

# OFFICE MEMORANDUM

DATE: October 12, 2000

TO: See Distribution Below

FROM: Lars Vidaeus, GEF Executive Coordinator

EXTENSION: 34188

SUBJECT: **Chile: Santiago Foothills PDF Block A Request for Medium Size Project**

Please find attached a PDF Block A for the above-mentioned project. We would appreciate your comments by October 19, 2000. Thank you.

**Distribution:**

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**PROJECT TO BE PRESENTED TO THE GLOBAL ENVIRONMENT FACILITY**

**SANTIAGO FOOTHILLS**

**BLOCK A PDF**

**PROJECT IDENTIFICATION**

<b>1. PROJECT NAME:</b> SANTIAGO FOOTHILLS: MOUNTAIN ECOSYSTEM CONSERVATION	<b>2. GEF IMPLEMENTING ENTITY:</b> WORLD BANK
<b>3. COUNTRY OR COUNTRIES WHERE PROJECT IS TO BE IMPLEMENTED:</b> CHILE	<b>4. COUNTRY ELIGIBILITY:</b> Convention on Biological Biodiversity Ratification (September 9, 1994)
<b>5. GEF FIELD OF ACTIVITY:</b> BIODIVERSITY	<b>6. OPERATIONAL PROGRAM/SHORT-TERM MEASURE:</b> MOUNTAIN ECOSYSTEMS (O.P. 4)
<b>7. PROJECT LINKAGE TO NATIONAL PRIORITIES, ACTION PLANS AND PROGRAMS:</b>  <p>In 1998, Chile's Environmental Policy for Sustainable Development, prepared by the National Environmental Commission (CONAMA), acknowledged the importance of the conservation and sustainable use of Chile's biodiversity and specifically underscored that it was the responsibility of the State to adopt actions and measures to conserve the country's ecosystems, species and genetic resources.<sup>1</sup> The Strategy specifically recognized the importance of maintaining the capacity and integrity of ecosystems through the integrated management and increased knowledge of their uses and value including the "goods and services" provided by habitats and recreational areas. As part of this Strategy, CONAMA also highlighted the importance of protecting specific geographic areas of the country as a fundamental instrument for the conservation of the country's biodiversity patrimony.</p> <p>The existing and future development of Santiago's metropolitan area is governed by the Metropolitan Santiago Master Plan (PRMS), which is a normative and regulatory territorial planning tool administered by the Ministry of Housing and Urban Development (MINVU). The PRMS has classified the Santiago Foothill ecosystem as an "Ecological Conservation Area," a special land use designation for those areas to be "preserved in natural condition, in order to ensure and contribute to environmental balance and quality." In 1998, MINVU commissioned a survey of potential natural sites in the Santiago metropolitan area to be considered for conservation status. The results of the survey, indicated that 19 out of the 24 sites surveyed were located in the Foothills and confirmed the importance of this ecosystem in the metropolitan region.<sup>2</sup> The PRMS provides for the development of more detailed sectional plans, which are compatible with the Plan's broader planning framework. A sectional plan is to be developed for the Santiago Foothills, which will reflect the importance of the area's natural values and resources and limit urban growth while permitting access to the area through the identification of permitted activities. Upon completion of the sectional plan, the results will be presented to MINVU and the PRMS modified accordingly. A key output of the GEF-supported Mid-size Project (MSP) proposed below, will be the development of the aforementioned sectional plan.</p> <p>The importance given to the conservation of the Santiago Foothills at the national level is reflected at the municipal level. The creation of the Protégé Project in 1993 (see below), by an association of 7 municipalities, for the purpose of conserving the Foothills through promoting an integrated and coordinated approach to their use is an indicator of the commitment that exists at the local level.</p> <p>Finally, CONAMA considers the successful incorporation of Santiago's Foothills into the sustainable development of the metropolitan area would serve as a model for the conservation of other fragile mountainous ecosystems in proximity to urban areas and could prove relevant to other cities both in Chile (e.g., Temuco, Chillan, Valparaíso, Coyhaique) and the region (Bogotá and Quito, Lima).</p>	
<b>8. GEF'S NATIONAL OPERATIONAL COORDINATION CENTER AND DATE OF COUNTRY ENDORSEMENT:</b>  GEF Focal Point: CONAMA. Project endorsed by the latter in correspondence with World Bank dated November 11, 1999, D.E. N° 995639	
<b>PROJECT ACTIVITIES AND OBJECTIVES</b>	

<sup>1</sup> *Una Política Ambiental para el Desarrollo Sustentable*, CONAMA, Chile. (Aprobada por el Consejo de Ministros de la Conama, en 1998).

