



# GEF-6 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-Sized Project

TYPE OF TRUST FUND: GEF TRUST FUND

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## PART I: PROJECT INFORMATION

Project Title:	Mainstreaming Conservation of Coastal Wetlands of Chile's South Center Biodiversity Hotspot through Adaptive Management of Coastal Area Ecosystems		
Country(ies):	Chile	GEF Project ID:	9766
GEF Agency(ies):	UNEP	GEF Agency Project ID:	01389
Other Executing Partner(s):	Ministry of the Environment (EM)	Resubmission Date:	April 3rd, 2017
GEF Focal Area(s):	Multi-focal areas	Project Duration (Months)	60
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Corporate Program: SGP <input type="checkbox"/>	
Name of parent program:	N/A	Agency Fee (\$)	488,946

## A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
BD-4 Program 9	GEFTF	3,505,151	10,177,138
LD-3 Program 4	GEFTF	1,641,653	6,698,295
<b>Total Project Cost</b>		<b>5,146,804</b>	<b>16,875,433</b>

## B. INDICATIVE PROJECT DESCRIPTION SUMMARY

**Project Objective:** Conserve and recover coastal landscapes<sup>1</sup> (CL) including wetlands and adjacent watershed territories, integrating them into local development, through their sustainable management and use

Project Components	Financing Type	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
1. Information management and outreach for mainstreaming biodiversity and sustainable land management (SLM) with an integrated landscape approach	TA	<p>1.1 Decision makers and relevant stakeholders aware and appreciate the importance of BD conservation and LD problems in coastal landscapes by means of more and better access to information regarding biodiversity of global relevance and the ecosystem and socio-economic services they provide (change attitude on issues)</p> <p><i>Indicators:</i></p> <ul style="list-style-type: none"> <li>- Increase on knowledge of the importance of key BD conservation and SLM in coastal landscapes for ecosystem and socioeconomic services provision measured by KAP surveys on selected stakeholders</li> <li>- Increase on knowledge of management practices for sustainable use of coastal wetlands measured by KAP surveys on selected stakeholders</li> </ul>	<p>1.1.1 Coastal landscapes including wetlands and adjacent watershed territories ecological assessment quantified:</p> <ul style="list-style-type: none"> <li>-key biodiversity inventory,</li> <li>-classification and map of land use degradation and ecosystem services evaluation,</li> <li>-proposed optimal economic and environmental land use arrangements for areas of multiple demands between environmental and economic priorities</li> </ul> <p>1.1.2 Coastal landscapes socio-economic assessment quantified (smallholders livelihood, value chains and markets)</p> <p>1.1.3 Coastal landscape Platform containing processed and integrated information including maps regarding priority zones as a decision-making aid for conservation of private or State</p>	GEFTF	1,215,601	3,847,576

<sup>1</sup> "Coastal landscapes" in the context of this project refers to territories that include wetlands and the surrounding territories that have an influence on them within their respective watersheds

			coastal landscape areas 1.1.4 Outreach and dissemination strategy for mainstreamed BD conservation and SLM in coastal landscapes based on the systematization of project tools, methodologies, results and findings			
2. Institutional and regulatory frameworks strengthened	TA	<p>2.1 Improvement in institutional and technical capability for Integrated Landscapes Approaches for SLM and BD conservation in coastal landscapes of South-central Chile (improved institutional competency)</p> <p><i>Indicators:</i></p> <ul style="list-style-type: none"> <li>- Increase in capacity of professionals and communities to manage coastal landscapes measured by an adapted Capacity development scorecard (to be developed during PPG)</li> <li>- Level of advance in knowledge management exchanges on coastal landscape sustainable management and ecosystem services approaches</li> </ul> <p>2.2 Incorporating regulations and criteria regarding BD conservation and SLM in coastal landscapes into the strategies and mandates of the EM, the Ministry of Housing and Urbanization (MINVU), Ministry of National Assets (MBN), General Department of Oceanic Territory and Merchant Marine (DIRECTEMAR), Fisheries Under-Secretariat (SUBPESCA), Ministry of Public Construction (MOP) and the Sustainability and Climate Change Agency (ASCC) increasing the Project's scope in 180,000 ha (implementation of new or revised policies)</p> <p><i>Indicators:</i></p> <ul style="list-style-type: none"> <li>- Number of new or modified policies and regulations which include principles of sustainable management and conservation of coastal wetlands</li> <li>- Applying the protocols and best practices in development projects approved by the associated institutions</li> </ul>	<p>2.1.1 Training Program developed and implemented for increased capacity of state institutions (MMA, MINVU, MOP, MBN, DIRECTEMAR) professionals to incorporate BD and SLM considerations within landscape and mitigation approaches as well as improved management practices for coastal landscapes sustainable management</p> <p>2.1.2 Systematization of tools for quantifying CL ecosystem and socioeconomic services, monitoring, and recovery for the purpose of efficient information management</p> <p>2.1.3 KM and communications strategy in coordination with related and synergic initiatives and platforms</p> <p>2.2.1 Protocols for Integrated sustainable land management and key BD conservation in coastal landscapes to be adopted by MINVU, MBN, MOP, and DIRECTEMAR</p> <p>2.2.2 Recommendations and criteria for BD conservation and SLM in coastal landscapes management to include in the National Biodiversity Strategy and in the EM's Environmental Impact Evaluation System</p> <p>2.2.3 Mainstreaming of best practices guidelines for sustainable wetland management in associated institutions with emphasis on critical biodiversity</p>	GEF TF	935,258	2,565,050
3. Demonstrative landscapes	TA	3.1 Enhanced mechanisms for cross-sector integrated planning and implementation of sustainable natural resources management at district level to decrease LD and preserve habitat of BD in coastal landscapes considering the multiple dimensions of livelihood options (agriculture, forestry, pastures, construction, tourism, infrastructure)	3.1.1 Detailed community-level integrated land use plans in participating districts with high biodiversity and LD problems, developed by district authorities, communities and local stakeholders, and being effectively applied with compliance with the NSCA norms	GEF TF	2,750,859	9,619,040

	<p><i>Indicators:</i></p> <ul style="list-style-type: none"> <li>- The surface area of the pilot basins that have an operational program for recovery and conservation of coastal wetlands and have compliance with NSCA norm</li> <li>-Adoption of sustainable management practices by the local communities, with a focus on gender. (no of people applying sustainable practices, at least 40% are women)</li> <li>-Number of ha under effective sustainable land management and conservation practices (SFM, CSA, Afforestation, Reforestation, Agroforestry, mitigation strategies)</li> <li>- Increase in the LDN National Voluntary Target 'Dynamics of land productivity' in the pilot landscapes [baseline and target to be established during PPG]</li> </ul> <p>3.2 The associated institutions at the sub-national level recognize and incorporate into their territorial planning, zoning and practices that includes conservation, recovery and monitoring of BD conservation and SLM in coastal landscapes (adoption of new practices)</p> <p><i>Indicators:</i></p> <ul style="list-style-type: none"> <li>- Territorial planning of the townships within the pilot ecosystems includes aspects of wetland and landscape conservation</li> <li>-At least two Municipalities are granted the Conservation Landscape category of SBAP</li> </ul> <p>3.3 Livelihood and income of coastal landscape smallholders are more resilient, diversified and strengthened</p> <p><i>Indicators:</i></p> <ul style="list-style-type: none"> <li>- % increase of average annual household income (sample households in pilot areas)</li> <li>-Number of products coming from coastal landscapes with certification granted</li> <li>-number of Clean Production Agreements approved by ASCC</li> </ul>	<p>3.1.2 On-the-ground implementation of selected SLM and BD conservation measures in pilot landscapes (as identified in the plans of 3.1.1) using the incentive mechanisms of the SBAP (Service for Biodiversity and Protected Areas) law project and the ASCC (Sustainability and Climate Change Agency), including</p> <ul style="list-style-type: none"> <li>-restoration in riverbanks and flooding areas;</li> <li>-reduced use of pesticides and drainage events;</li> <li>-erosion control measures</li> <li>-certification of sustainable forest management;</li> <li>-reforestation/afforestation and compensations for BD conservation measures by relevant private sectors such as tourism, forestry and agriculture</li> </ul> <p>3.1.3 Direct measures from guidelines and protocols for sustainable use of landscapes, reducing fragmentation and impacts of construction and urbanization integrated in MOP and MINVU development projects in the pilot ecosystems</p> <p>3.2.1 Central Government, communities and other district level stakeholders receive training in the development and implementation of integrated land use planning and have knowledge/ experience necessary to continue the application of plans.</p> <p>3.3.1 Value chain development of a selection of sustainable managed products from coastal landscapes is supported through certification and eco-labelling mechanisms</p> <p>3.3.2 The diversification of rural livelihoods in coastal landscape communities is supported through payments for ecosystem services and clean production agreements incentives and subsidies of the EM and ASCC</p>			
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	Subtotal		4,901,718	16,031,666
	Project Management Cost (PMC)	GEFTF	245,086	843,767
	<b>Total Project Cost</b>		<b>5,146,804</b>	<b>16,875,433</b>

