I. Introduction and Context

Country Context
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, 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. Climate change is exacerbating land degradation through changes in rainfall quantity and regimen, and rising temperatures.

Sectoral and Institutional Context
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. The Chilean Hotspot stretches from the Pacific coast to the Andes, encompassing the Northern Patagonian and Valdivian temperate rainforests and the deciduous...
Nothofagus forests; the Schlerophyllus 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.

Unfortunately, the Hotspot has lost over 70% of its original 300,000 km² of native habitat due mainly to abusive land management practices. Moreover, only 10.2% of the region is under protection (9,167 km²). 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. 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 forest degradation.

Over 60% of Chile’s cultivated lands are affected by accelerated soil erosion – primarily a result of farming on highly erodible soils or steep slopes without conservation practices and overgrazing. Erosion results in the loss of soil fertility when the organic topsoil and nutrients are washed away by increased runoff and can make farmland unusable through severe gullying. Because Chile has very limited arable lands, productivity losses have important consequences for the country’s economy and food security. Downstream, erosion and increased runoff can elevate sediment loads in streams, lakes and coastal areas; lower water quality; alter flow rates in streams and drainages, and increase flooding. Poor water quality affects aquatic biodiversity (and fisheries industries); increased sediment loads cause the rapid siltation of reservoirs and have made some of the country’s rivers unnavigable.

Two-thirds of the national territory (48 million ha) are affected or threatened by desertification. Of the 1.3 million people inhabiting these areas, about 60 percent live in poverty. The main causes of desertification in Chile are similar to other types of degradation and include poor land management, principally overgrazing, farming on marginal lands without conservation practices, and over-exploitation of forests. Desertification drastically reduces the capacity of the land to support rural livelihoods such as agriculture and ranching, 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.

Climate change in Chile is now resulting in declines in precipitation and increases in temperatures. Over the last fifty years, average annual rainfall has already decreased by 1,100mm. Projections for further declines in rainfall are even more alarming for the southern Bio-Bio Region, where rainfall is expected to decrease by 30 percent over the short term. The western slope of the Andes is also expected to receive less precipitation, especially during the summer months, reducing water supply water needed for human consumption and agricultural activities. By 2040, average temperatures are projected to climb by 2 degrees C in the north and 3 degrees C in the Central and Southern Regions. These increases will change seasonal warming and cooling patterns, including frosts. This has major implications for the country’s biodiversity, resource-based industries, and rural livelihoods.

Government Commitment:
The government is committed to move toward OECD standards for environmental management. In
2008, 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), 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 Ministry of Environment (MMA), with ministries, universities, and civil society to prioritize actions under the country action plan for the UNCCD. As part of the action and implementation plan for this sector, a map of priority areas facing desertification and drought was produced in 1999. One of the actions established to combat these challenges in the priority areas is to increase the impact and focus of three of the most important government programs that provide assistance to producers in the rural, agricultural and forest sectors in order to support the goals of the National Action Plan on Desertification and Drought (PANCCD).

For biodiversity and ecosystem protection, Chile is guided by its National Biodiversity Strategy of 2003 under the aegis of the MMA. As part of its national and regional biodiversity strategies, CONAMA (now MMA) identified priority areas for conservation throughout the country. Included among these ecosystems are the Valdivian Forests in southern Chile and the Mediterranean Forests of Central Chile that are considered hotspots. The biodiversity strategies 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. Such efforts could take the shape of sustainable land management activities at the individual farm level so as to mainstream best practices into existing productive activities.

