



# PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project

THE GEF TRUST FUND

Submission Date: 1 Sept 2009

Re-Submission Date: 22 Apr 2010

## PART I: PROJECT IDENTIFICATION

GEF PROJECT ID<sup>1</sup>: PROJECT DURATION: 70 months

GEF AGENCY PROJECT ID:

COUNTRY(IES): Chile

PROJECT TITLE: Sustainable Land Management

GEF AGENCY(IES): World Bank, (select), (select)

OTHER EXECUTING PARTNER(S): Office of Agrarian Studies and Policy (of the Ministry of Agriculture)

GEF FOCAL AREA (S)<sup>2</sup>: Multi-focal areas

GEF-4 STRATEGIC PROGRAM(S): LD-SP3-Innovation, BD-SP4-Policy, CC-SP6-LULUCF

NAME OF PARENT PROGRAM/UMBRELLA PROJECT (if applicable):

INDICATIVE CALENDAR*	
Milestones	Expected Dates mm/dd/yyyy
Work Program (for FSP)	Jun. 2010
CEO Endorsement/Approval	Nov. 2011
Agency Approval Date	Feb. 2012
Implementation Start	Jul. 2012
Mid-term Evaluation (if planned)	Dec. 2014
Project Closing Date	Apr. 2018

\* See guidelines for definition of milestones.

## A. PROJECT FRAMEWORK

Project Objective: To develop a national incentive program for mainstreaming sustainable land management planning and practices in order to combat land degradation, conserve biodiversity of global importance and protect vital carbon assets.								
Project Component s	Inv, TA, or STA <sup>b</sup>	Expected Outcomes	Expected Outputs	Indicative GEF Financing <sup>a</sup>		Indicative Co-Financing <sup>a</sup>		Total (\$) c = a + b
				(\$ a)	%	(\$ b)	%	
1. National Sustainable Land Management System – Program Development (SINFOSA)	STA, TA	1.1 Framework for National Incentive System for Environmental Services (SINFOSA) established and roadmap for mainstreaming at national and sub-national levels	1.1.1 Catalogue and assessment of existing MAG instruments that promote ecosystem restoration and future services for their use in SINFOSA; 1.1.2 National level priority area network for SINFOSA determined - based on vulnerabilities and potential for social and environmental benefits; 1.1.3 Eligibility criteria established for sustainable land management activities to be funded by SINFOSA for the provision of environmental services; 1.1.4 Procedures revised for application to, and allocation of MAG instruments for SINFOSA; 1.1.5 5 pilot areas defined that are eligible to be managed under the SINFOSA incentive system based on the design and objectives of the Conservation Districts	755,000	34%	1,450,000	66%	2,205,000
2. SINFOSA SLM Pilot Projects*	Investment	2.1 Reduced degradation and habitat loss, and increased carbon stock within 5 target areas (Conservation	2.1.1 Participation in SINFOSA of approximately 2,000 beneficiary families 2.1.2. Application of SINFOSA's SLM instruments supporting improved land management in approximately 100,000 ha	2,450,000	4%	63,000,000	96%	65,450,000

<sup>1</sup> Project ID number will be assigned by GEFSEC.

<sup>2</sup> Select only those focal areas from which GEF financing is requested.

		Districts) of globally important priority ecosystems via application of incentives for restoration and mainstreaming SLM practices	2.1.3. Training workshops on best practices for SLM and on application for SINFOSA incentives 2.1.4 Increased use of efficient rainwater collection and ground water recharge methods by beneficiaries 2.1.5 Restoration activities in priority biodiversity habitats 2.1.6 Increased application of sustainable forest management practices by beneficiaries, including reforestation with native species 2.1.7 Biological corridors established in pilot areas 2.1.8 Increased use of on-farm conservation practices to control soil erosion by beneficiaries					
3. National Monitoring and Evaluation Program for SLM and Environmental Services	TA	3.1 Siting, monitoring and early warning information system established and in use for land degradation and future environmental services programs	3.1.1 Improved indicators for SLM, biodiversity, and climate change developed 3.1.2 Training workshops for local institutions and stakeholders in on-the-ground monitoring techniques and indicators 3.1.3 Training workshops for MAG to manage information system inputs and analysis 3.1.4 Results from regular monitoring used to improve impact of project activities and to adjust SINFOSA (i.e. eligibility criteria and targets) to improve its effectiveness 3.1.5 Opportunities for replication of activities in SINFOSA national level priority area network identified	1,375,000	31%	3,000,000	69%	4,375,000
4. Institutional capacity building and lessons learned	TA	4.1 Increased capacity in national and regional governments and civil society organizations to coordinate application of SINFOSA instruments at national and local levels in order to mainstream SLM	4.1.1 Inter-sectoral coordination mechanism created that supports SINFOSA development and encourages participation of strategic stakeholders 4.1.2 Capacity for adaptive management of SINFOSA improved via trainings and workshops 4.1.3 Program developed for national-level outreach and communication of SINFOSA achievements, and incentives to replicate project activities	750,578	33%	1,550,000	67%	2,300,578
5. Project management				533,058	6%	8,610,000	94%	9,143,058
<b>Total project costs</b>				A5,863,636		B77,610,000		83,473,636

<sup>a</sup> List the \$ by project components. The percentage is the share of GEF and Co-financing respectively of the total amount for the component.

