops will be held which include meals, accommodation and transport for participants. It may include accommodation in some cases. Local quotations of the best option will be selected
3300	**Meetings/Conference**				
3301	Meetings/conferences				
	Meetings/conferences	Meetings with stakeholders to implement the model municipal ordinance based on the ecological planning (under activity 1.1.3)	13,637	Y 2-5	Several meetings will be held which includes meals, materials, rent conference rooms and others for participants.
	Meetings/conferences	Seminars, conferences and courses for municipal staff in forest, land and biodiversity management and ecological planning (under activity 1.3.2)	35,273	Y 1-5	Several meetings will be held which includes meals, materials, rent conference rooms and others for participants.
	Meetings/conferences	Stakeholders meetings for municipal coordination between 36 municipalities involved in the Project area (under activity 1.4.2) and environmental governance model (under activity 1.5.1)	25,273	Y 1-5	Several meetings will be held which includes meals, materials, rent conference rooms and others for participants.
	Meetings/conferences	Stakeholders meetings for agreement, coordination and implementation of environmental governance pilots (under activity 1.4.2)	20,500	Y 2-5	Several meetings will be held which includes meals, materials, rent conference rooms and others for participants.
	Meetings/conferences	Steering Committee (PSC) meetings	5,500	Y 1-5	Several meetings will be held which

		(under activity S&E)			includes meals, materials, rent conference rooms and others for participants.
	Meetings/conferences	Experts meetings to adjust the regional and local monitoring system (under activity 2.1.3) and meetings with others stakeholders for use, implementation, and evaluation of the monitoring system (under activity 2.1.4)	10,182	Y 1-5	Several meetings will be held which includes meals, materials, rent conference rooms and others for participants.
	Meetings/conferences	Stakeholders meetings to promote the forest and land sustainable management (under activity 2.2.2)	14,545	Y 1-5	Several meetings will be held which includes meals, materials, rent conference rooms and others for participants.
	Meetings/conferences	Stakeholders meetings for coordination, extension, and implementation of green economic activities (under activity 2.4.1 y 2.4.2)	16,740	Y 1-5	Several meetings will be held which includes meals, materials, rent conference rooms and others for participants.
	Meetings/conferences	Informative and coordination meetings with stakeholders to declare the Conservation District (under activity 3.1.3) and coordination for property management plans validation (under activity 3.2.1)	2,910	Y 2-5	Several meetings will be held which includes meals, materials, rent conference rooms and others for participants.
3311	Meetings/conferences	Stakeholders meetings for lessons learned, promoting, and extension of the Conservation District activities.	7,273	Y 2-5	Several meetings will be held which includes meals, materials, rent conference rooms and others for participants.
3312	Meetings/conferences	Workshops for developing sustainable and integrated landscape and natural resource management plans in project area municipalities, determining sites for pilot projects (including budget planning for each pilot project) (project activity 3.2.4)	11,000	Y 2-4	Several meetings will be held which includes meals, materials, rent conference rooms and others for participants.

4100	**Expendable equipment**				
4101	**Office supplies and consumables**				
	Expendable equipment	Office running cost	5,000	Y 1-5	Costs of office articles for staff project
4200	**Non-Expendable equipment**				
4201	**Non laboratory purchase**				
	Non-expendable equipment	1 four wheel drive truck 4x4(Project Staff)	30,000	Y 1	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one
	Non-expendable equipment	7 laptop computers (Project Staff)	6,900	Y 1	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one
	Non-expendable equipment	1 printer-scanner (multifunctional, toner) (Project Staff)	1,200	Y 1	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one
	Non-expendable equipment	2 photographic camera (Project Staff)	1,500	Y 1	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one
	Non-expendable equipment	GIS (3) and Office (7)software (Project Staff)	24,000	Y 1	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one
	Non-expendable equipment	3 GPS (Project Staff)	1,200	Y 1	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one
	Non-expendable equipment	2 binoculars(Project Staff)	900	Y 1	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one
	Non-expendable equipment	2 projector(Project Staff)	1,200	Y 1	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one
	Non-expendable equipment	Radios communication, GPS, tablets (municipalities implementing territorial planning under activity 1.1.3)	9,091	Y 2-5	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one
5100	**Operation and maintenance of equipment**				
5101	Equipment maintenance				