<sup>2</sup> *Registro de Hábitats Naturales en las Comunas del Area Metropolitana de Santiago*, Ministerio de Vivienda y Urbanismo, Darwin Initiative Fund; Chile, May, 1998.

## 9. PROJECT RATIONALE AND OBJECTIVES:

### RATIONALE:

Chile's matorral ecosystem (including the sclerophyllous forest of the Andean cordillera) is the only example of Mediterranean scrub ecoregion found in all of South America and is only one of five such ecosystems in the world.<sup>1</sup> Within the Latin American and Caribbean region, this ecosystem has been designated as a high-priority in terms of the need to conserve its biodiversity (level 1)<sup>2</sup>. The geographic range of this ecosystem extends approximately from the Aconcagua valley to the VII region and covers an estimated area of 990,000 ha. The only representative sample of this globally important ecosystem in Chile's National Protected Area System (SNASPE) is the Rio Clarillo National Reserve, a protected area covering only 19,800 ha representing just over 2% of the ecosystem's total areal extent. The restricted representation of this ecosystem in SNASPE has been attributed to its small geographical extent, high degree of private land ownership due to its proximity to several of the country's large metropolitan centers, and limited budgetary resources for the conservation of the country's biodiversity.

Chile's national capital, Santiago, is dominated by a mountainous landscape estimated to cover some 85% of the metropolitan region. In 1997, CONAMA conducted a survey which identified the Santiago Foothills, a primary example of Chilean matorral ecosystem, as of "singular relevance in terms of its biodiversity." The proposed project area, which encompasses 12,900 hectares (ha), is bounded to the west by the 900 meter (mt) elevation limiting the further expansion of Santiago's urban development, the Mapocho and Maipo rivers to the north and south respectively, and the first mountain range to the East. This latter boundary also coincides with the eastern most extension of the political boundaries of two of the seven metropolitan municipalities involved in conservation efforts of this significant ecosystem (i.e., Lo Barnechea and San José Maipo). The altitude of the proposed area ranges between 900 and 3,250 meters. The area consists of 34 micro-basins, 5 of which measure between 1,000 and 4,000 ha each. There is little systematically collected and organized information on the biodiversity in the Foothills. Nevertheless, one account indicates there are 48 native plants and an additional 7, which have been introduced as exotics. Of the former, 19 are considered to be rare or endangered in the area. One hundred and twenty-six species of fauna have been identified of which 18 are endemic to the zone and four are exotic; the remainder are considered native to Chile. Twenty-ix species are considered to be rare or endangered.<sup>3</sup>

Mountainous ecosystems, particularly those located in proximity to large urban areas, represent some of the world's most vulnerable ecosystems. The Santiago Foothills is no exception to the rule. Major sources of threat include the following:

1. Urbanization: Given its proximity to the capital city, there has and continues to be strong development pressures ranging throughout the entire Foothill area. Past development has already contributed to discernible changes in the natural process and features characteristic of the ecosystem. Examples include: accelerated erosion contributing to downstream conflicts associated with sedimentation, loss of habitat, and loss of infiltration capacity. Also to be considered is evidence of changes in such climatic factors as insulation and increases in temperature.
2. Illegal hunting, wildlife trade, and extraction of plants and soil: Illegal activities affecting the area's rich biodiversity appears widespread. These include: (i) the capturing of wildlife to support an illegal export industry. Species particularly at risk include the culpeo fox (*Dusicyon culpaeus*), vizcacha (*Lagidium viscacia*), quique (*Galictis cuja*), eared dove (*Zenaida auriculata*), Chilean tiramou (*Nothoprocta perdicarea*) and buzzard-eagles (*Genatoaetus melanoleucus*); and (ii) loss of vegetative cover attributable to illegal logging and fuelwood collection, forest fire, illegal plant extraction (e.g., Chilean soap tree [*Quillaja saponaria*], Chilean Jalap [*Peumus boldus*], extraction of herbaceous species for medical purposes, and humus removal for gardens and parks in the city). The consequences of these illegal practices have been an altered ecosystem as evidenced by an increase in exotic species (e.g., rabbits); the retreat of other species to higher sections of the basins and further into the gorges; and in some cases, the near extinction of endemic species (e.g., the vizcacha, Chilean magnolia [*Canelo sp.*], and peumo).
3. Non-sustainable grazing practices: Over-grazing of domestic cattle on both public and private lands, particularly in the municipalities of La Reina, Peñalolén, La Florida and Puente Alto, have been a major source contributing to land degradation.
4. Uncontrolled recreational use: Growing interest in the environment and natural areas among the adjacent urban population is increasingly becoming a threat to the Santiago Foothills. Despite their best intentions, uncontrolled access to a growing population of recreational users has proved to be a significant source of forest fires, land degradation, extraction of vegetation and soil. All these factors have combined to produce a cumulative and adverse impact on the area's biodiversity.

<sup>1</sup> The others are the Mediterranean scrub, California coastal chaparral, Fynbos of southern Africa, and the heathlands of Southwest Australia.

<sup>2</sup> *A Conservation Assessment of the Terrestrial Ecoregions of Latin America and the Caribbean*, World Bank and World Wildlife Foundation, Washington, D.C., 1997.

<sup>3</sup> *Mapas de Usos Potenciales de Suelo* survey, CONAMA RM - CONAF - PROTEGE - Gobierno Regional, Santiago, 1996.

To date, much of the urban population's knowledge and awareness of the Santiago Foothills is associated with the occurrence of natural hazards such as forest fires, landslides, and flooding. Most "environmental" measures in the proposed project area have been in the form of investment in infrastructure and other "hard" mitigation efforts implemented typically in response to an event, rather than through a more pro-active, anticipatory planning approach. As a result, there is little public recognition of the significance and importance of the Santiago Foothills, both in terms of its biodiversity and the relationship between maintaining natural ecosystem processes and degree of risk of occurrence of natural hazard. Nevertheless, with a growing interest among the urban population in the environment, there exists the potential to expand community awareness of the existence and significance of this globally-important ecosystem. There already exists some evidence of the existence of this potential (e.g., visitation figures from the three existing interpretative trails in the proposed project area indicate a level which exceeds 20,000 visits per year). Promoting increased public awareness and support for the proposed project will be critical to achieving sustainability for any effort to conserve the Foothills ecosystem.

#### OBJECTIVES:

The project goal is to protect, conserve, and restore in-situ a 12,900 ha area located in proximity to Santiago consisting of a representative example of a Mediterranean-mountainous ecosystem (i.e., the Santiago Foothills) and support the continued functioning of the ecosystem's ecological processes on which much of the city depends. A primary secondary objective will be to promote increased environmental awareness among the urban population of the significance of this ecosystem and build the support necessary for voluntary conservation efforts and create a culture of respect and admiration for this ecosystem and its biodiversity to ensure the sustainability of future conservation efforts. Finally, in light of the few examples demonstrating the successful integration of conservation efforts of mountainous ecosystems into urban planning processes, a third explicit objective will be the generation and dissemination of information to other interested individuals and institutions in the country and region.

#### 10. EXPECTED OUTCOMES:

##### GENERAL RESULTS:

This proposed project has four components: (i) public participation and institutional arrangements; (ii) design and the partial implementation of a conservation management master plan (sectional plan) for the Santiago Foothills; (iii) environmental education and institutional strengthening; and (iv) project implementation, monitoring and evaluation, and information dissemination.