<sup>b</sup> TA = Technical Assistance; STA = Scientific & Technical Analysis.

\* Specific targets for number of training workshops, participation of beneficiaries in trainings, and number of beneficiaries applying sustainable land management practices to be determined during project preparation.

**B. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE and by NAME (in parenthesis) if available, (\$)**

Sources of Co-financing	Type of Co-financing	Project
Project Government Contribution	Cash & In-kind	Cash: 69,000,000 In-kind: 8,610,000
<b>Total Co-financing</b>		<b>77,610,000</b>

**C. INDICATIVE FINANCING PLAN SUMMARY FOR THE PROJECT (\$)**

	Previous Project Preparation Amount (a) <sup>3</sup>	Project (b)	Agency Fee (d)	Total (b) + (d)
GEF financing	348,500.00**	5,863,636	586,364	6,450,000
Co-financing	185,000.00**	77,610,000		77,610,000
<b>Total</b>	<b>533,500.00**</b>	<b>83,473,636</b>	<b>586,364</b>	<b>84,060,000</b>

**D. GEF RESOURCES REQUESTED BY AGENCY (IES), FOCAL AREA(S) AND COUNTRY(IES)<sup>1</sup>**

GEF Agency	Focal Area	Country Name/ Global	(in \$)		
			Project (a)	Agency Fee (b) <sup>2</sup>	Total c=a+b
World Bank	Land Degradatio	Chile	3,636,364	363,636	4,000,000
World Bank	Biodiversity	Chile	1,363,636	136,364	1,500,000
World Bank	Climate Change	Chile	863,636	86,364	950,000
<b>Total GEF Resources</b>			<b>5,863,636</b>	<b>586,364</b>	<b>6,450,000</b>

<sup>1</sup> No need to provide information for this table if it is a single focal area, single country and single GEF Agency project.

<sup>2</sup> Relates to the project and any previous project preparation funding that have been provided and for which no Agency fee has been requested from Trustee.

**PART II: PROJECT JUSTIFICATION**

**A. STATE THE ISSUE, HOW THE PROJECT SEEKS TO ADDRESS IT, AND THE EXPECTED GLOBAL ENVIRONMENTAL BENEFITS TO BE DELIVERED:**

Chile is one of the most developed countries in the southern hemisphere and relies heavily on its natural resource base for employment and exports. The country has a wide range of ecological zones; including expansive arid desert, remote Pacific islands, a Mediterranean ecosystem, high-altitude grasslands and wetlands, and temperate rainforests, among others. This diverse landscape contributes to Chile's rich biodiversity that is characterized by high levels of endemism, unparalleled natural beauty and highly favorable environmental conditions for its successful resource-based industries; including forestry, fisheries, and agriculture. Yet, despite its natural assets and economic prowess, the country is challenged by land degradation problems including desertification, accelerated soil erosion, and forest degradation due to past malpractices. Climate change is also exacerbating land degradation through changes in rainfall quantity and regimen, and rising temperatures.

Globally recognized priorities for conservation in Chile include four of the country's 12 eco-regions: the Central Andean Dry Puna, Central Chile Matorral, the Winter Rainfall forest – Valdivian Temperate Rainforest (each of which overlap with *The Chilean Hotspot*), and the Magellanic Patagonian Steppe.<sup>4</sup> *The Chilean Hotspot*<sup>5</sup> stretches from the Pacific coast to the Andes, encompassing the Northern Patagonian and Valdivian temperate rainforests and

<sup>3</sup> Include project preparation funds that were previously approved but exclude PPGs that are waiting for approval.

\*\* The previous project preparation grant was financed under GEF-3 and thus is not included in the calculation of the GEF-4-financed agency fee and total GEF Resources (Table D).

<sup>4</sup> Ecoregions are listed from north to south. As part of the WWF's Global 200 Priority Ecoregions, the Central Chile Matorral, the Temperate Rainforests of Valdivia and the Patagonian Steppe are listed as Critically Endangered, while the Central Andean Dry Puna is listed as Vulnerable. The Central Andean Dry Puna also represents part of CI's Tropical Andes hotspot and the Patagonian Steppe has been named one of 37 Wilderness Areas of the World as defined by CI.

<sup>5</sup> Arroyo, M.T.K., P. Marquet, C. Marticorena, J. Simonetti, L. Cavieres, F. Squeo, R. Rozzi and F. Massardo. 2006. "El Hotspot Chileno, prioridad mundial para la conservación." *En Biodiversidad de Chile: Patrimonio y Desafíos*. Ed. CONAMA.

the deciduous *Nothofagus* forests; the *Sclerophyllus* dry forests and *matorral* (scrub range) of Central Chile with its Mediterranean climate; the semi-arid region of Norte Chico between Santiago and the Atacama Desert; and the forest and grasslands of the high Andes. Of the *Hotspot's* 3,893 native vascular plants that are known, 1,957 (50.3%) of them are endemic<sup>6</sup>.