	Equipment maintenance	Maintenance 4-wheel drive truck	6,000	Y 1-5	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one
	Equipment maintenance	Maintenance computers, printer + scanner	2,250	Y 2-5	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one
5200	**Reporting costs**				
5201	**Publications, translation, dissemination and reporting costs**				
	Reporting costs	Extension materials (primers, publications) Environmental planning Ordinance (under activity 1.1.3)	10,000	Y 2-5	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one
	Reporting costs	Educative materials with training programs for municipal staff (under activity 1.3.2)	15,636	Y 2-5	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one
	Reporting costs	Development GAL manual and printing (under activity 1.3.4)	21,818	Y 1-2	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one
	Reporting costs	Development and printing of extension materials in GAL schemes: Conservation Landscape, SCAM, Sustainable Commune (under activity 1.6.1)	18,182	Y 1-5	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one
	Reporting costs	Monitoring programs launch activity (under activity 2.1.5)	3,636	Y 2	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one
	Reporting costs	Development and printing of extension materials SFM/SLM and implemented pilots experiences (under activity 2.2.2)	25,454	Y 1-5	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one
	Reporting costs	Development and printing of campaign materials for extension and education to the community (under activity 2.5.2)	72,727	Y 1-5	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one
	Reporting costs	Design and maintenance of the Project web page (under activity 2.5.3)	43,636	Y 1-5	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one
	Reporting costs	Design and printing of publications, documentaries, extension and	70,910	Y 1-5	According with AGCI procedures, 2 quotations from vendors must be obtained

		communication of the Project, and merchandising (under activity 2.5.3)			in order to select the best one
	Reporting costs	Design and printing of extension materials related to lessons learned of Conservation District (under activity 3.3.2)	9,091	Y 4-5	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one
5202	**Audit reports**				
	Audit reports	Annual Reports (S&E)	25,000	Y 1-5	2-3 Proposals will be reviewed by a project coordinator. Depending upon qualification, experience, etc., the candidate will be selected.
5300	**Sundry**				
5301	**Communications (phone, fax, email, etc.)**				
5304	Communications	Package for 14 cell phones, internet included (project staff)	38,400	Y 1-5	According with AGCI procedures, 2 quotations from vendors must be obtained in order to select the best one.
5302	**Others**				
	Others	Parking rent for 4-wheel drive truck	38,400	Y 1-5	The best option to lease considering proximity parking to the work place and price, selecting the best choice.
5303	**Technical support (Midterm evaluation & Terminal evaluation)**				
	Evaluation	Mid-term Evaluation	20,000	Y 3	CVs of 2-3 candidates will be reviewed by a project coordinator. Depending upon qualification, experience, etc., the candidate will be selected.
	Evaluation	Terminal Evaluation	20,000	Y 5	CVs of 2-3 candidates will be reviewed by a project coordinator. Depending upon qualification, experience, etc., the candidate will be selected.
5375	**Fund Management Agency`s charges**				
	Executing Agency`s cost recovery	Executing agency expenses for project management cost	162,000	Y 1-5	Expenses for Project management (executing agency) previously agreed with the Ministry of Environment
	GRAND TOTAL		**5,657,201**		

Appendix 15: GEF Tracking Tools

Attached as Excel files: BD, LD, SFM

Appendix 16: Objectives Tree (Theory of Change)