**C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE**

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
Recipient Government	Ministry of Environment	In-kind	2,624,100
Recipient Government	Ministry of Environment	Grants	4,878,333
Recipient Government	MINVU	In-kind	523,000
Recipient Government	MINVU	Grants	600,000
Recipient Government	MOP -DGA	In-kind	500,000
Recipient Government	MOP -DGA	Grants	2,000,000
Recipient Government	MOP - DOP	In-kind	150,000
Recipient Government	MOP - DOP	Grants	250,000
Recipient Government	DIRECTEMAR	In-kind	1,000,000
Recipient Government	Ministry of National Assets	In-kind	500,000
Recipient Government	Ministry of National Assets	Grants	300,000
Recipient Government	Municipalities	In-kind	1,800,000
	Private actors/NGOs	In-kind	1,000,000
	Private actors/NGOs	Grants	500,000
	UNEP	In-kind	250,000
<b>Total Co-financing</b>			<b>16,875,433</b>

**D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES), FOCAL AREA AND THE PROGRAMMING OF FUNDS**

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) <sup>b</sup>	Total (c)=a+b
UNEP	GEFTF	Chile	Biodiversity		3,505,151	332,989	3,838,140
UNEP	GEFTF	Chile	Land Degradation		1,641,653	155,957	1,797,610
<b>Total GEF Resources</b>					<b>5,146,804</b>	<b>488,946</b>	<b>5,635,750</b>

**E. PROJECT PREPARATION GRANT (PPG)**

Is Project Preparation Grant requested? Yes ☒ No ☐ If no, skip item E.

**PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS**

Project Preparation Grant amount requested: \$150,000					PPG Agency Fee: 14,250		
GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee (b)	Total c = a + b
UNEP	GEFTF	Chile	Biodiversity		102,155	9,705	111,860
UNEP	GEFTF	Chile	Land Degradation		47,845	4,545	52,390
<b>Total PPG Amount</b>					<b>150,000</b>	<b>14,250</b>	<b>164,250</b>

**F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS**

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	180,000 Hectares <sup>2</sup>
2. Sustainable land management in production	120 million hectares under sustainable land	21,000 Hectares <sup>3</sup>

<sup>2</sup> Area of coastal landscapes where biodiversity legislation mainstreaming instruments in productive sectors will be applicable and binding.

<sup>3</sup> Area in terms of pilot interventions where SLM will be applied during project life. This will increase substantially as SLM is upscaled over time.

systems (agriculture, rangelands, and forest landscapes)	management	
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## **PART II: PROJECT JUSTIFICATION**

1. *Project Description.* Briefly describe:

1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed

### Coastal landscapes situation and trends

#### *Biodiversity, ecosystem services and Socio economic context*

It is necessary to underline the importance of the targeted landscapes and the need for their conservation and sustainable use, both on the global and national levels, because these ecosystems need to recover their integrity and maintain their services including productivity for human wellbeing and also have been considered to have great biological significance worldwide and are among the most important ecosystems on the Planet in terms of the biodiversity they harbor. In addition, the Evaluation of the State of Conservation of the Latin American and Caribbean Land Regions (Dinerstein et al., 1995) indicates that these systems were already in an endangered state in the 1990s. The threats to these ecosystems put the wetlands at risk because these are highly vulnerable and fragile, particularly in the face of the pressures of development based on non-sustainable practices, and because of climate change.

In Chile, several types of coastal landscapes are present including different classes of coastal wetlands: salt marshes, brackish and salty coastal lagoons, tidal plains and estuaries. Coastal wetlands are very dynamic systems both in space and time, depending on the hydric balance and salt levels, regulated by river and ocean flows. One of their most important characteristics is the presence of gradients, making for a high level of time-space heterogeneity and therefore the availability of habitats for aquatic and shoreline species. For this reason, these ecosystems have a high biodiversity concentration, in particular regarding migratory bird species (Wetlands National Action Plan, 2016).

Coastal wetlands are the systems which make it possible to sustain areas of agriculture, small-scale estuary fishing, seaweed and shellfish harvesting, as well as tourist activities such as bird watching, fishing and recreational navigation. They serve as regulators by mitigating flooding and limiting tides, they capture and filter industrial effluents, and they are the transitional environment between the ocean and continental waters, in addition to providing, in terms of ecological continuity of similar habitats, an essential corridor for coastal species. Their ecological and social contributions are of vital importance to Chile.

The selected pilot areas are part of a complex network of south-central Chilean coastal wetlands. The administrative districts included in Chile's "south-central" area (Coquimbo to Araucania Districts) coincide with the Mediterranean eco-region, which is the most threatened of the country's eco-regions and it is recognized internationally as one of the 34 priority sites for conservation of biological diversity in the world and one of only five Mediterranean-type eco-regions existing worldwide. The Mediterranean zones concentrate large numbers of human population because of their benign climate, making them privileged and strategic locations for human development. In Chile, this zone includes about four fifths of the country's population in only 25% of the country's surface (INE, 2002), generating excessive resource demands, decrease in agricultural productivity, loss of natural habitats and environmental pollution. In addition, significant pressure is exerted on them in the attempt to obtain high yields and productivity from the land and the coastal areas. Because of these historic tendencies, it has been very difficult in Chile to protect this ecoregion, and connectivity between high biodiversity areas is particularly difficult. Very little of the original vegetation (less than 15% according to some sources) remains in the approximately 155,000 km<sup>2</sup> comprising Chile's south-central area, with a high level of fragmentation; nonetheless, it still serves as habitat for nearly 1,500 endemic plant species as well as sclerophyll forests of global significance. Please see Annex 2 for a graph showing the distribution of protected areas on the national level which illustrates the deficit in the project zone.

Due to the high rate of **endemic species** in Chile, where **76%** of amphibious, **58%** of reptiles, **55%** of fresh water fish and **50%** of plants are endemic only to Chile, there is a lack of information on the conservation status of these species in categories such as the **IUCN Red List**, where even the taxon of several endemic species that can only be found in the central part of Chile and species that have being categorized as Critically Endangered and Endangered by the National Classification System, which is align in its methodology and criteria with IUCN's, have not yet been assessed by international standards, giving therefore more urgency to their inclusion into international lists. All the pilots are located in the Mediterranean ecoregion, recognized internationally as one of the 34 priority sites for conservation of biological diversity in the world. In terms of vegetation, this ecoregion has around 2,850 species, of which more than 50% are endemic only to Chile (Arroyo, et al. 1999). Due to their vulnerability to habitat modifications and pollution, of the 160 fern species, 73% have conservation problems, being categorized as Critically in Danger, In Danger or Vulnerable, by the National Classification System; while 95% of the 46 continental fish, 90% of 125 reptiles, 14% of the 502 birds, and 47% of the 148 mammals, of which 130 are native and 19 endemic, are also in one of these categories.

In Chile, land degradation is largely due to erosion, which although it has natural causes, can also be generated by human activities associated with inadequate land use practices. 64% of land in the country shows some type of erosion: Lands with

higher erosion levels, between moderate and highly severe, represent 49 percent of the total, covering approximately 28.5 million hectares. At a regional level, the erosion problem is concentrated in the northern territories of the country, with percentages higher than 90 percent of regional lands. When considering only the highest erosion levels, between moderate and highly severe, these percentages drop to 70 – 80 percent of regional lands. It is worth noting that this zone erosion is mainly due to natural causes. On the other hand, in the central zone, between the Valparaíso and Maule regions, the area showing moderate, severe and highly severe erosion problems reaches more than 50 percent of the regional territory. In contrast to the situation in the North, it is erosion caused by human activity. Erosion is also a factor in desertification. At a global scale, Chile is one of the most affected countries due to desert encroachment, desertification, land degradation and drought, at a level only comparable to that of the countries in Sub-Saharan Africa<sup>4</sup>.

The project intervention areas in coastal landscapes of the south-central part of Chile, where the pilot sites are located, maintain a diversity of anthropic activities of local and national interest. Given the benign Mediterranean climate this area has seen the highest rate of human settlement in the country even before the European conquest of the continent, concentrating 85% of the population on 25% of the nation's territory. Agro-climatic and land productivity conditions are also very favorable sustaining the consequent population growth and economic development in this cross-section of the country. This development however is reaching the boundaries of the land's carrying capacity in terms of competing land uses where urbanization to host the growing population alongside infrastructure development is taking away land that was formerly used for agricultural food production and livestock. The consequences are a) intensification of production on the land with the use of unsustainable methods, which puts increased pressure on the biophysical cycles, ecosystem health and thus ecosystem services provision and b) intense competition for land uses which forces productive activities to extend throughout the landscape putting in turn pressure on other landscapes such as forests and wetlands. Therefore, they must be recognized as fragile and vulnerable environments in the face of anthropic actions, and at the same time, of both economic and social significance. In order for these activities to continue over time, they must be accompanied by adequate safeguards and protection to maintain healthy ecosystem services and for their globally significant biodiversity.