1. Public participation and institutional arrangements: The primary outcomes under the public participation and institutional arrangements component will be the: (i) development of a consensus among key individual and institutional actors on the importance for and approach to the conservation of the Santiago Foothills; (ii) establishment of a permanent institutional mechanism to promote and coordinate the actions of private and public institutions and individuals directed to the conservation of the ecosystem; and (iii) development of draft legislation leading to the legal creation of an Ecological Reserve encompassing the proposed project area.
2. Design and implementation of a conservation management plan: To date, most conservation efforts in the Foothills have been *ad hoc* in nature and have proved to be relatively ineffective in addressing the threats to the ecosystem. A key outcome under this component will be the development of a conservation management master plan which will guide future interventions in the proposed project area over the medium and long-term. Within the project area, specific conservation sites will be identified and site-specific management plans developed. These in turn will be used to guide complementary project-supported activities including: rehabilitation of degraded areas, demarcation, and the construction of conservation infrastructure and access controls. A key activity supported under this component will be targeted research to demonstrate the effectiveness of rehabilitation efforts of degraded lands and the re-introduction of indigenous species. At the end of the project life, there will be a network of conservation trails, interpretive infrastructure, and a body of field-based research results suitable to support the project's environmental education and information dissemination components.
3. Environmental education and training: A key outcome from the project will be the development of a broad recognition among the public at large of the significance of the Santiago Foothills, not only as an ecosystem characterized by biodiversity of global importance, but in terms of its importance as a source of a wide range of goods and service for urban dwellers and visitors, alike. This will be a key outcome which must occur in parallel to the processes leading to the successful conclusion of the project's other outcomes, in particular the establishment of sustainable institutional arrangements and effective management plans. Relevant personnel in selected institutions will be trained in the importance of incorporating biodiversity considerations into the planning and management processes affecting the growth and development of the Santiago metropolitan region.
4. Project implementation, monitoring and evaluation, and information dissemination: A small group or core PROTEGE staff supplemented by consultants will implement the above project activities, as well as ensure that monitoring and evaluation measures will be put in place to ensure that relevant information is generated to monitor project performance as well as provide the basis for documenting and disseminating experiences and "lessons learned" useful to other relevant efforts in both Chile and the Region.

## 11. PLANNED ACTIVITIES TO ACHIEVE OUTCOMES:

### 1. Public participation and institutional arrangements:

- ◆ Negotiation and signing of bilateral agreements with major stakeholders.
- ◆ Workshops and other participative activities designed to develop and promote consensus on the formulation and implementation of a strategy to conserve the Foothills.
- ◆ Study of options and proposal leading to the legal protection of the Santiago Foothills.
- ◆ Study of options and proposal leading to the establishment of an institutional mechanism to administer the conservation of the Santiago Foothills.
- ◆ Economic study of the "goods and services" provided by the Santiago Foothills to the urban population.

### 2. Design and (partial) implementation of a conservation management plan:

- ◆ Preparation of a master plan for the conservation of the Santiago Foothills (to include a development and implementation of a surveillance and enforcement plan).
- ◆ Selection of priority pilot areas for project-supported field based conservation interventions.
- ◆ Completion of environmental baselines and development of site-specific conservation management plans for pilot areas.
- ◆ Re-vegetation and monitoring of selected degraded areas in pilot areas
- ◆ Construction of conservation infrastructure in pilot areas (fencing, control posts, nature trails and shelters).

### 3. Environmental education and institutional strengthening:

- ◆ Preparation of a long-term environmental education strategy in support of the conservation of the Santiago Foothills.
- ◆ Design, construction and implementation of an environmental education center emphasizing the Foothills ecosystem and the conservation of mountain biodiversity.
- ◆ Development and dissemination of educational materials (pamphlets, folders, posters, videos, CDs, etc.).
- ◆ Short-courses, cross-site visits, and production of materials to increase institutional capacity to incorporate biodiversity considerations into the metropolitan regional management and planning framework.

### 4. Project implementation, monitoring and evaluation, and information dissemination:

- ◆ Overall project implementation.
- ◆ Development and implementation of a project monitoring and evaluation plan.
- ◆ Analysis of alternatives and proposals leading to the financial sustainability of conservation efforts in the Foothills.
- ◆ Distillation and dissemination of results and "lessons learned" from the Foothills project.