PROBLEM	**GLOBALLY SIGNIFICANT BIODIVERSITY AND MULTIPLE ECOSYSTEM SERVICES IN CHILE'S MEDITERRANEAN ECOSYSTEM MOUNTAIN AREAS ARE ENDANGERED AND THEIR QUALITY DIMINISHED BECAUSE OF BAD PRODUCTIVE PRACTICES AND USE OF THE TERRITORY WITHOUT ENVIRONMENTAL CRITERIA.**		
STRATEGIES	**COMPONENT 1:** Municipal Environment Departments apply updated information on biodiversity and ecosystem services components on the local level for decision-making in land use plans.	**COMPONENT 2:** Implementation and promotion of best practices for the sustainable management of landscapes for biodiversity and ecosystem services conservation.	**COMPONENT 3:** Pilot-scale application of Integrated Conservation Districts for Soils, Forest and Water legislation.
OUTCOMES	Municipal environmental departments apply updated information on the biodiversity components and ecosystem services at a local scale for decision making in land use planning.	The scenario for conservation of biodiversity and key ecosystem services is improved in biological corridors by means of the implementation of best practices for the sustainable management of landscapes and financial incentive mechanisms, emphasizing SLM/SFM and the need to combat desertification.	Integrated Conservation Districts for soils, forest and water effectively established and implemented in some 500,000 hectares of production/conservation pilot areas.
DRIVERS & ASSUMPTIONS	The Public Services show a willingness to supply the existing data for evaluation and updating of Project environment components. Landowners show support for facilitating access to their lands for the purpose of gathering data and evaluating Project environment components. Mayors from the municipalities involved show the political will to validate, utilize and incorporate management standards for conservation of biodiversity, ecosystem services and environmental territorial planning, in developing municipal ordinances for local environment management, before Project finalization. The Environment Ministry authorities show the will to incorporate conservation of biodiversity and ecosystem services into their own LEM instruments. Mayors from the municipalities involved have the political will to adopt some of the LEM instruments, incorporating biodiversity management into their mandate.	Interest exists for utilizing the monitoring systems proposed by the Project, as well as for contributing pertinent information as feedback. The will exists on the part of the Public Services to discuss, validate and incorporate better techniques in biodiversity conservation and SLM/SFM into the existing financial incentives mechanisms (FMs). Clear and expedient channels are available for applying for FMs. The Public Services and competent institutions commit to supporting extension and implementation of the strengthened instruments. Local stakeholders are interested in improving their productive systems and implementing best productive practices compatible with Project objectives. The owners of private landholdings are committed to and are accompanied through the application process for implementing FMs. There is interest on the part of regional and local authorities for implementing the education and awareness programs in biodiversity and ecosystem services proposed by the Project.	The political will exists for declaring, for the first time in Chile, the Conservation District legislation, as well as for articulating and enhancing the existing financing mechanisms for implementing recovery practices for soil, water and forests. Landowners are motivated for elaborating and implementing Integrated Land Management Plans. The Public Services are committed to validate and implement the land plans. The FMs are implemented in an orderly fashion, making it possible to fulfill the District Management Plan objectives. There are experiences of declared Conservation District and implemented Land Plans from which to draw lessons learned.

INTERMEDIATE STATES	An assessment system is created for biodiversity and ecosystem services are which the biological mountain corridors provide. The Municipalities incorporate biodiversity and ecosystem services for sustainable use and management of the territory, by means of a program for strengthening their personnel's capacities; by means of a strategy for promoting and strengthening LEM schemes; and of a proposed environment Ordinance model for biological mountain corridors.	Monitoring programs are established on the regional level for determining the status, pressure and response of key attributes of biodiversity and ecosystem services, and soil degradation. Extension and training programs are carried out on FMs and best practices for sustainable management of land and forests, biodiversity conservation and soil degradation. Land plans are carried out and/or pilot practices for sustainable management of forests, land and biodiversity. A strategy is available for promoting and strengthening instruments for certifying best practices for SLM/SFM in sustainable markets. Education and awareness programs are carried out on biodiversity and ecosystem services, targeting relevant local stakeholders (municipalities, community, public services).	The legal instrument of Conservation District for soil, forest and water is declared in the pilot area. Integrated Land Management Plans for soil, water and forests are implemented in pilot areas within the Conservation District. A Strategy for publicizing the lessons learned is drawn up following implementation of land plans on pilot sites.
IMPACT	**PUBLIC-PRIVATE INITIATIVES ARE CONSOLIDATED FOR CONSERVING AND MANAGING SUSTAINABLY THE GLOBALLY SIGNIFICANT BIODIVERSITY AND MULTIPLE ECOSYSTEM SERVICES IN CHILE'S MOUNTAIN AREAS OF THE MEDITERRANEAN ECOSYSTEM, SLOWING THE PROCESS OF SOIL AND FOREST DETERIORATION.**		

Appendix 17: UNEP/GEF Environmental and Social Safeguards Checklist

Project Title:	Protecting Biodiversity and Multiple Ecosystem Services in Biological Mountain Corridors in Chile's Mediterranean Ecosystem		
GEF project ID and UNEP ID/IMIS Number		***Version of checklist***	Version N° 1
Project status (preparation, implementation, MTE/MTR, TE)	Preparation	***Date of this version:***	July, 2014
Checklist prepared by (Name, Title, and Institution)	Dr. Jaime Rovira, Environmental Ministry of Chile Supervisor		

In completing the checklist both short- and long-term impact shall be considered.