Below is a description of 4 initial demonstration landscapes in terms of their biodiversity together with their productive sectorial activities and predominant land uses, in particular ecosystem services and landscape level productivity. Please refer to Annex 1 for a map with their location.

Coquimbo District: Elqui River Mouth pilot basin. The pilot area will cover the wetlands and a portion of the basin, with urbanization areas and agriculture being their main land uses. The wetland is of an estuary type, and it's near one of the most important tourism centers of the country, La Serena, where a high rate of urban development is taking place. This landscape is located in the Coquimbo district of Chile, it used to be a highly productive agricultural area, famous for fruits such as lemons, papaya and grapes, but has faced over a decade of drought, together with a desertification process that has affected 80% of the district and seen the loss of more than 15,000 jobs in the agricultural sector in the last 7 years. It is a zone with a high level of endemism, with a variety of plant associations such as native forests, grass and shrub lands, which offer a rich mosaic of habitats to a number of animals and more than 150 different bird species. There are 2 native species classified by IUCN as Critically Endangered and Endangered, together with 6 classified as Vulnerable (of which 3 are endemic only to Chile). More critically, 4 endemic species that can only be found in this region, are classified by the National System as Critically Endangered, but have yet to be assessed by the IUCN Red list. Refer to Annex 5 for a comprehensive list with scientific names and conservation status.

Valparaíso District: Mantagua wetland pilot basin. The pilot area will cover the wetlands and a portion of the basin. This wetland is a system composed by an estuary and a lake. The main production activities are agriculture, with predominance of forage and flower production; forestry, with *Pinus radiata* and *Eucalyptus globulus* plantations; and tourism, with hotels, cabins and restaurants. Native forest also covers areas of the basin. Land degradation and desertification processes have strongly affected the agricultural productivity in the basin, where unemployment reaches 20% for rural areas with smallholders farming and 50% of the territory is affected by erosion and drought. As far as significant species for conservation are concerned, and according to the IUCN Red List, this district harbors 2 Critically Endangered species, of which 1 is endemic only to Chile; 2 Endangered species, of which 1 is endemic only to Chile and 5 Vulnerable species, were 2 are endemic only to Chile. There are also 11 endemic species to this region of which 5 are categorized as Critically Endangered and 6 as Endangered by the National Classification System, but thus far have the "Not assessed" or "Data Deficient" status in the IUCN Red List. Refer to Annex 5 for a comprehensive list with scientific names and conservation status.

O'Higgins District: Cauhuil wetland pilot basin. The pilot area includes the wetland and the surrounding productive landscape of the basin where SLM will be applied. The wetland is an estuary with a special saline condition, with economic activities depending on the wetland, such as tourism, fishing and saline production. Land uses in the basin are agriculture and forestry plantations with exotic species. Although this district possesses the most productive soils in the country, it phases a serious desertification and land degradation problem, with high occurrence of forest fires, due to droughts and exotic species plantations

<sup>4</sup> [http://www.mma.gob.cl/1304/articles-52016\\_Chapter9.pdf](http://www.mma.gob.cl/1304/articles-52016_Chapter9.pdf)

(radiate pine and eucalyptus); unsustainable agriculture, with high crop rotation and excessive exposure of the soil to climatic conditions; together with overgrazing of livestock. Nearly 20% of the district is affected by Very Severe or Severe erosion. In 2008, the National Forestry Corporation established a reserve on the island in the Cahuil saltflats, because it has a hybrid ecosystem where hydrophilic vegetation abounds, creating an environment favorable to endemic flora and fauna development. In the area, two species have the Critically Endangered IUCN conservation status, while 4 have the Endangered status and 9 the Vulnerable one. Of these, 7 are endemic only to Chile. Other 14 endemic species only to Chile are not yet classified by IUCN, but 4 have the Critically Endangered status of the National Classification System while 10 have the Endangered one. Refer to Annex 5 for a comprehensive list with scientific names and conservation status.

**Araucania District: Queule wetland pilot basin.** The pilot area extends into a wide extent of the basin, where the main land uses are native forest, pastures, agriculture areas and forest plantations. This district has the highest number of indigenous people and rural inhabitants of the country. It also has the highest deforestation rates to convert native forests into pine plantations, agricultural and pasture areas. The full harvest of exotic plantations and large areas of pasturelands leaves high portions of soil exposed to the strong rainfalls in this district (average of 2,000 mm/year), causing loss of superficial soil layers and erosion processes. This site is classified as “of very high priority” for biodiversity conservation in the Araucania Region. According to the IUCN Red List, it has 2 Critically Endangered species (1 endemic), 9 Endangered species (5 endemic), and 9 Vulnerable (2 endemic). There are 10 endemic species that have not been assessed by IUCN, of which 5 have the Critically Endangered status, while the other 5 have the Endangered one of the National Classification System. Refer to Annex 5 for a comprehensive list with scientific names and conservation status.

The project will start with these 4 pilot sites from the onset. These are the sites in which consultations are the most advanced and partners have already agreed to work with the project. The project will gradually add more intervention sites with similar degradation problems and biodiversity value. At this point, initial consultations have taken place with 3 additional locations within the project intervention area landscapes that will be gradually incorporated as pilot sites. Conclusive consultations and coordination will be carried out in a participatory manner during PPG with all the stakeholders involved.

### **Coastal wetland governance**

Since these are transitional ecosystems between the ocean and the continent, their management and protection, from the institutional point of view, are on the fringes of the mandates of both the General Water Department (DGA) and the General Department of Oceanic Territory and Merchant Marine (DIRECTEMAR). Furthermore, they are affected and influenced by productive and sectorial activities which are in the mandate of other institutions, such as SUPBESCA for fisheries, the Ministry of National Assets (MBN) for the extraction of sand and gravel, among other products, and the Ministry of Public Work (MOP) and the Ministry of Urban Development (MINVU) for the construction of infrastructure adjacent to the wetlands, among the most important. For this reason, estuaries in particular present complications in decision-making regarding this type of ecosystem. Therefore, the challenge and pending task is to integrate and plan in a coordinated manner the actions to be carried out within the framework of the National Wetland Strategy (CONAMA, 2005), not only among the bodies and professionals operating within the related institutions, but also in their policies, strategies, directives, and all instruments for water resource management. At the watershed level, different stakeholders are involved in land management, with the Municipalities and Regional Government involved in land use planning and zoning, the Ministry of National Assets (MBN) in charge of state land uses and allocation purposes, the EM regional bodies (SEREMIAS) as supervising and regulating entities of environmental impacts of development projects, and private actors, consistent of industries and large agricultural owners, together with smallholder farmers.

### **Threats**

- At the National Level
  - Loss/degradation of habitat and productivity

Land use changes to agriculture and inappropriate intensive production practices including the overuse of fertilizers and equipment, exotic forest plantation, and grasslands have directly impacted in the general environmental condition of the coastal landscapes and their productivity in terms of agriculture and livestock rearing as well as their associated wetlands. In terms of their level of trophic (nutrient load), it shows progressive deterioration of these systems. From the physical point of view, the coastal landscapes' vulnerability lies in changes in water salinity or in its availability affecting soil fertility and water quality not only for production purposes but also other uses of this water. Many wetlands are being drained for agriculture, and upstream activities such as offtake of water for agriculture and overgrazing of grassland and desertification have reduced overall water availability for production and consumption as well as its flow to wetlands, dried up some waterways and decreased the wetlands' water retention capacity.

Pollution of rivers and lakes has produced higher levels of eutrophication, which is harmful to fisheries, agriculture productivity and human health. Furthermore, marine habitats are becoming polluted by silt, metals and fertilizers washing from rivers.



Excessive nitrogen in water leads to increasing outbreaks of toxic algal blooms. The use of untreated water affects development especially in the poorer regions. The main causes of pollution are agricultural run-off, industrial and domestic discharges.

With such dynamic changes to the landscape, changing climate and agricultural practices, extensive deforestation and massive global trade Chile is particularly susceptible to the threat of IAS. Wetlands are particularly threatened and are being damaged by exotic water weeds, introduced crustaceans, fish, terrapins and even mammals.

#### Causes of Land Degradation in the Coastal Mountain Range and Plains<sup>5</sup>:

##### *Coquimbo District:*

- Topography of hills and rolling hills
- Easily erodible soils
- Cultivation on non-arable lands
- Logging of semi-desert shrubs
- Overgrazing
- Insufficient land for fields

##### *Between Valparaíso and Araucanía Districts:*

- Topography of hills and rolling hills
- Easily erodible soils
- Overgrazing
- Forest fires and burns
- Insufficient land for fields
- Excessive use of natives forests
- Clearing of forests for agriculture and livestock.