**Incremental cost analysis:** State resources assigned to protect biodiversity are currently scarce and limited to the protection of state-owned areas covered by Chile's national system of protected areas (SNASPE). Due to the relatively small geographical extent of Chile's natural ecosystem, high degree of land ownership, and budgetary constraints, there is very little investment in conservation of this globally important ecosystem. On the other hand, there is considerable public concern and investment in other environmental issues including those associated with the Foothills ecosystem. These include forest fires and natural hazards mitigation. As a result, investments in the proposed project area are largely limited to the construction and maintenance of civil works and/or operations in response to natural hazards associated with the Foothills (i.e., forest fires, landslides, flooding and erosion-sedimentation events). The proposed baseline is defined by these public supported activities within the Santiago Foothills project area. The estimated cost associated with the proposed baseline is US\$ 5,012,000. Baseline cost has been based on estimates derived from investments and O&M costs borne by the public sector in recent years. These in turn were used to make projections over the life of the proposed project (the next 3 years). Specifically these costs were based on: the completion of municipal sectional plans in compliance with PRMS; the cost of incorporating andean-based sectional plans into the PRMS; costs of combating forest fires; and the construction and maintenance of infrastructure works and ancillary operations to mitigate the effects of landslides, floods, and erosion-sedimentation events. While most of these events are a result of processes characteristic of a naturally hazardous area such as the Foothills, the public response fails to address these issues in an integrated and efficient manner. Most interventions are reactive, coming belatedly and after the event, rather than attempting a proactive approach which anticipates the event(s). To date, metropolitan and municipal planning fail to take an integrative approach to the management of this area. Moreover, conservation of the Foothills as a natural area and its biodiversity are not presently taken into account. The proposed GEF alternative will be complementary to the baseline and will include measures to: (i) incorporate the conservation of this area and its significant biodiversity into the region's existing planning and development framework; (ii) promote a more proactive and integrative approach to addressing natural hazards that affect the project area and adjacent urban area; (iii) conserve the Santiago Foothills ecosystem; (iv) increase awareness of its importance; and (v) document and disseminate the results of the project to other relevant sites and institutions. The cost of the GEF alternative is an estimated US\$ 5,762,000 where incremental costs represent approximately US\$750,000 (including PDF Block A resources).

BASELINE	US\$ 5,012,000
GEF	US\$ 750,000
TOTAL	US\$ 5,762,000

See Table 1 below for more detail.

**12. STAKEHOLDERS INVOLVED IN PROJECT:**

Aside from CONAMA and CONAF, other participants expected to collaborate in project preparation and/or implementation include: University of Chile (Department of Ecology), the 7 participating municipalities, National Agricultural and Livestock Service (SAG), and individual land owners.

**PART II- INFORMATION ON ACTIVITIES FINANCED BY BLOCK A, SFPP GRANT****13. ACTIVITIES TO BE FINANCED BY THE PDF:**

Block A funds will help fund the detailed preparation of the activities proposed in Section 11 above. Preparation work would include:

- A. Cadaster of Stakeholders. There is a large number of stakeholders with existing or potential interests in the conservation of the Santiago Foothills ecosystem. Their participation in the MSP will be critical to the success of the project. Under this activity, a cadaster of major landowners, institutions, and other major stakeholders potentially interested in participating in the Santiago Foothills MSP will be completed.
- B. Public Participation. Subsequent to the identification of stakeholders under the activity above, Block A resources will be used to sponsor a series of meetings and workshops aimed at informing and generating consensus among interested stakeholders on project objectives and approach. The outcome of this activity will provide a key input into the proposed approach in the MSP proposal.
- C. Initial Pilot Site Selection. One or more of the technical workshops supported under the public participation activity will be used to define selection criteria and complete and initial selection of pilot conservation areas to receive support under the MSP.
- D. Refinement of Project Components. All project components will be further prepared and costed under this activity.
- E. Baseline and Incremental Cost Analysis. This activity will be used to obtain and analyze the information necessary to refine the project baseline and complete the incremental cost analysis to be submitted with the MSP proposal.
- F. Co-financing and Sustainability. Block A resources will be used to identify and approach potential sources of co-financing. The objective would be to ensure that over the medium-term the GEF funds are well leveraged and that over the long term project activities may be sustained once GEF funds are no longer available.
- G. Social and Environmental Analysis. While there are no expected adverse social or environmental impacts associated with the proposed project, this activity will be used to prepare terms of reference for completion of social and environmental analyses as additional and prudent safeguards to be completed during MSP implementation.
- H. Project Implementation. This activity will be used to support an institutional analysis of PROTÉGÉ and the proposed project's implementation needs, which will provide the basis for the institutional strengthening efforts to be supported under the MSP, if required.
- I. Logical Framework. This activity will be used to develop the project's logical framework, impact indicators, and monitoring plan.
- J. Finalization of GEF MSP Proposal. Preparation and translation of the final proposal suitable for submission to GEF.
- K. Project Implementation Manual. Under this activity, Block A resources will be used to prepare a draft project implementation manual (PIM) to include a 3-year operational plan and a more detailed plan for the project's first year including activities scheduled, institutional arrangements, budgets and distribution of administrative responsibilities.