Section A: Project location

If negative impact is identified or anticipated the Comment/Explanation field needs to include: Project
for addressing the issue; Responsibility for addressing the issue; Budget implications, and other comme

	Yes/No/N.A.	*Comment/explanation*
- Is the project area in or close to -		
- densely populated area	Yes	
- cultural heritage site	Yes	
- protected area	Yes	Parts of the project area are protec areas.
- wetland	Yes	
- mangrove	No	
- estuarine	No	
- buffer zone of protected area	Yes	
- special area for protection of biodiversity	Yes	
- Will project require temporary or permanent support facilities?	No	
If the project is anticipated to impact any of the above areas an Environmental Survey will be neede determine if the project is in conflict with the protection of the area or if it will cause significant dist to the area.		

Section B: Environmental impacts

If negative impact is identified or anticipated the Comment/Explanation field needs to include: Project
for addressing the issue; Responsibility for addressing the issue; Budget implications, and other comme

	Yes/No/N.A.	*Comment/explan*
- Are ecosystems related to project fragile or degraded?	Yes	They are mountains
- Will project cause any loss of precious ecology, ecological, and economic functions due to construction of infrastructure?	No	
- Will project cause impairment of ecological opportunities?	No	
- Will project cause increase in peak and flood flows? (including from temporary or permanent waste waters)	No	

- Will project cause air, soil or water pollution?	No	
- Will project cause soil erosion and siltation?	No	
- Will project cause increased waste production?	No	
- Will project cause Hazardous Waste production?	No	
- Will project cause threat to local ecosystems due to invasive species?	No	
- Will project cause Greenhouse Gas Emissions?	No	
- Other environmental issues, e.g. noise and traffic	No	
Only if it can be carefully justified that any negative impact from the project can be avoided or mitigated satisfactorily both in the short and long-term, can the project go ahead.		

Section C: Social impacts

If negative impact is identified or anticipated the Comment/Explanation field needs to include: Project stage for addressing the issue; Responsibility for addressing the issue; Budget implications, and other comments.

	Yes/No/N. A.	*Comment/explanation*
- Does the project respect internationally proclaimed human rights including dignity, cultural property and uniqueness and rights of indigenous people?	Yes	
- Are property rights on resources such as land tenure recognized by the existing laws in affected countries?	Yes	
- Will the project cause social problems and conflicts related to land tenure and access to resources?	No	
- Does the project incorporate measures to allow affected stakeholders' information and consultation?	Yes	
- Will the project affect the state of the targeted country's (-ies') institutional context?	No	
- Will the project cause change to beneficial uses of land or resources? (incl. loss of downstream beneficial uses (water supply or fisheries)?	No	
- Will the project cause technology or land use modification that may change present social and economic activities?	Yes	
- Will the project cause dislocation or involuntary resettlement of people?	No	
- Will the project cause uncontrolled in-migration (short- and long-term) with opening of roads to areas and possible overloading of social infrastructure?	No	
- Will the project cause increased local or regional unemployment?	No	
- Does the project include measures to avoid forced or child labour?	Yes	
- Does the project include measures to ensure a safe and healthy working environment for workers employed as part of the project?	Yes	
- Will the project cause impairment of recreational opportunities?	No	
- Will the project cause impairment of indigenous people's livelihoods or belief systems?	No	
- Will the project cause disproportionate impact to women or other disadvantaged or vulnerable groups?	No	
- Will the project involve and or be complicit in the alteration, damage or removal of any critical cultural heritage?	No	

- Does the project include measures to avoid corruption?	Yes	
Only if it can be carefully justified that any negative impact from the project can be avoided or mitigated satisfactorily both in the short and long-term, can the project go ahead.		

Section D: Other considerations

If negative impact is identified or anticipated the Comment/Explanation field needs to include: Project stage for addressing the issue; Responsibility for addressing the issue; Budget implications, and other comments.

	Yes/No/N.A.	*Comment/explanation*
- Does national regulation in affected country (-ies) require EIA and/or ESIA for this type of activity?	No	Not for project interventions and activities.
- Is there national capacity to ensure a sound implementation of EIA and/or SIA requirements present in affected country (-ies)?	Yes	
- Is the project addressing issues, which are already addressed by other alternative approaches and projects?	Yes	
- Will the project components generate or contribute to cumulative or long-term environmental or social impacts?	Yes	Project components will contribute to positive environmental or social impacts
- Is it possible to isolate the impact from this project to monitor E&S impact?	Yes	Project M&E system will allow monitoring E&S impact.