Unfortunately, the *Hotspot* has lost over 70% of its original 300,000 km<sup>2</sup> of native habitat due mainly to abusive land management practices. Moreover, only 10.2% of the region is under protection (9,167 km<sup>2</sup>)<sup>7</sup>. The most common causes of its deterioration are the use of poor agricultural practices on marginal lands, overgrazing by cattle and sheep, uncontrolled burning, and forest degradation due to over cutting and poor logging practices<sup>8</sup>. About half of Chile's 15.4 million ha of forests are already degraded, which is advancing at about 77,000 ha per year. Most degradation occurs in the southern forests, where fuelwood extraction is a major contributor to the problem. Despite Chile's internationally-recognized leadership in plantation forestry, an estimated 63% of all native forest management in the country leads to some level of forest degradation<sup>9</sup>.

In addition to land degradation, poor land management practices contribute to accelerated soil erosion on cultivated lands (over 60% of Chile's cultivated lands)<sup>10</sup> as well as desertification (48 million ha, which corresponds to two-thirds of national territory), putting at risk Chile's important terrestrial and aquatic habitats. These impacts are further exacerbated by climate change, which has already led to a decrease of 1,100mm in average annual rainfall over the last 50 years. By 2040, average temperatures are projected to climb by 2 °C in the north and 3 °C in the Central and Southern Regions<sup>11</sup>, leading to changes in seasonal warming and cooling patterns, including frosts. Of the 1.3 million people inhabiting lands affected by desertification, about 60 percent live in poverty. As desertification spreads due to poor land management and in concert with a changing climate regime, it drastically reduces the capacity of the land to support rural livelihoods such as agriculture and ranching, jeopardizes resource-based industries, and eliminates habitats for biodiversity. Consequently, migration rates are high, up to 3% annually, in areas most affected. As natural resources and arable lands become more constrained, human resource use intensifies in the remaining areas, which poses progressively increasing threats to the country's vulnerable ecosystems.

The project's Global Environment Objective (GEO) is to develop a national incentive program for mainstreaming sustainable land management planning and practices in order to combat land degradation, conserve biodiversity of global importance and protect vital carbon assets. The project aims to achieve this objective primarily through developing, testing, and refining a national incentive system for environmental services (SINFOSA<sup>12</sup>). Although not a system of Payments for Environmental Services (PES), the SINFOSA would rely on existing land management incentive systems to mainstream sustainable land management, biodiversity conservation, and climate change mitigation in several priority regions of Chile. Ongoing government initiatives and incentive laws in the forestry and agricultural sectors (native and plantation forestry, soil conservation, and irrigation) will be re-focused so that their application promotes future provision of environmental services and better targets global and national environmental priorities. The project's incremental investments will help ensure that these incentives are allocated with a strategic vision for sustainable land management that without the GEF increment would continue to be indirect and diffuse throughout the landscape. Investments through SINFOSA will be reconfigured based on a watershed-based approach to planning to be developed under the project. It is estimated that the project investments could allow for sequestration of up to 120 million tCO<sub>2</sub> over 20 years through reforestation efforts (approximately 1.5 million tCO<sub>2</sub> per year) while recovery of degraded forests could provide for another 24 million tCO<sub>2</sub> over the same period (approximately 0.3 million tCO<sub>2</sub> per year).<sup>13</sup> A key tool in this process will be the establishment of the Conservation Districts, which

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<sup>6</sup> *ibid* Arroyo et al. 2006

<sup>7</sup> Myers, N., R.A. Mittermeier, C.G. Mittermeier, G.A.B. da Fonseca, and J. Kent. 2000. Biodiversity hotspots for conservation priorities, *Nature* vol. 403: 853-858.

<sup>8</sup> Deforestation played an important role in the degradation of the landscape historically, but now is no longer considered a major problem.

<sup>9</sup> INFOR. 2008. Chile's Readiness Plan Idea Note for the World Bank Forest Carbon Partnership Fund.

<sup>10</sup> Ellies, A. 2000. Soil Erosion and Its Control in Chile in *Acta Geologica Hispanica*, v. 35, p. 279-284

<sup>11</sup> Estudio "Análisis de Vulnerabilidad y Adaptación en agricultura, recursos hídricos y silvicultura, como parte del proyecto GEF Capacitación de Chile para cumplir sus compromisos con la Convención Marco de la Naciones Unidas sobre el Cambio Climático", Centro AGRIMED, Facultad de Ciencias Agrarias y Forestales, Universidad de Chile, 2000.

<sup>12</sup> SINFOSA is the *Sistema Nacional de Gestión Territorial de Fomento a los Servicios Ambientales*.

<sup>13</sup> This assumes only half of the project activities utilize this incentive.

have been created by law No. 18,378 and incorporated into the new forestry law (No. 20,283) but not yet in use in the field. Project pilot activities will occur in the four priority ecoregions described above.