Consistency with GEF Priorities:
Through its focus on sustainable land management and the incorporation of biodiversity and climate change considerations, the project targets several GEF priorities. In the implementation and piloting of Chile’s existing legal framework for Water, Soil and Forest Conservation Districts (Conservation Districts) 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, given the lack of a formal legal instrument for promoting regional land-use planning in Chile. In the pilot Conservation Districts, the project aims to work with communities and social groups to integrate biodiversity and climate change considerations into productive activities and landscapes (i.e., diverse farming systems that promote carbon sequestration and globally significant biodiversity conservation). To support these pilot activities, the project will also facilitate the coordination of programs in various national and regional institutions from agriculture to community development to forest management, thus targeting GEF Strategic Priorities BD-SP4: Strengthening the Policy and Regulatory Framework for Mainstreaming Biodiversity, and CC-SP6: Management of Land Use, Land-Use Change and Forestry as a Means to Protect Carbon Stocks and Reduce GHG Emissions. Objectives of these activities will include a focus on native forest management and regeneration as well as protection of globally significant biodiversity in Chile’s priority ecoregions.
Incremental Reasoning:
Under a scenario without the GEF alternative, the existing programs for irrigation, soil conservation, and forestry, would not address sustainable land management from an integral, multifocal standpoint. Other programs that exist in addition to these—and which are managed by several Chilean institutions and Ministries with vested interests in productive activities—would also remain disconnected. Each thematic program currently operates within its own sphere of influence, without taking into consideration the cumulative effect needed to address land degradation, biodiversity conservation and climate-change mitigation collectively. Their occasional overlap and frequent lack of complementarity highlights the need for a new harmonized multidisciplinary land management approach to combat environmental degradation and curb emissions of greenhouse gases. Moreover, because most programs in the rural sector provide assistance as reimbursements after the work has been done; small and medium farmers are coincidentally excluded, as they lack the capital or credit needed for the initial investments. Overcoming this and other barriers to mainstreaming their involvement in sustainable land management is a major goal of the project. An incremental investment would help complement and or realign at least three of these 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. Degraded Lands, Irrigation Law, and the Forestry Support and Development Law. 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.

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. Specific investments in order to pilot and implement sustainable land management would likely not be made in absence of the GEF investment, considering present global and national economic situations.

More specifically, the GEF alternative would build on and strengthen the baseline scenario by covering the incremental costs associated with (i) 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 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 an eco-regional vision for land, forest and water resources management.

Relationship to CAS
The World Bank 2011-2016 Country Partnership Strategy (Report No. 57989-CL) with Chile highlights the Government of Chile’s development agenda called Chile Pais Desarrollado, which sets the goal for achieving high income developed country status by 2018. The primary challenges highlighted in the CPS are related to boosting economic growth and eliminating extreme poverty. In addition, the Government has committed to protecting the environment in order to ensure the long-term environmental sustainability of growth as well as respond to Chile’s commitments to address climate change as a new member of the OECD. The Sustainable Land Management Project is specifically included in the current CPS as an ongoing commitment under the Sustainable Management of Natural Resources (p. 51).
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 project, the GEF Santiago Foothills Mountain Conservation. A biocarbon fund project for afforestation and reforestation, SIF Afforestation and Carbon Sinks Project is now under implementation and the country has been selected for participation in the World Bank’s Forest Carbon Partnership Facility.

As Chile increases its environmental management standards to meet OECD criteria, it has a unique opportunity and need to pilot innovative mechanisms 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-funded 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.

II. Proposed Global Environmental Objective(s)

Proposed Global Environmental Objective(s) (From PCN)
The project’s Global Environment Objective (GEO) is to develop a national system to promote practices for combating land degradation, conserving biodiversity of global importance and protecting vital carbon assets. The GEO also serves as the PDO. The project aims to achieve this objective primarily through the developing, testing, and improving the design of a national system for sustainable land management. The system would coordinate existing yet discrete programs to mainstream sustainable land management, biodiversity conservation, and climate change mitigation in priority regions of Chile, including four globally and nationally-recognized ecoregions, some of which cover parts of the Chilean hotspot. The project would bring about sustainable land management by improved coordination of many ongoing government initiatives in the forestry and agricultural sectors (native and plantation forestry, soil conservation, and irrigation). Investments through the SLM umbrella system will be based largely on concepts of integrated watershed and landscape management approaches to planning and land management. One key tool in this process will be the establishment of the Conservation Districts, created through National Law No. 18,378 and incorporated into the new forestry law (No. 20,283) but not yet in use in the field.