Appendix 18: Response to Reviews

Below are the responses to the comments sent by the GEF Council Members, GEF Secretariat and Scientific/Technical Advisory Panel (STAP), regarding this GEF Project:

GEF Secretariat

Comment/Question	Response
15. September 14, 2012 **Please provide an estimate of CO_2 benefits arising from the SFM/REDD related activities. Carbon estimates are quite high for this type of activity. Please refine the figures.** February 14, 2014 Estimates revised sufficiently for PIF. Further refined figures will be expected as part of PPG.	During the PPG phase, CONAF finalizad the study "Elaboración de Insumos Técnicos y Metodológicos para el Desarrollo de la Tipología de Proyectos Forestales de Captura de Carbono por medio de la Restauración de Bosques Mediterráneos", related to carbon capture in Mediterranean forest, resulting a factor of 0,59Ton C/ha/year (see ProDoc section 3.1, paragraph #101).
16. Is there a clear description of: a) the socio-economic benefits, including gender dimensions, to be delivered by the project, and; b) how will the delivery of such benefits support the achievement of incremental/additional benefits? September 14, 2012 a) Socio-economic benefits are identified but are somewhat generic. What effect will the availability of a certified supply chain or involvement in the Conservation Districts have to land users? Fuller coverage of gender issues are expected at CEO Endorsement.	Land users in the project area will benefit from the refinement of important existing financial mechanisms. Changes in these mechanisms, through the Project, will expand the offer of financial incentives to the good practices in different activities, especially forestry, agriculture and livestock in the Conservation District pilot area. Inside the Conservation District legislation, the application of benefits for land owners is prioritized against all other applicants to public funds of Agricultural Ministry. All those who sign up for the Master Plan for land management will have priority for obtaining State subsidies for implementing actions from that Plan on their own land properties. The Project will work with FM administrators, such as SAG and INDAP, which give financial benefits to middle or big producers (SAG) and small producers (INDAP). Throughout the Project will be reviewed the standards of feasible activities to have the benefits and the list of costs to calculate them. The goal is modify the standards looking for the promotion of good practices required by certified products. **Certifications:** the Project will promote use of existing (wine or honing products certifications) or developing certification systems (FSC or Cleaning Productions Agrees) which target best productive practices. In some cases, the landowners will be accompanied in

	formulating their projects for obtaining these certifications. These are best practices certifications which bring associated economic benefits to the production which is certified. **Gender Issues:** INDAP's financial mechanism (for small producers) will especially benefit women´s households. Because, they are the majority of applicants for activities related with certified products. The gender of the participants in Project activities will be documented. During the PPG phase, this kind of record was kept at meetings with partners entities and workshops that took place. There being a total of 54 women and 56 men consulted (see section 5, table 12 "Stakeholders Participation"). However, during the recently concluded PPG stage, 47 relevant institutions within the Project area were contacted, and they showed interest in contributing to and participating in Project activities (Appendix 10 "Decision-Making Flowchart and Organigram").
17. Is public participation, including CSOs and indigenous people, taken into consideration, their role identified and addressed properly? September 14, 2012 Brief details are included in the PIF of local community participation, attention to this will be expected as part of the PPG phase. Additionally, Component 2 seems dependent on private sector involvement, particularly the plans to utilize certification plans to enhance private sector involvement will be expected as part of the PPG stage.	**Local Community Participation:** Education and awareness activities are included regarding the importance and valuing of biodiversity and ecosystem services, forests, and soil degradation, targeting relevant stakeholders in the local communities. At the same time, the monitoring system for biodiversity and ecosystem services, forests and combating soil degradation will include the participation of members of the local community including CSOs, which will imply their involvement in gathering data and informing to feed the system. Indigenous people are not present in significant numbers in the project area (see outputs 2.5 and 2.1). **Private Sector Involvement:** Promoting certification systems, which the Project will foster, includes articulating with the Council for Clean Production (CCP) in generating or perfecting their Clean Production Agreements (CPAs) with producers' associations by production field. In addition, we expect to accompany groups of producers through the certification process in different localities within the Project area, as demonstration cases and for transferring lessons learned (see output 2.4).
18. Does the project take into account potential major risks, including the consequences of climate	Under section 3.5, table 10 "Risk Factors and Possible Mitigation Measures", in the ProDoc, the PPGs