- Urban development and tourism

The coastal landscapes include an increasing level of building development exacerbating land use competition without proper planning that affects biophysical cycles and thus ecosystem services with negative consequences not only on agricultural productivity but on the wider landscape due to inappropriate land use change. Coastal wetlands are being fragmented by public infrastructure, alteration of sand bars in the case of estuaries, and increasing threats from mining within 80 meters of the coastline, which has produced an important degradation rate and a threat to its diversity (Villagran-Mella et al, 2006). Coastline activities have intensified and planning instruments do not currently recognize explicitly the concept of sustainable management of coastal wetlands. Integrated management of coastlines is not applicable in Chile and therefore, actions undertaken in coastal systems are motivated by opportunity (productive or conservationist) instead of by an integrated and well-planned State policy. Uncontrolled mass tourism at wetland sites has also degraded critical wetland ecosystems through causes such as inappropriate tourism facility development, trampling and pollution due to motorized vessel activities.

- At the Pilot Sites, threats affect ecosystems functions and services at the landscape level and overall biodiversity status as well, particularly in the wetland portions

Coquimbo District: Elqui River Mouth pilot basin: The greatest pressure on ecosystem services and biodiversity is coming from urban development, with a high level of construction due to its location between two important tourism centers, which have caused a loss in water availability and land degradation through draining and filling. Parts of the river bend are being used as a dumping site for rubble and debris of construction material and as a spillway.

Valparaíso District: Mantagua wetland pilot basin: Pressure to this wetland is also coming from urban development, but also from pollution and water extraction due to overgrazing and agricultural activities in the surrounding areas. The main threat is the unplanned road development and the active land use change to agriculture, which has caused a decrease of the native forest, increased forest fires and proliferation of invasive exotic species.

O'Higgins District: Cahuil wetland pilot basin: Unsustainable and unplanned mass tourism is becoming an important threat to this wetland, with an increased generation of residues, over fishing and hunting of native animals, together with the use of untreated water spill causing new levels of eutrophication. Deforestation of the native forest for charcoal and several years of drought are also affecting the ecosystem's health.

Araucanía District: Queule wetland pilot basin: Though this wetland is located in a more pristine environment, with low eutrophication levels, the expansion of exotic forest plantation and of the forest industry in the area is increasing the pressure to the previously found agricultural activities (potatoes and cereal) and overfishing by local communities.

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<sup>5</sup> [http://www.mma.gob.cl/1304/articles-52016\\_Chapter9.pdf](http://www.mma.gob.cl/1304/articles-52016_Chapter9.pdf)



## **Barriers**

The barriers were grouped according to the problems that the project will address with the three components and their respective outcomes and outputs

### **Barriers regarding information and knowledge management**

#### **a) Limited knowledge and decision support systems for policy formulation, decision making and planning**

Knowledge, experience and opportunities are limited regarding recovery of coastal landscapes and their ecosystem services ranging from agricultural lands and their productivity, forested lands and wetlands and their environment. Further, the negative impact that various production practices, including agriculture, have on land productivity and ecosystem services provision, is not well understood and linkages not made between these poor practices and deterioration of services, e.g. prime agricultural land is lost due to degradation of coastal wetlands. Although there is some basic data, it is dispersed, in different or incompatible formats, and inconsistent in terms of information monitoring and the analytical methods applied to its analysis. The information available regarding ecosystem services provided by the coastal landscapes including wetlands as well as their economic significance in the different productive systems they support is insufficient. In addition, the ability to translate this information into effective public policies and adequate management decisions is limited, especially on the sub-national levels.

#### **b) Inadequate understanding of the interdependence between wetland sustainable management and conservation, and sustainable land management in the associated landscapes in which they are inserted**

The lack of basic knowledge regarding how these ecosystems function at the landscape level, except on the smallest scale (individual landholding or less in terms of management) prevents a coherent integration of resource utilization. The strictly sectorial focus originates in the lack of operational knowledge in Chile regarding complex ecosystemic processes, and both of these gaps reinforce and feed back into each other. Ecosystem health and functions at the wider landscape level is not sufficiently understood, neither in terms of land productivity in sectors such as agriculture and forestry, nor in terms of the causal relationship of the ecosystem components and their interactions. For this reason, if the only considerations for coastal zone and wetland management are effluents and the hydric system present, resulting from the processes generated in the watershed that feeds into it, it becomes inviable in terms of sustainable management and ecosystem service provision in the medium and long term. It is true that productive landscapes and coastal wetlands require local-level study and planning; but it is no less true that to achieve understanding of their ecosystemic and biophysical dynamics, a wider viewpoint with a landscape approach is required.

#### **c) Limited access to useful information and lack of public awareness regarding the importance of coastal wetland conservation**

Most of the population is not aware of the importance of coastal wetlands for biodiversity conservation, of different plant and animal species, nor of the ecosystem services provided, on the level of the landscape and to production for local development. Recognition of the significance of coastal wetlands on the national level, awareness of the threats that these ecosystems face, their socio-economic and environmental importance, is fundamental for their conservation and to assure the institutional support needed in order to maintain them.

### **Barriers regarding institutional and regulatory frameworks**

#### **d) Insufficient policies and regulatory frameworks supporting the development of coastal landscapes sustainable management and conservation at national, regional and local levels**

Very few robust experiences have been carried out in continuous management or recovery of coastal landscapes in Chile's south-central area. The EM has not been able to implement public policy instruments beyond restriction of certain projects that would have had a particularly devastating impact on ecosystem services and wetlands, through the Environmental Impact Evaluation System (SEIA). Even though there is an existing demand on the part of civil society for action in these areas, this demand is not finding its way into public policies for regulating management of these areas.

#### **e) Limited and/or inconsistent coordination of national institutions for the sustainable management and conservation priorities of productive landscapes and coastal wetlands**

The threats that Chile's south-central coastal landscapes including wetlands are facing, are part of the mandates of different institutions, i.e. changes in water courses, sandbars and beaches are under regulation by the Armed Forces Under-Secretariat, sand and gravel extraction are supervised by the Mining Ministry, building projects are regulated by the Ministry of Housing and Urbanization as well as local authorities, and capture or harvest of marine biomass are supervised by the Fisheries Under-Secretariat. None of these sectorial authorities takes into account criteria beyond those strictly related to their own areas when regulating activity development. Jurisdiction for regulating and inspecting resource utilization is deficient, dispersed and uncoordinated, making it difficult to establish a coherent and controllable regulation system. The different institutions in charge lack the installed capabilities for adequate implementation of their respective norms, in addition to deficiencies in the norms themselves and lack of coordination, all of which contributes to an overall situation with high difficulties to regulate.

#### **f) Lack of specific institutional capacity for sustainable land management and wetland protection**

Barriers relating to institutional capacity include lack of know-how for addressing threats specific to coastal landscapes and in particular to wetlands. There are gaps in information and knowledge that are key for decision-making and drawing up policies that insure sustainable natural resource and biodiversity management. This type of sustainable management requires a process of consultation, negotiation between the different stakeholders, bio-physical and social monitoring, supervision and conflict management, none of which has as yet been integrated into the capacities of the professionals involved. In addition, neither the local communities nor the regional or municipal authorities have the necessary experience for implementing integrated management plans for coastal wetlands

#### Barriers regarding participatory planning and coastal lands sustainable management at the local level

##### **g) Lack of coordination among local institutions and authorities involved on the implementation of land use plans at the landscape level and regulations for the sustainable management of coastal wetlands**

At the local level, the lack of coordination among the different institutions with mandates over coastal land uses including wetland uses and management is further complicated by the role of local governments and municipalities on the decision process and enforcement of land use plans at the wider landscape, where lack of technical capacities are more exacerbated and where useful information and data are both scarce and dispersed over the institutions. Thus it has become very difficult to ensure proper ecosystem functioning, with the consequent negative effects on land productivity on one hand and biodiversity conservation on the other.

##### **h) Absence of incentives for the application of SLM and conservation practices**

Incentives for local producers to apply sustainable land management practices to increase agricultural productivity are not being made available efficiently due to the lack of capabilities for drawing up, and acquiring funding for projects that include ecosystem services considerations. In addition, local producers do not have access to markets which award “premium” value to their commodities produced under sustainable land management and in a manner that is environmentally compatible within the coastal wetlands. This could be a way to reward and motivate them to utilize resources in a way that increases their land’s productivity and at the same time conserves biodiversity.