The project has four major activities: (i) development of technical and institutional mechanisms to support sustainable land management through the SINFOSA, (ii) pilot implementation of the SINFOSA approach in target priority ecosystems, (iii) monitoring and evaluating the SINFOSA (approach and impacts) in the target areas for national level replication and use, and (iv) capacity building for SINFOSA in different ecoregions. These activities are complementary and correspond to the first four components of the project:

**Component 1: National Sustainable Land Management System – Program Development (SINFOSA). (BD: \$173,650; CC: \$113,250; LD: \$468,100)**

The component would support the streamlining of existing and new incentive instruments to develop a focused approach to sustainable land management, climate change mitigation and biodiversity conservation. Traditionally, the Ministry of Agriculture's (MAG) incentives have been limited to agriculture and forestry (plantation) production, with little regard to environmental sustainability or diffusely spread throughout the landscape. Activities under the component would aim to re-focus part<sup>14</sup> of the existing incentive framework by developing technical instruments, plans, and institutional arrangements that support the long-term sustainability of land management activities, as well as economic concerns.

To achieve the proposed outcome, the activities under this component will include: (i) Assess the applicability of existing MAG instruments for incentives and mechanisms that could promote SLM and future provision of ecosystem services; (ii) Determine priority areas at a national level eligible for participation in SINFOSA, based upon their vulnerabilities and potential for generating benefits; (iii) Establish eligibility criteria for sustainable land management activities to be funded under the SINFOSA system and revise procedures for application to, and allocation of MAG incentive instruments; (iv) Identify five pilot areas that are eligible to be included under SINFOSA incentive system based on the design and objectives of the Conservation Districts.

**Component 2: SINFOSA SLM Pilot Projects. (BD: \$563,500; CC: \$367,500; LD: \$1,519,000).**

The National SLM system (SINFOSA) will be piloted in four globally- and nationally-recognized priority ecosystems including the (a) Central Andean Dry Puna; (b) Central Chile Matorral; (c) Winter Rainfall forest – Valdivian Temperate Rainforest; and (d) Magellanic Patagonian Steppe. Five pilots in these four ecosystems will target the participation of approximately 2,000 beneficiary families and thus support improved land management activities in approximately 100,000 hectares.<sup>15</sup> The pilots will help to build the knowledge and experience needed to scale up SINFOSA to operate at the national level, within the framework of Chile's Conservation Districts. Pilot project design will be site specific, but, under a framework to ensure the sustainable use of productive areas and to conserve and restore degraded and fragmented habitats, could include: (i) establishment of biological corridors; (ii) on-farm conservation practices to control erosion; (iii) sustainable forest management, including reforestation with native species; (iv) restoration activities in priority biodiversity habitats; (v) improved efficiency of water use (including rainwater); and (vi) promoting ground water recharge. Through such activities, special attention will also be paid to improving protection for areas especially vulnerable to fire, pests, drought and invasive species.

Eligible GEF funds would be applied to incremental activities for financing under the component with specific focus on each focal area (SLM, Biodiversity, and Climate Change) and will include among other activities: training for beneficiaries, government authorities and service providers on best practices for improved land management, and the access and application of incentives to carry them out. Peer learning (producer-to-producer) would be encouraged at the local level. Government co-financing would come from allocating a portion of the national incentive programs funding to cover a range of goods and services of SINFOSA that focus on SLM investments for restoration, reforestation of native species, and sustainable land-use practices. As the project advances, government funding for SLM pilots would be gradually increased, and by year 5, the mainstreamed SLM program would be ready for application at the national level.

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<sup>14</sup> Approximately 25% of the annual incentives provided under the four incentive laws

<sup>15</sup> More precise locations of pilot projects and exact figures of beneficiary families and hectares intervened will be determined during project preparation, as indicated under Component 1.

**Component 3: National Monitoring and Evaluation Program for SLM and Environmental Services. (BD: \$316,250; CC: \$206,250; LD: \$852,500).**

This component will focus on monitoring and evaluation of the new SINFOSA incentive system, as implemented through the pilots. Although specific monitoring activities will focus on pilot regions and watersheds, the investments and training efforts will be configured for application on a national level. Key parameters for monitoring include: (i) administrative effectiveness, (ii) impact on territories and local populations, and (iii) its global benefits from a land degradation, biodiversity, and climate change standpoint.<sup>16</sup> Based on the monitoring results and feedback mechanisms with participation and input from producers and stakeholders, adjustments will be proposed to SINFOSA to improve its effectiveness for adaptive management of the project.

Monitoring techniques would seek to maximize participation and input of local institutions and stakeholders. This would potentially require capacity building and the establishment of clear roles and protocols in the monitoring and evaluation process. However it would also strengthen the process of mainstreaming practices through greater engagement and responsibility for results. The overriding criterion will be to ensure effectiveness once these actions are scaled up to the national level while generating improved SLM, biodiversity, and climate change parameters and indicators for long-term monitoring. Dissemination of impacts and results will also be included for generating public and governmental support for the SINFOSA system over the longer term.

**Component 4: Institutional Capacity Building and Lessons Learned. (BD: \$172,633; CC: \$112,587; LD: \$465,358)**

This component would strengthen mechanisms for institutional mainstreaming of the SINFOSA model while improving cross-sector coordination through the creation of an inter-sectoral coordination mechanism. Existing incentives and instruments focus on traditional production models (e.g., agriculture, livestock production, and forestry), which has seriously limited the ability of the GoC to mainstream sustainable land management. This in turn has led to the limited development of institutional capacities to promote such an integrated focus. The activities under this component aim to overcome this operational barrier.