**14. EXPECTED OUTPUTS AND DATES OF COMPLETION:**

The overall output will be a detailed proposal to be submitted to GEF for consideration for possible funding under OP 4 requesting complementary support to on-going protected area programs in the Santiago Foothills over a three-year period. The proposal will include a logframe for execution of the project. The schedule for completion of the 11 tasks to be supported under the PDF Block A is presented in Table 2.

**15. OTHER POSSIBLE CONTRIBUTORS/DONORS AND AMOUNTS PERTAINING BLOCK A PDF ACTIVITIES AND AMOUNTS:**

PROTEGE will make an in-kind contribution in the form of operational support estimated at US\$ 7,500. No other cash grants will be available at this stage.

**16. TOTAL BUDGET AND INFORMATION ON HOW COSTS WILL BE MET (INCLUDING BLOCK A GRANT):**

PDF Activities	SOURCE OF FUNDING (US\$)*					TOTAL
	GEF	PROTEGE	UCHILE	CONAF	CONAMA	
Stakeholder cadaster preparation	-	400	-	-	-	400
Stakeholder meetings & workshops	4,500	1,000	-	-	-	5,500
Criteria identification and initial pilot site selection	4,000	4,000	4,000	4,000	-	16,000
Component refinement and costing	10,500	3,000	500	500	500	15,000
Definition of baseline and incremental cost analysis	3,000	-	-	-	-	3,000
Identify potential sources of co-financing	-	1,000	-	-	-	1,000
TOR preparation for social and environmental analysis	-	-	-	-	200	200
Project implementation needs analysis and plan	-	500	-	-	-	500
Logical framework and monitoring plan preparation	-	500	-	-	-	500
Preparation and translation of project document to be submitted for GEF approval	1,500	500	-	-	-	2,000
Draft PIP preparation	1,500	500	-	-	-	2,000
Equipment	-	500	-	-	-	500
<b>Total</b>	<b>25,000</b>	<b>11,900</b>	<b>4,500</b>	<b>4,500</b>	<b>700</b>	<b>46,600</b>

\*All non GEF financing in kind.

**PDF DISBURSEMENT CATEGORIES**

	Block A (US\$)
Professional staff & consultants	15,000
Field trips, travel	4,000
Workshops	4,500
Published material and translation work	1,500

**Total amount** **25,000**

**PART III INFORMATION ON THE APPLICANT INSTITUTION****17. NAME:**

ASOCIACION DE MUNICIPALIDADES PROYECTO (PROTÉGÉ)

**18. DATE OF ESTABLISHMENT, MEMBERSHIP, AND LEADERSHIP:**

PROTEGE was established in August 1993 as an institution working on a municipal basis.

Personnel: 7 professionals and 1 manager (an attorney, forestry engineer, journalist, designer, cartographer and 2 mountain interpretive guides.

First President: Joaquín Lavín I. Former Las Condes mayor (and a presidential candidate in 1999)

Second President: Fernando Castillo Velasco, mayor for La Reina

Executive Director: Felipe Bañados M. Y

Deputy Director: Carlos Fuenzalida F.