##### **i) Absence of integrated monitoring and evaluation system for coastal landscape management and the productive activities they harbor including wetland conservation**

At the present time, the services and benefits provided by coastal landscapes and their wetlands, including maintaining species diversity, are not appreciated, monitored or evaluated overall in an effective manner. Activity along the coastline has intensified and planning instruments do not explicitly recognize sustainable land management of a wide range of land uses neither management of coastal wetlands. Integrated management of the coastlines is not being applied in Chile and therefore actions affecting coastal systems are motivated by opportunity (production or conservation), and not as a response to an integrated and planned State policy. Biodiversity conservation and sustainable use in estuary zones, for example, has not been recognized as benefiting small-scale fishermen or the tourism sector.

#### **2) the baseline scenario or any associated baseline projects**

In the present baseline scenario, there has been progress regarding initiatives by the different stakeholders involved, including a Wetlands Strategy, drawing up a National Action Plan, and Proposed Legislation for establishing the Service for Biodiversity and Protected Areas (SBAP), but these efforts are just beginning to emerge, have not yet been consolidated and are going to require much effort to ensure successful implementation.

In the Central-Southern coastal wetlands, biodiversity and natural resources baselines exist, but there is neither systematic monitoring nor evaluation of their ecosystem services, nor interventions to promote a more integrated focus, on the level of the basin or the landscape. There have been few evaluations of the impact of industrial or building activities, but no specific requirements focused on these areas within the Environmental Impact Evaluations of the SEIA (Department of Environmental Impact Evaluation), the Ministry of Public Works (MOP) and the Ministry of Urban Development (MINVU). Nor do the current Local Development Plans or Territorial Planning at the Subnational levels include specific frameworks for conserving or protecting coastal wetlands. More awareness is needed on the part of public stakeholders as well as the general public, regarding the role of the wetlands in providing ecosystem and productive services, in addition to their role in protecting local biodiversity and its significance as a rest stop for numerous species of migratory birds.

In addition, Chile’s Central-Southern area is the zone that concentrates the greatest proportion of national population, with a growing housing sector, active deforestation processes ever since the colonial period, and ever more frequent droughts that contribute to an increase of forest fires within the wetlands or in neighboring zones, all of which are threatening the adequate conservation of these ecosystems.

The proposed GEF Project will complement and augment on-going initiatives, helping to integrate those being carried out by different stakeholders on the national level, as described below.

### Initiatives led by the Environment Ministry (EM)

In 2005, CONAMA's Directing Committee approved the National Strategy for Conservation and Rational Use of Wetlands in Chile, within the framework of the "National Biodiversity Strategy" of 2003. These processes come under the Biological Diversity Agreement (CDB, ratified in Chile in 1994), whose purpose is to compatibilize with the Strategic Plan for Biological Diversity (2011-2020), with an allocated budget for its updating plan of USD 910,000; and the Aichi Targets, whose mission is to take the necessary measures to arrest the loss of biological diversity to ensure that by 2020, the ecosystems will be resilient and will continue to provide essential services. In this way, the diversity of life on our Planet will be assured, contributing to human well-being and to the eradication of poverty. It should be emphasized that this Strategy emerges as a complement to the international commitment with the Ramsar Convention, agreement which Chile signed in 1971.

In 2005, in addition to approving the Strategy, the National Wetlands Committee was established, including 16 State bodies under the leadership of the Environment Ministry, who drew up the "National Action Plan for the Conservation and Rational Use of Wetlands in Chile" in 2016, with the support of different stakeholders from civil society led by the Environment Ministry. The development cost of this Plan was USD 8,000, and the budget allocation for its implementation is in the process of being determined with the assistance of the GEF-NSBAP project, together with the other Action Plans of the Strategy. The purpose of applying this public policy instrument is to advance toward stopping the deterioration and loss of wetlands and actively promote their conservation.

Development and progress in the area of wetlands, which takes into account the current state of these systems and brings us closer to understanding some of their characteristics, is based to some extent on studies carried out before the establishment of the National Wetlands Strategy (2005); these studies were undertaken by different stakeholders and national bodies, both public and private. The Ministry is working on the **Aquatic Systems Environmental Condition Monitoring Network**, with an allocated budget of USD 107,000 for the next 5 years, and whose purpose is to set up a network for monitoring the environmental conditions of aquatic systems through acquiring portable equipment to feed data into the wetlands monitoring system, for the Environmental Under-Secretary's future Coastal Wetlands Monitoring Network. In addition, an effort is being made to organize and catalogue all of this data for the purpose of defining and establishing the present state of Chile's wetlands; this corresponds with the establishment of the National Survey of Chilean Wetlands, carried out by the Environment Ministry in 2011 and updated in 2012, 2014 and 2015. The Survey includes a total of 40,378 wetlands, corresponding to 1,317,704 ha of the national territory. Furthermore, this Survey includes the Chilean Ramsar Sites and those included in the State Protected Areas.

Despite the existence of this Wetlands Survey, it is essential today to take into account in defining their present state of conservation, not only the basic ecology of the wetlands, but also the relationship between the wetlands and people, essentially through the goods and/or services that they provide, these relationships or uses being often what generate the threats to the ecosystem, and consequently to humans' own well-being.

The EM has also established the Secondary Norms for Environmental Quality (NSCA), which is a regulatory instrument aimed to conserve and preserve aquatic ecosystems through the maintenance and improvement of continental and marine water quality. It evaluates the impact of pollutants and protects wetlands against eutrophication within a Landscape approach to maintain pristine environments in high biodiversity areas. Currently, there are four NSCA in force for rivers and two for lakes, while four more are planned.

The EM is in the process of formalizing approval of the SBAP (Service for Biodiversity and Protected Areas) through Congress. The main instruments of the Service will be (these will be applied through on-the-ground interventions of component 3 during the implementation of this project in the pilot ecosystems):

- Management Plans for Conservation (Ar. 42 law 19,300), where compliance will be mandatory and it will establish management plans for NRM with requirements for natural resources use permits, use of pesticides and other agro-chemicals, alteration of fluvial, rivers, wetlands or lake systems and species hunting control, among others.
- Ecological Restoration Plans, which will cover measures and actions leading to the recovery of degraded ecosystems, developed by Municipalities with Regional Governments and the EM district bodies (SEREMIAS).
- Conservation Landscapes, as a recognition that Municipalities with associated actors can apply to the SBAP, with benefits in terms of priority access to incentives and other instruments.
- Biodiversity Compensations, where the Service will define criteria and standards for restoration and conservation practices that can apply to compensation payments, of a fund for PES of the SBAP
- Certification of Sustainable Practices in high biodiversity and priority areas, through SBAP Eco-labels that certify the incorporation of sustainable management practices in productive activities.
- Certification of Biodiversity and Ecosystem Services, as a System for recognition of activities, practices or territories that contributes to the conservation of BD and maintenance and recovery of ecosystem services, such a private areas for

conservation, afforestation/reforestation with high priority species, species with conservation issues or degraded lands in high BD areas.

#### Initiatives led by other public institutions

The General Water Department (DGA), that has an institutional annual budget of USD 30,243,632, through under the Ministry of Public Works, has a real time Hydrometeorological Satellite Service, where it is possible to request data obtained from satellite receptor stations located in Chile's main hydrographic basins, as well as the Water Quality Monitoring Network, which reports data such as temperature, pH, dissolved oxygen levels, electrical conductivity, etc. The lake water level monitoring stations measure water levels in these bodies of water, making it possible to follow variations and volume over specific time periods. In addition, the sedimentometric stations make it possible to estimate the total sediment load of a flow, as well as soil loss by erosion, or the amount of sediment deposited on natural and artificial (dam) lake bottoms. The lake and lagoon water quality control Network takes into account a total of 20 bodies of water located in the Central and Southern macro-zones which are monitored periodically to determine their degree of trophic, established on the basis of three parameters: Phosphorus, Nitrogen and Chlorophyll.

The Port Works Department (DOP), that has an institutional annual budget of USD 122,535,629, through under the Ministry of Public Works, is developing infrastructure in the coastal areas of Chile, such as port and piers construction and improvements, walking pathways and sightseeing platforms, together with loading docks and bays for fishing activities. With GEF funding, protocols and guidelines to preserve wetlands will be integrated in the development processes of DOP.

The General Department of Oceanic Territory and Merchant Marine (DIRECTEMAR), with an institutional annual budget of USD 127,000,000, has at its disposal the Program for Observation of the Coastline Environment (P.O.A.L.), which was set up to monitor annual fluctuations in the levels of concentration of the main components of domestic, industrial, petroleum hydrocarbon and POC effluents in bays, lakes and rivers under DIRECTEMAR's jurisdiction. Under the P.O.A.L., the levels and concentrations of the main pollutants are determined and evaluated both in coastal and sweet waters, their main focus being those bodies of water that are subject to a greater level of use or intervention in Chile. The potential effects of two major factors are taken into account: waste from activities being carried out on land adjacent to the body of water (industry, sanitary services, etc.), and the impact generated by those activities carried out within the body of water itself (such as fishing, aquaculture, beaches, boating, etc.).