Key Results (From PCN)
The proposed project would aim for following impacts:

- Development of an effective framework and roadmap for a national program to mitigate land degradation, conserve biodiversity, and protect vital carbon assets.
- Reduced land degradation and increased carbon stocks in 5 target areas for landscape restoration and SLM practices.
- Improved capacity to monitor impacts and results through the development of an effective monitoring and early warning system for Land Degradation and SLM.
- Increased management and coordination capacity for the application of a program to mainstream SLM.

III. Preliminary Description

Concept Description
The project’s total costs of US$ 83,473,636 consisting of a GEF donation of US$5,863,636 and US$ 77,610,000 in co-financing (primarily from the national program budgets) implemented over a five
year period.

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

Component 1: National Sustainable Land Management System – Development. The component would support the improvement of existing and new forestry, agriculture and rural development programs to develop a focused approach to sustainable land management, climate change mitigation and biodiversity conservation. Traditionally, MAG’s programs have been limited to agriculture and forestry (plantation) production, with insufficient regard to environmental sustainability or geographic focus needed to support sustainable land management objectives in the overall landscape. Activities under the component would aim to re-focus part of the existing government framework of programs 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) A detailed assessment of the applicability of existing MAG programs for promoting SLM; (ii) prioritize and classify geographic locales nationwide eligible for participation in the new SLM system, based on their vulnerabilities and potential for replicating effective SLM; (iii) establish eligibility criteria for sustainable land management activities and a design for the system and propose reforms to other MAG programs or approaches to support SLM objectives; (iv) develop, validate and refine eligibility criteria for management areas to be included under the new SLM system based on the design and objectives of the Conservation Districts and the application of pilots in Component 2.

Component 2: SLM Pilot Sub-projects. The National SLM system will be piloted in four globally- and nationally-recognized priority ecosystems some of which cover parts of the Chilean hotspot including the (a) Central Andean Dry Puna; (b) Central Chile Matorral; (c) Winter Rainfall Forest - Valdivian Temperate Rainforest; and (d) Magellanic Patagonian Steppe identified under Component 1. Five pilots in these four ecosystems will support improved land management activities in approximately 90,000 hectares. The pilots will help to build the knowledge and experience needed to scale up the new SLM system 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 conservation 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 government programs 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 existing program resources to cover a range of goods and services 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.

Component 3: National Monitoring and Evaluation Program for SLM. This component will focus on monitoring and evaluation of a new SLM program, as implemented through the pilots. Although specific monitoring activities will focus on pilot regions, 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. Based on the monitoring results and feedback mechanisms with participation and input from producers and stakeholders, adjustments will be proposed to the new SLM system 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. 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 indicators for long-term monitoring. Dissemination of impacts and results will also be included for generating public and governmental support for the SLM system over the longer term.

Component 4: Institutional Capacity Building and Lessons Learned. Component 4 would strengthen mechanisms for institutional mainstreaming of the SLM model while improving cross-sector coordination through the creation of an inter-sectoral coordination mechanism. The existing system 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 an integrated focus. The activities under this component aim to overcome this operational barrier.

Institutional strengthening will specifically target capacities for: (i) application of sustainable land management (including those already existing in MAG) in eligible areas, especially as they may apply to the effective application of Conservation Districts, using sustainable land management approaches; (ii) mainstream monitoring and evaluation of SLM system’s impact and effectiveness; (iii) design a program for national level dissemination of SLM approaches 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. 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 partially financed by
CONAF, with on-the-ground support from institutional budgets and the GEF project.

Beneficiaries

The main project beneficiaries will be: (i) the rural poor whose lands are highly degraded and should benefit from improvements in soil, carbon stocks, and protection of watersheds; (ii) small and medium private sector producers that are contributors to the country’s GDP; (iii) civil society benefitting from an improved landscape that incorporates water, soil, biodiversity, and other intangibles as values; and (iv) native biodiversity in global priority hotspots. In addition, the project would aim to bolster the technical capacity and outreach of government institutions (national, regional, and municipal) working in the productive sector and natural resource management to provide technical, policy and regulatory leadership.

IV. Safeguard Policies that might apply

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VI. Contact point

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