change and provides sufficient risk mitigation measures? (i.e., climate resilience) September 14, 2012 Key risks identified, fuller consideration is expected at CEO Endorsement.	elaboration on key risks to the Project are presented: Especially regarding review comments, "the risk from the climate factor will be incorporated in this Project through promoting good productive practices which minimize water consumption (hydraulic efficiency in forest-agriculture-livestock production), as well as conservation of vegetation cover and the sustainable soil and forest practices, in addition to protecting and conserving key zones which make possible conservation of the ecosystem services of water supply and carbon capture". Other risks are changes in local government authorities and environment department's personnel, at the end of 2016, and at the national level in March 2018 (election dates), may affect the continuity of Project activities initiated under the previous (present) government". The mitigation measures for these changes are: formalizing participations of principal project actors with contracts with Councils of Municipalities and with Public Services.
31. Items to consider at CEO endorsement/approval: 1. Efforts to work with existing UNDP project to maximize synergy and collaboration. 2. Carbon benefits to be refined. 3. Fuller details of socio-economic and gender issues. 4. Involvement of private sector particularly through the certification elements. 5. Deeper assessment of risks.	See responses to the individual questions of this summary above.

Guidance from STAP

Comment/Question	Response
2. It is noted that the project is requesting a significant level of funding from the biodiversity and land degradation portfolios in the GEF Trust Fund. It would be useful if the PIF outlined explicitly how this initiative will address the Aichi Targets and the UNCCD Zero Net Degradation strategy respectively.	In paragraph 74, of the ProDoc, the relationship between Aichi Targets, the Project Outputs and CBD Indicators for Aichi Targets are depicted. Target 1. "By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably" is related with six Project Outputs, among them Output 2.5. "Education program on the need to conserve biodiversity and combat desertification for relevant local stakeholders". Target 2. "By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being

	incorporated into national accounting, as appropriate, and reporting systems" is related with five Project outputs, between them Output 1.2. "Local-scale assessments on the biodiversity components and ecosystem services of the project area"; Output 2.1. "Monitoring system for biodiversity conservation and SLM/SFM with private and public stakeholders in the project area; Output 1.1. "Local scale land use plans developed and linked to GIS system of the project area" will be achieved using the first results mentioned. The same will occur with Environmental Accounts. They will be developed with the Outputs 1.2 and 2.5. These environmental accounts carried out in the project area will be a test for national environmental accounts and the process will be supervised by UNEP. There are other 5 targets strongly related with Project Outputs: Aichi Targets 3, 5, 7, 14 and 19. See Table 9 "Relationship between Aichi Biodiversity Targets, Project Outputs and CBD Indicators" for more details. The Project is in conformity with the UNCCD Zero Net Degradation Strategy, since the Project area is located in a semi-arid climate zone, where soil degradation is equivalent to desertification. In addition, the Project has identified as the main causes of degradation, overpopulation and livestock activity (see section 2.3 "Threats, Causes and Analysis of Obstacles"). The action strategy here is to work on the landscape level in combating desertification, as recommended by the UNCCD. The Project will address this issue with the products 2.1, 2.2, 2.3 and all of component 3.
3. The overall framework and strategy for this project is sound, and based on extensive experience, existing proven technologies, and well developed approaches. As described, the project should make a reasonable contribution to GEBs and to sustainable land management in the Maipo River Basin. However, STAP believes that the proponent has proposed an initiative that is very tentative in many ways and which is potentially missing significant opportunities. It is proposed that the project will "significantly help ensure multiple ecosystem services for the Metropolitan [Santiago] region" (pg. 4, repeated verbatim on pg 16). Although the project stresses the importance of drinking water, irrigation, hydro power, and flood regulation, strikingly it does not focus on water itself as an ecosystem service that will be	The Project includes determining and assessing three main ecosystem services: water supply, carbon storage and air quality. Support will be given to generating favorable conditions for implementing a System of Payment per Environmental Service (abbreviated PSA in Chile). But this result – establishing such a system as this - is not included as a Project product per se. Nonetheless, the Project will address this issue under output 2.3 for incorporating SLM/SFM practices into existing instruments: • the Economy Ministry's Clean Production Agreements (CPA's); • the Wine, Climate Change and Biodiversity Program (called VCCB in Chile) for the sustainability of the wine industry;