The Municipalities have different instruments that can support the sustainable management of wetlands in their administrative areas, such as the Communal Development Plan (PLADECO), the Land Use Program, the Road Infrastructure and Connectivity Program, and related to environmental consciousness and management; Municipalities have the Local Environment Management Program and the Environmental Education Program. The Municipality of La Serena, where the Elqui pilot wetland is located, has developed together with the Serena University, a series of community talks and educational field trips related to conservation and biodiversity importance of the wetland to increase consciousness in the community. The Municipality of Quintero, where the Mantagua pilot wetland is located, has obtained the basic environmental certification process of the Ministry of environment, where work is being done on environmental education, environmental audit, and integrating environmental aspects to the land use planning and management program. The Municipality of Pichilemu, where the Cahuil pilot wetland is located, has conducted an Environmental Protection Fund (FPA) of the EM (Environmental Ministry) to contribute to the conservation of the wetland through a local environmental program, with a cost of USD 34,000. The municipality of Tolten, where the Quelue pilot wetland is located, has also receive funds through the FPA to create a germplasm bank for high biodiversity value species in the wetland and its basin, with a cost of USD 43,000. Investments by municipalities are substantive and vary widely throughout the project implementation area. Project preparation activities will include a more comprehensive assessment of these initiatives and include them in the overall analysis.

#### Initiatives led by Civil Society

A series of projects from the EM's Environmental Protection Fund (FPA) have made it possible to finance studies by different NGO's within the selected pilot ecosystems, including in the Cahuil Wetland a project for local environmental management as a contribution to conservation of coastal wetlands; in the Valparaíso Region, a project for conservation of the most significant wetlands in the heart of the township, with a cost of USD 34,000; another for the conservation of a network of wetlands in the region, with a cost of USD 30,500; yet another with the Mantagua Wetlands which are part of the conservation hotspots in the Valparaíso Region. The FPA, has an annual budget for conservation and biodiversity projects of USD 253,000 for the regions in the South-central part of Chile, and in the past 5 years has financed USD 135,833 in environmental projects related to wetlands in that part of the country.

3) the proposed alternative scenario, GEF focal area strategies, with a brief description of expected outcomes and components of the project,

Because of the current barriers and present conditions in the coastal wetlands in Chile's Central-Southern area, this Project will adopt an inter-institutional and landscape focus for the conservation and recovery of wetlands of global biodiversity significance. An integrated management focus is indispensable to ensure provision of the multiple ecosystem services the CW's

provide, and to maintain functional and productive landscapes. Within this integrated focus, sustainable CW management becomes a strategic element for reducing pollution and for halting the reduction of wetland surface areas, these being important “drivers” in the reduction of species biodiversity and the variables which most affect the provision of multiple products, services and benefits that are characteristic of healthy and functional ecosystems.

The Project’s **overall objective** is to Conserve and recover coastal landscapes (CL) including wetlands and adjacent watershed territories integrating them into local development, through their sustainable management and use.

In accordance with the GEF guidelines, the Project’s Components will contribute to target the following programmes:

Under BD-4: Mainstream biodiversity conservation and sustainable use into production landscapes and seascapes and production sectors, the project will be aligned with Program 9: Managing the Human-Biodiversity Interface. It will contribute to Outcome 9.1 “Increased area of production landscapes and seascapes that integrate conservation and sustainable use of biodiversity into management” and to Outcome 9.2 “Sector policies and regulatory frameworks incorporate biodiversity considerations” by incorporating coastal area landscapes under sustainable production protocols and mainstreaming biodiversity into policy and programmes. It will do so through i) increasing knowledge of the importance of key BD conservation and SLM for ecosystem and socioeconomic services provision as well as of management practices for sustainable use of natural resources in coastal landscapes, ii) mainstreaming ecosystem services and biodiversity into regulatory frameworks by increasing capacity of national and local stakeholders to manage landscapes sustainably, iii) shaping policy and development projects of relevant institutions to include sustainable management and conservation as well as protocols of best practices and finally iv) piloting the regulations and protocols on-the-ground through incentive mechanisms that reward sustainable production and conservation in the field for a number of production and infrastructure sectors, public and private.

Under LD-3: Integrated Landscapes: Reduce pressures on natural resources from competing land uses in the wider landscape; the project will be aligned with Program 4: “Scaling-up sustainable land management through the Landscape Approach”. It will contribute to Outcome 3.1: Support mechanisms for SLM in wider landscapes established, and Outcome 3.2: Integrated landscape management practices adopted by local communities based on gender sensitive needs. The LD strategy for GEF 6 lists a number of support activities that are exceptionally well aligned with the landscape level approach that this project is proposing. The project’s lines of action listed here paraphrase the strategy’s support activities and are to an extent copied verbatim: i) develop institutional capacity and promote financial mechanisms for sustainable land management; ii) provide incentives for reducing the pressures and competition between land use systems; iii) apply integrated watershed management, including wetlands and mountainous regions where SLM interventions can improve hydrological functions and services for agro-ecosystem productivity; iv) develop multi-stakeholder landscape planning involving both public and private sectors to inform decision-making on integrated management of ecosystem services; v) Improving agricultural land management near areas that require protection, including through empowerment of local communities.

The **Components** are:

*Component 1: Information management and outreach for mainstreaming sustainable wetland management*

In this component, the GEF’s incremental financing will support achievement of Outcome 1.1 Decision makers and relevant stakeholders aware and appreciate the importance of BD conservation and LD problems in coastal wetlands landscapes by means of more and better access to information regarding the ecosystem and socio-economic services they provide.

In this Outcome, the focus will be on generating additional key information for improved sustainable land management as well as regarding information gaps of globally relevant biodiversity. This is incremental and complementary to the existing data bases regarding the ecosystem services that coastal ecosystems provide at the watershed or landscape level, with inventory, classification and map of land use degradation and ecosystem services evaluation, data on conservation status of little known endemic species of flora and fauna, the productive use that is currently being given to the coastal wetlands’ natural resources, with particular emphasis on those uses which impact the ecosystems’ functionality, in addition to the livelihood of smallholder communities, value chains of the products coming from wetlands landscapes and markets of the related products, with proposed optimal economic and environmental land use arrangements for areas of multiple demands between environmental and economic priorities. This information will be obtained in a participative manner and jointly with the different agencies, institutions and communities involved in the pilot ecosystems, which will serve to inform both society and decision-makers in a regular and systematic manner, through a communications strategy that makes it possible to reach national, sub-national and local levels, in addition to improving the EM’s wetlands platform and other information management mechanisms that will constitute inputs to this strategy. The campaigns carried will seek to increase awareness regarding the ecological significance of coastal wetlands and SLM, importance of improved production on existing arable land for local communities’ benefit and improved provision of ecosystem services and less negative impact of agriculture and other production sectors on the wetlands, in order for wetlands to optimize the hydrological functions and services for agro-ecosystem services. Furthermore, instruments will be developed wherein prioritizing wetlands for conservation purposes will be available to both private and State managers, to help in decision-making and promote an increase in the surface area of protected wetlands because of their contribution to conserving national and international biodiversity.

## *Component 2: Institutional and regulatory frameworks strengthened*

Under this component, the GEF's incremental financing will support achievement of Outcomes 2.1 Improvement in institutional and technical capability for Integrated Landscapes Approaches for SLM and BD conservation in wetlands landscapes of South-central Chile, and 2.2 Incorporating regulations and criteria regarding BD conservation and SLM in coastal wetland landscapes into the strategies and mandates of the EM, the Ministry of Housing and Urbanization (MINVU), Ministry of National Assets (MBN), General Department of Oceanic Territory and Merchant Marine (DIRECTEMAR), Fisheries Under-Secretariat (SUBPESCA), Ministry of Public Construction (MOP) and the Sustainability and Climate Change Agency (ASCC) increasing the Project's scope in 180,000 ha.

Given the importance of establishing capabilities to ensure good, sustainable management of coastal wetlands, outcome 2.1 constitutes the basis for the Project's sustainability and the institutionalization of its results with the key stakeholders and partners. The EM's human and institutional capacities will be strengthened in order to implement the Ministry's "Wetlands Action Plan" effectively, and incorporate into related institutions the protocols, guidelines and considerations for sustainable wetlands management in territorial planning, management plans and evaluation of projects related to productive uses in landscapes that include coastal wetlands. On the institutional level, systematizing and efficient use of tools for information management and quantification of wetlands products and services will be carried out, together with monitoring systems and networks that support information management on the national and sub-national levels. In addition, Knowledge Management and communications strategies will be developed under this outcome in close coordination with related and synergic initiatives to maximize learning as well as to avoid repetition of efforts and investments while integrating project findings. Examples include sharing assessment of endemic and little known species with IUCN's listings or assessing best practices in ecosystem services valuation from relevant partners. This outcome will also provide the tools to widen the project impact in geographic scope from the project demonstrative landscapes to the wider South-central area. The scenario after the project will find improved capacities for wetland sustainable management and biodiversity conservation through the dissemination of materials and a replication strategy with training of relevant staff and decision makers in key sectors and institutions at the local and national levels.