Institutional strengthening will specifically target capacities for: (i) Applying SINFOSA instruments and incentives (including those already existing in MAG) in eligible areas, especially the effective application of Conservation Districts, using the lens of sustainable land management; (ii) Mainstreaming the monitoring and evaluation of SINFOSA's impact and effectiveness of incentives; and (iii) Designing a program for future national level dissemination of SINFOSA instruments and to assist in the transfer and replication of project activities. Institutional capacity can mean public sector (at national, regional, and municipal levels) as well as private sector/civil-society organizations that may be strategic in terms of land-use, sustainable land management, conservation, governance, or production.

**Component 5: Project Management. (BD: \$137,603; CC: \$64,049; LD: \$331,406)**

Component 5 provides the technical and fiduciary support elements to ensure efficient execution of the project through administration, monitoring and evaluation plan and coordination. The executing unit of the Project will be financed by ODEPA, with on-the-ground support from institutional budgets and the GEF project.

**B. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH NATIONAL/REGIONAL PRIORITIES/PLANS:**

The GoC is committed to move toward OECD standards for environmental management. In 2007, the National Environment Commission (CONAMA) approved its National Action Plan (NAP) on climate change, with the primary objective of “reducing adverse impacts from climate change, through an integrated approach.” The NAP places a high priority on the mainstreaming of climate change considerations into public investment programs and is developing mitigation and adaptation strategies across the agriculture, forestry, industry and energy sectors.

Desertification is addressed through the National Forestry Corporation (CONAF)<sup>17</sup>, which coordinates activities with the support of the National Consultative Committee on Desertification and Drought. The Committee brings together other national institutions such as the National Environment Commission (CONAMA), with ministries, universities,

<sup>16</sup> These include the biological corridors, restoration activities for priority biodiversity habitats, protecting carbon sinks via SLM practices, estimation of reduced GHGs, water capture, and potential for establishment of environmental services programs among others.

<sup>17</sup> CONAF sits within the Ministry of Agriculture (MAG).

and civil society to prioritize actions under the country action plan for the UNCCD.<sup>18</sup> One of the actions established to combat threats of desertification, biodiversity loss and climate change impacts in the priority areas is to increase the focus of three of the most important incentive systems the country has in order to support the goals of the National Action Plan on Desertification and Drought (PANCCD), which has been in force since 1997. They include programs for irrigation, soil conservation and forestry.<sup>19</sup> The GoC has asked that the proposed project help them to articulate and mainstream the concepts of land degradation, climate change, and biodiversity conservation throughout the government policies, programs, and investments in priority areas.

With regards to biodiversity and ecosystem protection, Chile is guided by its National Biodiversity Strategy of 2003 (as part of the UNCBD) under the aegis of CONAMA. Proposed project activities focus specifically on strategic actions 1, 3, and 4<sup>20</sup> of the NBS, including: developing management tools and incentives for biodiversity conservation and ecosystem restoration in productive landscapes (private property), establishing biological corridors, preventing and fighting desertification in concert with the UNCCD plan of action, promoting sustainable productive practices (agriculture and forestry) while generating experiences that can be replicated on a national scale, and incorporating instruments of regional planning (i.e. Conservation Districts) that also incorporate biodiversity considerations. The design of the incentive system SINFOSA and the incorporation of biodiversity considerations into policy frameworks via those incentives would also foster inter-institutional and inter-sectoral coordination. The biodiversity strategies also include provisions for assessing the impacts of climate change for the flora and fauna of these areas, mitigation and restoration of degraded areas.

In addition to the National Protected Areas System, regions outside protected areas for conservation of biodiversity are being recognized as critical elements of the national strategy in the face of a changing climate and altered ecosystems. As part of its national and regional biodiversity strategies, CONAMA identified over 300 priority areas for conservation throughout the country, many of them located on private property.<sup>21</sup> Included among these ecosystems are the Valdivian Forests in southern Chile and the Mediterranean Forests of Central Chile that are considered hotspots.<sup>22</sup> In addition, the priority areas of the UNCCD prioritize lands that fall outside of the country's protected areas network. The proposed project would target such areas through sustainable land management activities at the individual farm level so as to mainstream best practices into existing productive activities.

### **C. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH GEF STRATEGIES AND STRATEGIC PROGRAMS:**

Through its focus on sustainable land management and the incorporation of biodiversity and climate change considerations, the project targets several GEF priorities. The project is forward-looking in its approach and consistency with GEF interest that future projects in land degradation “are expected to improve the provisioning of agro-ecosystem and forest ecosystem services”<sup>23</sup>. In the implementation and piloting of Chile's existing legal framework for Water, Soil and Forest Conservation Districts (Conservation Districts), and the application of tools for future payments for environmental services, the project targets LD-SP3: Investing in New and Innovative Approaches in Sustainable Land Management. Conservation Districts are an innovative tool to promote conservation planning,

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<sup>18</sup> Chile ratified the UNCCD in 1988.