specifically addressed in this initiative. Many urban areas in the Andes region have developed or are in the process of developing payments for ecosystem service models in partnership with rural communities in surrounding watersheds, whereby a portion of water user fees are directed towards sustainable land management and conservation activities which help to ensure future water supplies (see TNC led initiative in Quito, Ecuador). Given the economic importance of this region to the Chilean economy, it is surprising that a PES approach focusing on water in conjunction with the regional government of the metropolitan region of Santiago has not been proposed. The GEF has also proposed a future strategic focus on sustainable cities, along with the private sector. This project may well be able to explore important aspects associated with both of these proposed thematic areas in future GEF programs.	• and the certification of organic agriculture under the MINAGRI.
4. It is noted that climate risks in this initiative have been rated as low (B.4). This is surprising, as recent research places the risks of significant water flow fluctuations (flash floods, extremely low water levels) as quite high in this region (Ahumada, G. et al, 2013). Earlier in this year, flash floods resulting in water supplies being cut to over 2 million people in the Metropolitan area. Moreover, a World Bank proposal entering this work program (Andes Adaptation to the Impact of Climate Change in Water Resources - Bolivia, Colombia, Ecuador and Peru) suggests that the risks of climate change impacts in this region, particularly to water supplies in urban areas, is extremely high.	Following more detailed work during the PPG phase, under section 3.5, table 10, in the ProDoc, the key risks to the Project are addressed in more depth than in the preliminary PIF assessment: "the risk from the climate factor will be incorporated in this Project, through promoting best productive practices which minimize water consumption (hydraulic efficiency in forest-agriculture-livestock production), as well as conservation of the tree mass and the sustainable soil and forest practices, in addition to protecting and conserving key zones which make possible conservation of the service of water supply and carbon capture"; other risks are changes in local government authorities and personnel, at the end of 2016, and at the national level in March 2018 (election dates), may affect the continuity of Project activities initiated under the previous (present) government". The mitigation measures for these changes are: formalizing participations of principal project actors with contracts with Councils of Municipalities and with Public Services.
5. In developing the full project brief, STAP urges that the proponents consult the STAP advisory document on Payments for Ecosystem Services and Certification.	In accordance with the guidance of the STAP's suggestion through the document review, the Project will not develop a new certification label or seal, nor systems for payment of environmental services, but instead will support and catalyze incorporating the biodiversity and forest conservation variable into

	existing certification systems, addressed under output 2.3 of this Project, and through the promotion of good productive practices for green markets developed under product 2.4.

GEF Council Members (June 2013 Work Program)

Comment/Question	Response
USA's comment 1 The United States suggests that the project carefully consider how best to mitigate the human resources and institutional capacity risks associated with this project. We note that of the 30 municipalities included in the Project area, 10 of them have not assigned any staff exclusively to environmental protection of their territories through local environmental management, and those who have been assigned are not always adequately trained or exclusively dedicated to these tasks.	During PPG implementation, the diagnosis indicated that at the time this ProDoc is being written, 19 of 30 municipalities from the Metropolitan Region participate in SCAM (Environmental Certification System for Municipalities of the Environment Ministry). All of them have environment departments with 1 to 5 members (average = 2.1). Throughout the Project, the project plans to train those professionals assigned to the environmental management in the municipalities involved, in order to develop improved capacities in environment management and in rational use of natural resources. For further detail refer to Section 3.3 of the ProDoc "Project Components, Expected Results and Activities", particularly in the description of outputs and activities under component 1 named: "Developing local environment governance capacities, applying this knowledge to biodiversity conservation and sustainable land use". This component considers under its activities to build a Municipal Ordinance Model (MOM) implemented in at least 5 municipalities of the Project area. The MOM will be possible owing to the ecological planning made by the Project by means of gathering information and assessing biodiversity and ecosystem services. The Project will make it possible to carry out training activities (both in classroom and in the field) targeting staff of the 36 municipalities involved, mainly the technical teams assigned to the Infrastructure Units or Divisions, Planning and Environment Departments, in matters such as ecosystem services provision, biodiversity conservation, productive practices protocols on sustainable management of soil and forests (components 2 and 3), municipal environment management schemes (output 1.6.), as well as training in applying ordinances and the use of GIS tools resulting from outputs 1.1. and 1.2, in theory as well as in practice.