Outcome 2.2 has to do with developing appropriate policies and regulations for adoption by the relevant institutions, these include protocols on best practices for developing infrastructure in or near coastal wetlands, such as roads, pathways, trails or touristic infrastructure, adopted by the Ministry of Public Work (MOP); protocols and best practices related to urban development construction associated to wetland landscapes, adopted by the Ministry of Urban Development (MINVU); criteria that focus on sustainable practices and guidelines for prioritizing coastal wetlands of national and international significance, together with best practices guidelines for productive activities, such as sand and gravel extraction, mining and others that affect coastal wetlands, adopted by the Ministry of National Assets (MBN) and the regional Governments and Municipalities. These protocols and guidelines will be drawn up in integral and appropriate manner at all institutional and governmental bodies for implementation on the national and sub-national levels and will represent binding instruments. With this outcome, the project seeks to improve the complementarity between the policies and mechanisms of the different institutions involved, in order to promote in-situ conservation of coastal wetlands, with the focus on revising and adapting existing policies and regulations in order to incorporate wetlands conservation principles into integrated management at the basin or landscape level. With the mainstreaming of the improved management practices by all the related institutions, the target is to enhance the conservation status of coastal wetlands of the south-central region of Chile.

## *Component 3: Demonstrative landscapes*

Under this component, the GEF incremental financing will support achievement of Outcomes 3.1 Enhanced mechanisms for cross-sector integrated planning of sustainable natural resources management at district level to decrease LD and preserve habitat of BD in coastal wetland landscapes considering the multiple dimensions of livelihood options (agriculture, forestry, pastures, construction, tourism), 3.2 The associated institutions at the sub-national level recognize and incorporate into their territorial planning, zoning and practices that includes conservation, recovery and monitoring of BD conservation and SLM in coastal wetland landscapes, and 3.3 Livelihood and income of coastal wetlands smallholders are more resilient, diversified and strengthened.

The main expected accomplishment of this component is the on-the-ground implementation of protocols and best practices developed in component 2, for the sustainable use and recovery of coastal wetland landscapes in the pilot ecosystems, in order to reduce their environmental deterioration and promote conservation of their ecosystem functions. Habitat destruction and coastal wetlands deterioration are the main causes of biodiversity loss in Chile's South-central zone. Under outcome 3.1, the objective is to overcome these barriers by means of implementing integral plans, with a basin or landscape-level focus, under the leadership of the Environment SEREMIS jointly with the associated institutions and municipal bodies. Pilot plans include recovery and application of traditional technologies, while at the same time incorporating new methodologies and introducing innovations through Project support, along with carrying out their respective monitoring programs. The project will start with these 4 pilot sites from the onset. These are the sites in which consultations are the most advanced and partners have already agreed to work with the project. The project will gradually add more intervention sites with similar degradation problems and

biodiversity value. At this point, initial consultations have taken place with 3 additional locations within the project intervention area landscapes that will be gradually incorporated as pilot sites. Conclusive consultations and coordination will be carried out in a participatory manner during PPG with all the stakeholders involved. The total area of influence of the project, including pilot wetlands and the associated landscapes and watersheds where SLM practices will be applied and where the legislation to protect biodiversity will be binding accrues to some 180,000 hectares.

The implementation of integrated land use plans, developed in a participatory manner by district authorities, communities and local stakeholders, effectively applied with compliance with the NSCA norms, regulating the use of pesticides and agro-chemicals, river basin and wetland drainage events, control of pollutants of different sources and control and management of eutrophication processes, together with the implementation of restoration and SLM activities through incentive mechanisms of the SBAP (Service for Biodiversity and Protected Areas) law project and the ASCC (Sustainability and Climate Change Agency) are used for restoration in riverbanks and flooding areas with reforestation and recovery of native vegetation activities, certification of sustainable forest management in forest plantations in the wetland basins, reducing erosion and harvest impacts to the soil, through live fences, infiltration trenches, crop rotation, composts, among others, together with leaving native forest areas as buffer zones for conservation and mitigation of impacts and other measures by relevant private sectors, such as tourism, forestry and agriculture through compensations for BD conservation grants of the EM.

Efforts will be made with local communities who utilize CW's as part of their way of life, applying methods and practices that will cause minimal damage to the ecosystem services and ensure the standard of habitat quality required for natural resource conservation and biodiversity in the coastal wetlands. The pilot sites will in turn have a significant role in terms of monitoring and scientific and technical data gathering, in order to refine methodologies, protocols, and best practices and prioritization guidelines, which will be promoted throughout the Project under component 1.

In the pilot ecosystems where urban development as well as road and infrastructure construction are the main drivers of degradation, the project will work with MOP and MINVU to integrate in their development projects direct measures and protocols for sustainable use of wetlands, reducing fragmentation and impacts of the projects and developing infrastructure useful for demonstration of the biodiversity importance such as sightseeing pathways and low impact urban construction.

To increase the LDN National Voluntary Target 'Dynamics of land productivity' in the pilot landscapes, measures and targets will be designed in the PPG phase in coordination with the focal point institution which is the National Forestry Corporation (CONAF) of the Ministry of Agriculture. Currently, CONAF is in a renovation process due to two Law Projects that would transform the institution. One is the Law Project to convert CONAF into the National Forest Service, which is to be presented in Congress and will result in emphasizing some of CONAF's current activities, such as forest fire prevention and forest plantation subsidies, while diminishing others, such as the protection of protected areas. The latter will be part of the second Law Project to create the SBAP (National Service of Biodiversity and Protected Areas), which will be part of the Ministry of Environment and is in an advanced phase of approval in Congress. Both Law Projects have been prioritized by the Government, with the goal to be approved before the end of this Government period in 2018 with general elections towards the end of this year. Therefore, coordination with the institution that will cover LDN measures will be consolidated during PPG phase, when there's more clarity on the stakeholders role.

Critical for the sustainability of the project after its completion, is the incorporation by the regional governments and other associated institutions at the subnational levels, of the development and implementation of integrated land use planning and practices that include conservation, recovery and monitoring of BD conservation and SLM in coastal wetland landscapes to be incorporated into their territorial planning and zoning. Training in these aspects will be covered under outcome 3.2. The establishment of the plans with the SLM practices could lead the Municipalities to obtain the Conservation Landscape Category of the SBAP, with binding commitments and management plans for medium and long term periods, adding to the sustainability of the project.

Under outcome 3.3, developing and implementing Clean Production Agreements with local productive sectors is a critical element for promoting and developing capacities in implementing best practices voluntarily and through incentives, such as obtaining seals and certifications, based on the particular conditions of both development and biodiversity, in the selected pilot areas. Clean Production Agreements are voluntary agreements between an association of businesses representative of a productive sector, and the competent public bodies whose aim is to apply **Clean Production** through specific targets and actions within a specified timeframe for achieving what has been agreed upon. The CPA's objective is to improve productive and environmental conditions in terms of hygiene and work safety, water and energy efficiency, emissions reduction, waste revaluation, best practices, promoting production, and other areas covered by the agreement, seeking synergies and economies of scale as well as compliance with environmental norms that tend to increase the businesses' productivity and competitiveness. On 22 October 2012, the UN gave international validation to CPA's as the first Nationally Appropriate Mitigation Action (NAMA). Under this outcome, interventions will also focus on broadening the knowledge base of local communities to implement SLM practices, methods and tools, while diversifying rural livelihoods by strengthening the capacity of local communities in integrating selected products from sustainably managed coastal landscapes including wetlands to the market, adding value with certification seals and payments for environmental services of the SBAP.



4) [incremental/additional cost reasoning](#) and expected contributions from the baseline, the GEFTF and [co-financing](#);

Current practices in coastal wetland landscapes, from land-use planning to production in the wetlands and surrounding basin, are failing to maintain ecosystem functions and cannot facilitate sustainable development. Without the GEF funds, the current unplanned, uncoordinated, unsustainable expansion of agriculture; overexploitation of fisheries and forests; and misuse of wetland resources without adequate consideration for sustainability or conservation will continue to have damaging impact on the state of biodiversity and livelihood conditions.

Despite important isolated initiatives to address these trends, under the business-as-usual scenario, biodiversity losses and ecosystem degradation can be expected to continue, along with increasing vulnerability to climate change. Local governments, civil society and community based organisations in the ecoregion will not possess the resources to develop their capacities to plan and manage coastal-wetland landscapes for multiple, integrated production, sustainability and global environmental benefits.