<sup>19</sup> The Forestry Support and Development Law (Ley de Fomento Forestal, DFL 701, 1974, modified through Law No. 19.561 in 1998 for restoration of desertified areas and degraded land reclamation); the land management program for degraded lands (Programa de recuperación de suelos degradados, DL No. 202, 2001), which is instrumental in addressing soil fertility issues and soil restoration in croplands and range lands; Law No. 20.283, 2008, for Native Forests Restoration. The government annually allocates USD\$90 million as financial resources to implement these laws.

<sup>20</sup> Strategic Action 1 – Conservation and restoration of ecosystems to reduce the rate of loss of biodiversity by 2010 – includes measures such as biological corridors and preventing/combating desertification in concert with the UNCCD Action Plan. Strategic Action 3 – Promote sustainable productive practices that ensure maintenance of biodiversity – includes generating and validating sustainable use experiences that can be replicated on a national level, and promoting sustainable agriculture and forestry practices. Strategic Action 4 – Strengthening inter-institutional and inter-sectoral coordination for integrated biodiversity management – includes the development and application of instruments for regional planning that incorporate biodiversity considerations (such as the proposed Conservation Districts).

<sup>21</sup> At least 1.5 million hectares are part of private conservation initiatives nationwide, and which are currently operating without Government incentives. These areas, and private properties with conservation potential, are particularly important for biological connectivity and the provision of environmental services.

<sup>22</sup> See also: [http://www.conservation.org/explore/priority\\_areas/hotspots/south\\_america/Chilean-Winter-Rainfall-Valdivian-Forests/Pages/default.aspx](http://www.conservation.org/explore/priority_areas/hotspots/south_america/Chilean-Winter-Rainfall-Valdivian-Forests/Pages/default.aspx)

<sup>23</sup> GEF. 2009. Investing In Land Stewardship GEF's Efforts To Combat Land Degradation and Desertification Globally.

given the lack of a formal legal instrument for promoting regional land-use planning in Chile. The streamlining of sustainable management practices into policy and regulatory frameworks for production incentives specifically targets GEF Strategic Priority BD-SP4: Strengthening the Policy and Regulatory Framework for Mainstreaming Biodiversity, as well as specific CBD 2010 targets 4.1<sup>24</sup>, 5.1, and 8.1<sup>25</sup>, while the project activities focused on promoting carbon sequestration and reduced GHG emissions in productive activities target GEF Strategic Priority CC-SP6: Management of Land Use, Land-Use Change and Forestry as a Means to Protect Carbon Stocks and Reduce GHG Emissions.

In the pilot Conservation Districts, the project would work with local producers, communities and social groups to promote diverse farming systems and forestry practices to restore degraded landscapes while enhancing carbon sequestration and globally significant biodiversity conservation. Validation of the sustainable management production techniques would be included in component 3 activities that create new indicators for SLM, biodiversity and climate change and which will use monitoring information to improve project impact and effectiveness of SINFOSA. As a result, validated standards and indicators would be incorporated into the MAG policy frameworks that govern the awarding of relevant incentives (as described above). Building on this, the project also proposes to facilitate the coordination of programs and incentives across various national and regional institutions from agriculture to community development to forest management.

**D. JUSTIFY THE TYPE OF FINANCING SUPPORT PROVIDED WITH THE GEF RESOURCES:**

The GEF grant will provide the needed incremental investments that would be more difficult to attain through government budgetary or non-governmental sources for the technical, capacity-building, coordination, and policy assessment work necessary to achieve mainstreaming of SLM, biodiversity, and increasing carbon stocks. The proposed GEF financing will complement the substantial counterpart investment resources from the existing incentive systems in place.

**E. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES:**

*Small Grant Program to Combat Desertification PNUD/GEF/UE*

*GEF/CONAMA/PNUD:*

*Regional System of Protected Areas for Conservation and Sustainable Use of the Temperate Valdivian Rainforest*

A five-year project that is in its second year of implementation in the X Region de Los Lagos, it tackles the concept of ecosystem connectivity via creation of ecological corridors and buffer zones that include important natural areas, agro-ecosystems and other private areas with important biodiversity. The SLM project's goal to create a holistic framework for sustainable land management via incentives and legal instruments complements the UNDP project's pilot demonstration activities that strive to showcase immediate protection measures and its development of sustainable protection models for collaborative management of buffer zones and conservation landscapes that can be repeated via incentives and regulatory mechanisms. They would mutually reinforce one another through coordination of their pilot activities and sharing lessons learned as they both strive to involve the private sector and indigenous groups.

*Creation of a National Integrated System for Protected Areas*

With a goal to increase the representativeness of the National PA network, this UNDP/GEF project focuses on creating both public and private protected areas. The private protected areas, as part of a financially sustainable PA network and to be created via strategic alliances between public finance and the private productive sectors, could benefit from the incentives and legal instruments to be streamlined in the SLM project. For the SLM project, with its focus on mainstreaming sustainable land management into productive sectors (private lands) and promoting community development, it will be important to ensure compatibility between the projects given their shared goals

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<sup>24</sup> Target 4.1: Biodiversity-based products derived from sources that are sustainably management, and production areas managed consistent with the conservation of biodiversity. Applicable indicators include: coverage of hectares of production systems that contribute to biodiversity conservation or the sustainable use of its components, # projects in each sector that have supported the incorporation of biodiversity aspects into sector policies, legislation, policies and plans at national and sub-national levels, among others.