<p><b>19. MANDATE/TERMS OF REFERENCE:</b></p> <p>PROTEGE works on a municipal basis and brings together 7 municipalities within the Santiago region, which include part of the mountainous ecosystem in their territory. PROTEGE was created to protect and preserve all mountainous areas bordering the 7 municipalities and to promote the establishment of a large ecological reserve on this location. This objective is being achieved through carrying out various operations promoted and implemented by PROTEGE, either on an independent basis or together with other entities, whether public or private.</p>	<p><b>20. SOURCES OF INCOME:</b></p> <p>Annual budget US\$ 170,000.</p>
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**21. RECENT ACTIVITIES/PROGRAMS, IN PARTICULAR THOSE RELEVANT TO THE GEF:**

- Potential Soil Use Map, 1997, US\$ 50,000.-, CONAMA – CONAF and PROTÉGÉ. Included a land use management plan for the area covered by the proposed MSP project @ 1:50,000 scale.
- Prepared and obtained funding for a Mountain Excursion and Conservation Map project for years 2000/01 from the GEF Small Grants Program (GEF-PNUD) US\$ 46,600.
- Designed and implemented the construction of three mountain nature trails in project area between the period 1996 and 1998.
- Successfully negotiated a framework agreement between PROTEGE and CONAF aimed at establishing a monitoring and enforcement system for the Santiago's Foothills including the establishment of a park ranger presence in selected areas in 1999.
- Completed the successful negotiation of an easement for community access across a 500 ha parcel of private land in the proposed project area, April 2000.
- During the period 1999-2000, initiated negotiations with the National Property Ministry (MBN) to acquire Santiago Foothills lands (300 ha) located within the La Reina municipality for conservation purposes.
- During the year 2000, initiated negotiations with an individual land owner to acquire the corresponding rights of use and land management through an easement for a 500 ha area within the proposed project area.
- Developed and obtained approval for an Environmental Education and Conservation Management project for the Ramón basin located within the Santiago Foothills project area (3,589 ha). Other participants are: Empresa de Agua Potable de Santiago (private firm); CORFO (state entity); and CONAF (state forestry service).

**Project Team:**

Felipe Bañados (legal specialist)  
Carlos Fuenzalida (forest engineer)  
Jorge Gargas (environmental interpretive guide)  
Ursula Faber (graphic designer)  
technical manager (TBD)  
environmental education specialist (TBD)  
natural resource economist (TBD)

**Contact Person:**  
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**Part IV – INFORMATION TO BE COMPLETED BY IMPLEMENTING AGENCY**

**22. Project identification number: P070654**

**23. Implementing Agency contact person:**  
Robert Kirmse, Task Manager, Latin America and Caribbean Region:  
Tel: (202) 473-2362; email [rkirmse@worldbank.org](mailto:rkirmse@worldbank.org)  
Cristine Kimes, Global Environment Coordinator: Tel: 202 473-3689;  
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#### **24. PROJECT LINKAGE TO IMPLEMENTING AGENCY PROGRAM(S): THE COUNTRY**

Assistance Strategy (CAS April 17, 1995), along with Bank sector work on environmental issues in Chile (Report no. 13061-CH), identifies the unsustainable use of natural resources as a serious environmental problem in Chile. The proposed GEF medium sized project is complementary to the institutional strengthening work being undertaken by CONAMA under the Environmental Institutional Development Project (Loan 3529-CL) as well as to the recently approved MSP--Valdivian Forest Zone; Private-Public Mechanisms for Biodiversity Conservation (P058299), which aims to ensure more active participation of the private sector in biodiversity conservation. The proposed project would also complement the work on improved natural resources management being undertaken by the Secano Agricultural Development Project (LN3974-CL) as well as the proposed activities of the Chile Watershed Management project, which is currently under preparation and aims to help protect critical natural habitats, reduce land degradation and protect aquatic and terrestrial ecosystems.