USA's comment 2 The PIF states that the project seeks to Carrying out a pilot project to enhance personnel capacities in the environmental departments of 30 municipalities (Outcome 3.1), but it is unclear exactly how this outcome is going to address the fact that there do not seem to be enough people to actually staff the positions needed to implement previous GEF project outcomes or those that may come from the current proposal. We suggest providing more detail on how the project will help identify personnel gaps, recruit staff to appropriate departments and retain them after they have been trained.	In component 1 named: "Developing local environment governance capacities, applying this knowledge to biodiversity conservation and sustainable land use". The achievement indicator for its Output 1.3 is: No. of municipalities with personnel trained in biodiversity, ecosystem services and sustainable territorial planning (ecological planning). The target upon Project completion is to have at least 20 municipalities with trained personnel. The project also considers support to modifications in municipality's law, especially by formalization of the environmental departments; promoting different environmental management schemes for municipalities that they drive biodiversity conservation and sustainable land use. For all this, the personnel will be trained in GIS's tools use. All these actions implemented in a participatory way will contribute to achieve a permanent work content and concern for environmental issues by municipalities. Details are provided in section 3.3 of the ProDoc.
USA's comment 3 With regard to private sector involvement in the development of an environmental compliance label, we suggest that the project seek to ensure that: a) many companies will adopt the measures needed and undertake a certification process and; b) that consumers will be educated on what such a label means and seek out those products. We are concerned that the economic incentives might not be in place that could compel industry to undertake a certification process, and that enough companies are on board with the concept to have a noticeable impact on environmental degradation. There is only one private company listed as a co-financer (Gasco) and Gasco and "Owners of Nature Sanctuaries in the Metropolitan Region" are the only private sector entities listed as potential private sector stakeholders in Table B.5.	a) During the PPG elaboration, it was decided to promote and strengthen existing or developing certification instruments and/or good productive practices programs, rather than creating a new EM certification in this field following guidance from STAP. The conclusion was reached that to create an effective EM certification would require special legal faculties – and the project will be working on just that during Project implementation – but it was preferable not to commit to that product and instead work with the existing certifications and/or programs. The government will attempt to involve numerous private companies to obtain best productive practices certification. To this end, during the PPG phase, two Ski Resorts, one gold mining industry and one biodiversity protection program in vineyards inside the Project area were contacted.—Actually, vineyards have a clean production agreements certified by CPL. During the Project execution they will develop new biodiversity protection standards to apply in those clean production agreements. b) The promotion of good productive practices by improving financial incentives and promoting certifications in place should not be separated from other major activity under the project. Ecological

	planning of the entire project area will allow the development of land use plans inside the project area, which will encourage many enterprises to be on board with the concept not having a noticeable impact on the environmental degradation.
USA Comment 4 We have concerns about how the results of this proposed project will be successfully adopted, given that the results of previous GEF projects are languishing due to lack of resources. This concern ties back to our comment about addressing human resource and institutional capacity risks. We suggest providing more detail on how this project will cope with or address the risk of insufficient resources to implement its outcomes. Are there other funding streams that will continue after the project is finished, that are focused on implementation or scaling up of results? Will this project's outcomes build upon or facilitate the implementation of the outcomes from the previous GEF projects that seem to have languished?	The Project includes many activities to assure that its actions will continue over time. Together with developing capacities of the municipal staff, the creation of systems for articulation and coordination among participating municipalities is planned, as well as a permanent awareness campaign for empowering the different relevant public and private stakeholders with the conviction that they must include biodiversity and forest protection and combating soil degradation among their own activities. The project also considers support to the modifications on Municipal Organic Legislation (MOL), especially by formalization of the Municipal Environment Departments (MEDs); promoting different Local Environmental Management (LEM) schemes for municipalities that drive biodiversity conservation and sustainable land use. All these actions implemented in a participatory way will contribute to achieve a permanent work content and concern for environmental issues by municipalities and the necessary funding streams. The Environment Ministry will take on the scaling up of GEF Project results as the main responsible for the Biodiversity Regional Strategy recently approved. which has the same goals. The Ministry will administrate the system for assessing (monitoring) of biodiversity conservation and sustainable land use beyond the project.

fits Estimate Calculations

Multiple Ecosystem Services in Biological Mountain Corridors in Chile's Mediterranean Ecosystem GEF ID: 5135

	Total Project areas in hectares	Average Degradation Rate in tons CO2/ha/year	% Reduction of Average Degradation Rate due to Project	Growth rate tCO2/ha/year	Annual CO2 over baseline due to Project	*Years of intervention effectiveness during project life	CO2 Benefit from Project effective years (tCo2)
acement of Carbon in Forests							
M	50,000			0.81	40,500.00	3	121,500
s ster	200,000			0.81	162,000.00	3	486,000
							607,500
sions							
o GIS	372,322	0.59	10		21,967	3	65,901
ion of s as							
for							
oject							**673,401**