<sup>25</sup> Target 5.1: Rate of loss and degradation of natural habitats decreased. Target 8.1: Capacity for ecosystems to deliver goods and services maintained. Applicable indicator for both targets includes coverage in hectares of sustainable use and management of biodiversity including area under certification.



and target participants. Other common elements that the projects share, and for which they could coordinate, include the strengthening of individual and institutional capacities for planning, management and financial management of their respective networks; this would allow for more efficient biodiversity protection, adaptation to climate change and sustainable land management in general.

#### *Conservation of Biodiversity in Altos de Cantillana, Chile*

In its final phase of implementation, the objective of this initiative is to consolidate a public-private model for biodiversity conservation and sustainable land management in the Cordón de Cantillana, an area representative of Central Chile's Mediterranean ecoregion. Activities are oriented to making species protection compatible with the push for economic activities in the region. The collaborative framework created for this project includes partnerships between the Santiago Metropolitan Region's local representatives from CONAMA, CONAF and the Regional Directorship of the Agricultural and Livestock Service (SAG), as well as a Public-Private Committee ("Directive Committee") created during the project. The SLM initiative could build on this local collaboration for project activities in its Central Chile Matorral Ecoregion pilot subproject.

#### *Preparation of the Second National Communication on Climate Change*

Chile is in the process of developing its Second National Communication on Climate Change, from 2007-2010. This exercise will generate relevant information for the execution of activities proposed for the Climate Change Plan of Action, and which would be applicable to the SLM project. Among others, it will provide updated information about the state of GHGs, develop programs that contain measures to mitigate climate change, identify vulnerabilities and facilitate adequate climate change adaptation activities for the country. It will also develop other information relevant for the integration of climate change considerations in the public political agenda, the transfer of technology, the systematic investigation and observation of the country's climate, and education.

### **F. DISCUSS THE VALUE-ADDED OF GEF INVOLVEMENT IN THE PROJECT DEMONSTRATED THROUGH INCREMENTAL REASONING :**

Under a scenario without the GEF alternative, the existing incentive systems, including the programs for irrigation, soil conservation, and forestry (as mentioned above), would not address sustainable land management from an integral, multi-focal standpoint. The interventions of the substantial investments made by the government would continue to be diffusely distributed throughout the landscape, since, considering present global and national economic situations, the specific investments in order to pilot and implement the innovative mechanisms for restoration of degraded landscapes and environmental services proposed would likely not be made. Each incentive (some of which are managed by different institutions and Ministries with vested interests in productive activities) currently operates within its own sphere of influence, without taking into consideration the cumulative effect that they may have on land degradation and biodiversity when applied simultaneously in a particular region. Their occasional overlap and frequent lack of complementarity highlights the need for a land management framework that could harmonize their use to avoid exacerbating existing trends of environmental degradation including increased emissions of greenhouse gases. An incremental investment would help realign at least three of these incentive instruments, which will expire soon: Forestry Support and Development Law (DFL 701, 1974), Land Management Program for Degraded Lands (DL No. 202, 2001), and the Small Irrigation and Drainage Works Law<sup>26</sup>. Their likely renewal in the near future opens the door for the proposed GEF Sustainable Land Management Project to support the GoC's discussions and efforts to streamline these instruments for sustainability, especially in the priority areas.<sup>27</sup>

The GEF alternative would provide the needed support to the current governmental strategy that aims to promote synergy among the various initiatives and policies in order to reverse land degradation trends. The targeted approach proposed through the incremental investments would permit more sustainable and measureable outcomes for global

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<sup>26</sup> "Ley No. 18.450, de fomento a la inversión privada en obras menores de riego y drenaje". This law is administered by the National Irrigation Commission. Its goal is to increase the amount of land with irrigation, improve the efficiency of irrigation water or improve agricultural soils with poor drainage, and in general, to support irrigation works and connections. Each year, US\$74 million is awarded to irrigation projects through a project proposal competition.

<sup>27</sup> Before becoming effective, laws and incentive programs must also pass through the Ministry of Finance (Hacienda), whose goal is to ensure efficiency of public expenditures and social profitability. Streamlining these incentives and legal instruments to reverse land degradation and desertification, protect biodiversity and mitigate climate change while improving sustainable livelihoods for producers would in itself embody a new vision for efficient public expenditures and thus contribute to compliance with Hacienda's requirements.

biodiversity, climate change, and SLM. Moreover, the dissemination of global biodiversity considerations and mainstreaming with productive landscape stakeholders is an incremental investment needed given the scale and intensity of land use in Chile. Currently, there are no incentives to incorporate biodiversity or climate change criteria in the private productive sector. Global benefits generated from the incremental investment of GEF resources would include technical assistance to establish biodiversity, climate change and SLM criteria for SINFOSA, to develop the SINFOSA monitoring system, and to assist the GoC to streamline and coordinate both incentive policy frameworks as well as institutions via the application of Conservation Districts for the productive sector; it is an innovative and strategic approach that can be integrated into other ongoing national programs. Strengthening this District or watershed-based approach will allow investments in restoration and SLM to be better located where there is greatest benefit for biodiversity rather than a simple demand-driven, and distributed approach that presently prevails in the incentive system.