Table 1: Incremental Cost Analysis (Narrative) of Santiago Foothills GEF MSP  
2001-2004 (FY)

Baseline	GEF Alternative	Incremental
<ul style="list-style-type: none"> <li>• Development of municipal sectional plans compatible with PRMS up to the 900 mt elevation.</li> <li>• Incorporation of andean-based sectional plans into the PRMS</li> <li>• Municipal and CONAF forest fire operations in response to events.</li> <li>• Construction and maintenance of landslide mitigation infrastructure; construction and operations to mitigate impacts of flooding; operations to mitigate impacts associated with sedimentation associated with storm events.</li> </ul>	<ul style="list-style-type: none"> <li>• Municipal sectional plans which incorporate biodiversity conservation criteria for those municipalities with political jurisdictions extending beyond the 900 mt elevation.</li> <li>• PRMS modified to reflect the planning and management of an Ecological Reserve in the Santiago Foothills</li> <li>• Development of proactive capacity to anticipate and respond quickly to forest fires.</li> <li>• Integrated natural hazard management strategy developed and implemented for Santiago Foothills</li> </ul>	<ul style="list-style-type: none"> <li>• Incorporation of biodiversity considerations into the municipal planning process.</li> <li>• Sectional plan developed for and public participation in the management of Ecological Reserve in Santiago Foothills.</li> <li>• Forest fire prevention plan, field-based fire prevention measures including fire breaks, increased public awareness, and equipment support for one fire brigade.</li> <li>• Natural hazard plans developed for landslides, flooding, and erosion-sedimentation events; degraded lands rehabilitation; and sedimentation/erosion-related studies supported.</li> <li>• Draft legislation leading to the creation of an Ecological Reserve conserving the Santiago Foothills.</li> <li>• Establishment of an institution to administer and promote the conservation of the Santiago Foothills.</li> <li>• Site-specific conservation plans developed and implemented in 8 pilot sites.</li> <li>• Public education center and information materials developed in support of the conservation of the Foothills.</li> <li>• Study of alternatives to support the financial sustainability of the Ecological Reserve.</li> <li>• Dissemination of results stemming from the Foothill project.</li> </ul>

Table 2: Block A Implementation Plan of Santiago Foothills GEF MSP

Duration of Block A Grant: 5 months	
Activities	Projected Month (1 <sup>st</sup> working day of each month)
	10/00 11/00 12/00 01/01 02/01 03/00 04/00 05/00
<b>Block A Submitted</b>	x
<b>Block A Approved</b>	x
<b>Block A Funds Disbursed</b>	x
Stakeholder cadaster preparation	o
Stakeholder meetings & workshops	(30/11) ----- (20/1)
Criteria identification and initial pilot site selection	(7/11) ----- (31/12)
Component refinement and costing	(15/11) ----- (31/1)
Definition of baseline and incremental cost analysis	-- --
Identify potential sources of co-financing	(15/11) ----- (31/1)
TOR preparation for social and environmental analysis	o
Project implementation needs analysis and proposal	--
Logical framework and monitoring plan preparation	o o
Preparation and translation of project document to be submitted for GEF approval	--
Draft PIP preparation	
<b>Draft MSP Proposal Submitted to WB</b>	x (15/3)
<b>Internal Review in WB</b>	x (30/3)
<b>Finalization of Proposal</b>	-- (15/4)
<b>Final MSP Proposal Submitted to WB</b>	x (15/4)
<b>Submission to GEF</b>	x (30/4)

Santiago,

D.E.N° 995639 /

November 11, 1999

Dra. Myrna Alexander  
Banco Mundial  
Edificio Bouchard  
Bouchard 547, 3er Piso  
1106 Buenos Aires,  
Argentina

Ref.: Proyecto "**Conservación y rehabilitación del ecosistema de montaña de la ciudad de Santiago de Chile**".

Estimada señora:

Por la presente me refiero a la solicitud del señor Felipe Bañados, Director del Proyecto Protege, para el financiamiento del proyecto arriba mencionado. Como punto focal del Fondo para el Medio Ambiente Mundial apruebo su solicitud. Este proyecto ha sido discutido y aprobado en Comité Técnico de CONAMA.

Sin otro particular, lo saluda atentamente,

RODRIGO EGAÑA BARAONA  
Director Ejecutivo  
COMISION NACIONAL DEL MEDIO AMBIENTE

REB/JE/AC/CK/TS

C.c.: Christine E. Kimes, Banco Mundial.