More specifically, the GEF alternative would build on and strengthen the baseline scenario by covering the incremental costs associated with: (i) incentive and policy development; (ii) capacity building of local and national stakeholders; (iii) implementation of demonstrative and replicable field activities; (iv) establishment of a monitoring and early warning system and development of appropriate regional and national level indicators for desertification, land degradation, drought, loss of biodiversity and impacts of climate change on natural and productive ecosystems; (v) environmental education and dissemination programs; and (vi) the development of an eco-regional vision for land, forest and water resources management.

**G. INDICATE RISKS, INCLUDING CLIMATE CHANGE RISKS, THAT MIGHT PREVENT THE PROJECT OBJECTIVE(S) FROM BEING ACHIEVED, AND IF POSSIBLE INCLUDING RISK MITIGATION MEASURES THAT WILL BE TAKEN:**

1. *Lack of interest in participation by producers.* Changing the approach of incentive systems may be difficult and publicly unpopular. Mitigating this potential risk will be for the project to establish strong outreach, dissemination, and capacity-building programs while integrating new financial incentives for the productive sector.
2. *While design of incentives based on watershed approaches (Conservation Districts) are more holistic, they tend to add complexity given their multi-sector approach and frequent lack of tie-ins to administrative units, while governance can be complicated.* The risk can be mitigated by ensuring good participation and optimizing use of existing governance structures or leadership capacities. Participatory approaches will be used in addition to the strengthening of existing coordination and land-management structures.
3. *Counterpart funding.* The present global economic situation remains volatile and may affect allocations for counterpart funding downstream for the new PES. Nevertheless, because Chile plans to use the new system toward compliance with OECD criteria for environmental management, the SINFOSA remains an important priority for the country. The team will continue to monitor the situation with the government.

**H. DESCRIBE, IF POSSIBLE, THE EXPECTED COST-EFFECTIVENESS OF THE PROJECT:**

The cost effectiveness of the project is based on the use of existing economic incentive measures and legislation to mainstream environmental considerations into the “business-as-usual” scenario. Proposing substantial changes in institutional structures, legal reforms, and new funding sources would increase the overall costs to achieve the same results if a new system of incentives were to be proposed. The leveraging of resources is substantial (approximately 10 to 1 Gov/GEF ratio). In addition the proposed alternative provides the added benefit of potentially reducing resistance from both the beneficiaries and public-sector institutions by maintaining the established institutional mechanisms, thus making any proposed policy changes and planning instruments more viable in their adoption. The focus on working directly with the local communities that will participate and conduct operational activities, also improves cost efficiency of project expenditures. This will provide for better management of funds given current national budgetary rules.

**I. JUSTIFY THE COMPARATIVE ADVANTAGE OF GEF AGENCY:**

The Sustainable Land Management Project is specifically included in the World Bank’s current Country Partnership Strategy (CPS) with Chile as an ongoing commitment under the *Proposed Area of Cooperation of Sustainable Development and the Environment*. The CPS highlights “climate change impacts threatening water access in the country’s arid and degraded regions”, in which government priorities include protected endangered ecosystems and expanding markets for carbon finance and ecological services.

The proposed project includes a substantial investment component through the national incentive systems existing in the forestry and agriculture sectors, both areas where the World Bank has had significant experience with payments for environmental services projects and investments regionally and worldwide. The Bank also has a long-standing history of GEF projects with satisfactory outcomes in Chile and the Southern Cone, including the GEF MSP *Public Private Mechanisms for Biodiversity Conservation in the Valdivian Forest* and the best practice GEF project *Santiago Foothills Mountain Conservation*. A biocarbon fund project for afforestation and reforestation, *SIF Afforestation and Carbon Sinks Project*, is now under preparation and the country has been selected for inclusion in the World Bank's Forest Carbon Partnership Facility (FCPF). In neighboring Argentina, successful Bank projects focusing on native forest management, protected areas and biodiversity conservation provide the Bank with additional applicable experience.

As Chile increases its environmental management standards to meet OECD criteria, it has a unique opportunity and need to pilot innovative mechanisms (especially through payments for environmental services) for land degradation, biodiversity conservation, and climate change mitigation and adaptation. Working in partnership with the Bank, the lessons learned and capacities of the country in these sectors can be transferred effectively to the region and at a global level. This GEF-funding initiative would complement other Bank and IFC-supported initiatives in the environmental and sustainable development sector while providing a platform for successful development outcomes from other priority areas of engagement.

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

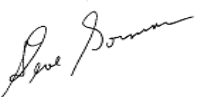
**A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):**

(Please attach the [country endorsement letter\(s\)](#) or [regional endorsement letter\(s\)](#) with this template).

NAME	POSITION	MINISTRY	DATE ( <i>Month, day, year</i> )
Ximena George-Nascimento	GEF Operational Focal Point	NATIONAL COMMISSION FOR THE ENVIRONMENT (CONAMA)	07 OCTOBER 2009

**B. GEF AGENCY(IES) CERTIFICATION**

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

Agency Coordinator, Agency name	Signature	Date ( <i>Month, day, year</i> )	Project Contact Person	Telephone	Email Address
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