The main justification for the use of GEF resources is to build on the baseline to promote a truly cohesive, cross-sectoral management of natural resources, mainstreaming SLM and BD conservation in wetland ecosystems into landscape planning, strengthening stakeholder capacity and removing barriers that hinder the ecological functioning of coastal wetlands and threaten the biodiversity hotspots. The approach will introduce incentive measures to encourage local stakeholders to adopt new sustainable livelihood options and enhance the knowledge base among decision makers and local populations on SLM and biodiversity conservation, thereby reducing environmental stresses. Support to the continued development of an enabling environment complemented by activities that target critical constraints in land, forest, and production systems will be addressed and complement the baseline project by addressing the interphase between water, agriculture, and forestry through a landscape approach.

The proposed project will cover the incremental cost associated to redefining how BD protection and SLM practices can be integrated with socioeconomic development strategies of different state institutions and private actors in an integrated approach. Component 2 of the project is critical as regards to putting in place the requisite framework and policies that are compatible with this approach, while Component 3 will operationalize the approach. The GEF financing will support the initiatives and efforts initiated by the Government to promote BD conservation and SLM practices in coastal wetlands landscapes, such as:

- The NSCA norms (Secondary Norms for Environmental Quality) in river basins, lakes and coastal areas, which are a regulatory instrument aimed to conserve and preserve aquatic ecosystems through the quality maintenance and improvement of continental and marine waters. It evaluates the impact of pollutants and protects wetlands against eutrophication within a Landscape approach. The GEF incremental value will provide compliance and use of NSCA norms for coastal wetlands in the project pilot landscapes.
- The creation of the SBAP (Service for Biodiversity and Protected Areas) is a Law Project in an advanced stage for approval in Congress. The main instruments of the Service will be Management Plans for Conservation; Ecological Restoration Plans; Conservation Landscapes; Biodiversity Compensations; Certification of Sustainable Practices and Ecolabelling; Certification of Biodiversity and Ecosystem Services. With GEF financing coastal wetland landscapes will have practical demonstrations of these instruments and incentives in the pilot landscapes and project scope area. With the demonstration, upscaling and replication of these instruments, the project will reverse land degradation trends and promote BD conservation through direct interventions.
- Aquatic Systems Environmental Condition Monitoring Network, whose purpose is to set up a network for monitoring the environmental conditions of aquatic systems through acquiring portable equipment to feed data into the wetlands monitoring system, In addition, to organize and catalogue all of this data for the purpose of defining and establishing the present state of Chile's wetlands is the National Wetlands Platform. Through GEF financing the valuation of ecosystem and socioeconomic services in wetland landscapes and the contribution of assessing little known endemic species will enrich the EM Wetland Platform on data gaps related to conservation status, threats and conservation actions recommended and that are under implementation within the project period for previously poorly known species;
- With GEF financing, BD and SLM principles, protocols and guidelines for coastal wetland landscapes sustainable management will be integrated in the construction and urban development sector, forestry industries, fisheries, agriculture and tourism sectors over 1,800,000 ha.
- Public-private partnerships will be developed through Clean Production Agreements, promoting both socio-economic development and ecosystem protection. Guidelines will be developed for private sector partners on how sustainable management of coastal wetlands can be achieved, and key stakeholders such as governments, private sector and civil society will be sensitized and engaged in protecting and sustainably using coastal wetlands. Awareness raising campaigns on the benefits of sustainable management, biodiversity, community action and land use planning will be carried out.
- The project will work with local governments, municipalities, NGOs and local communities, mainstreaming sustainable management practices at all the administrative levels. Smallholders' communities will receive training for production,

transformation, commercialization and value addition of innovative and sustainable livelihoods, with a value chain approach to support access to reliable markets, increasing the incidence of SLM approaches applied by small-scale holders leading to soil and vegetation quality improvements.

#### 5) [global environmental benefits](#) (GEFTF)

In terms of GEB in the LD focal area, the project will promote Sustainable Land Management in coastal areas of the associated districts. It will do so combining two lines of action: a) introducing an innovative integrated land use planning approach that has not been used so far in this densely populated section of the country and b) on-the-ground application of SLM practices and productive protocols in key sectors such as agriculture, forestry and tourism, but also in regards to infrastructure and construction which have a significant bearing on integrated land use planning and effects on ecosystem health. This will bring together stakeholders at multiple scales, led by the ministry of environment at national level and engage public and private partners from the relevant sectors at subnational and local levels. The regulatory framework is under approval at congress, and the local buy in will be secured through innovative incentive mechanisms funded by key institutional partners (as described in the baseline and alternative sections of this document). Through this landscape approach benefits will be achieved in terms of environmental, social and economic aspects. For the environment, long term benefits will be associated to securing goods and services from healthier ecosystems while in the short term more tangible benefits include soil fertility and overall health and productivity, reduced contamination and degradation of the land-water-vegetation continuum through soil and water conservation, improved water supply in quantity and quality for multiple uses. The socio-economic benefits provided by the project are expected from an increase in incomes by local stakeholders as their participation in applying sustainable production protocols will translate into improvements for their livelihoods associated to increased productivity of the land on one hand, and to application of incentives schemes on the other.

Regarding GEBs in the BD focal area, the project will address the direct drivers of global biodiversity loss and land degradation in 180,000 ha of coastal wetland landscapes in the Mediterranean ecoregion of Chile recognized internationally as one of the 34 priority sites for conservation of biological diversity in the world, having the highest endemism rate of flora and fauna species of the country, while being the least protected in terms of surface area, the most intervened historically, with the highest rate of current construction and development works, and the more populated region of the country, with 85% of the inhabitants in 25% of the surface, by promoting action at the level required to effect real change. Conservation of threatened species will thus be facilitated, but also the inclusion of endemic ones that have not yet been captured in the global level records thus requiring urgent assessment and protection. Most relevant species included in the IUCN Red list are: in Critically Endangered category: *Numenius borealis*, *Eriosyce chilensis*, *Rhinoderma rufum*, and *Telmatobufo bullock*, 3 of them endemic only to Chile; in the Endangered category: *Lontra felina*, *Liolaemus leopardinus*, *Eriosyce aspillagae*, *Chelonia mydas*, *Echinopsis bolligeriana*, *Araucaria araucana*, *Eupsophus contulmoensis*, *Eupsophus migueli*, *Eupsophus nahuelbutensis*, *Lontra provocax*, *Pelecanoides garnotii*, *Pitavia punctata* and *Pseudalopex fulvipes*, 6 of them endemic only to Chile; and in the Vulnerable category: *Caudiverbera caudiverbera*, *Jubaea chilensis*, *Rhinella atacamensis*, *Dermochelys coriacea*, *Leopardus guigna*, *Lepidochelys olivacea*, *Alsodes barrioi*, *Alsodes montanus*, *Alsodes tumultuosus*, *Buteo ventralis*, *Octodon bridgesi*, *Rallus antarcticus* and *Rhinella rubropunctata*, 6 of which are endemic only to Chile. There are 50 species, all of them endemic only to Chile, which have not been assessed by IUCN, but have in the National Classification System the status of Critically Endangered or Endangered. Refer to Annex 5 for a comprehensive list of these species): The project tackles the fact that biodiversity management efforts are not being properly considered by decisions from other ministries or productive sectors affecting coastal wetlands. Therefore, the project will work on stimulating the demand for better information about biodiversity at development decision points and within development processes and systems, as well as the successful provision of that information simply and cost-effectively over the long-term. The global environmental benefit of the project is to reduce the development drivers affecting biodiversity loss and land degradation in coastal wetlands of the central south of Chile, through demonstrated efforts in four pilots (20,200 ha), but achieving national scale results on this front through a pro-active up-scaling and replication strategy.

The proposed project will ensure the conservation and protection of ecosystem and species biodiversity that are of global importance. In addition, the project will provide important global benefits through the maintenance of vital ecosystem processes and services. For example, many of the internationally important wetlands are critical migration stop-over sites for water bird species. The sites also provide important food sources for fish, act as spawning grounds and nurseries, provide critical fish migration paths, contribute to water quality improvement, water storage, aquifer maintenance and climate mitigation.

Wetlands provide various livelihood and economic opportunities through fisheries, agriculture and tourism and associated employments. They also offer opportunities for public education, awareness and enjoyment, and living laboratories for continued biological exploration and study. Implementation of integrated management plans would provide a more stable environment in which both communities and business can thrive better, including a more balanced local economic development path, with specific focus on ensuring reduction in vulnerabilities and enhancing capacities of the wetland dependent communities through integrating sustainable livelihood options within implementation plans, with focus on achieving gender equity. The global benefits of the project through these integrated restoration plans are the maintenance of the range of

environmental services and products derived from coastal wetlands, the reduction of wetlands loss and degradation, and enhanced sustainable livelihoods for local communities and wetland dependent people.

6) innovation, sustainability and potential for scaling up.

Efforts to address coastal wetlands landscapes threats and barriers have not yet targeted underlying problems of environmental degradation in a comprehensive manner. Ad-hoc approaches that do not capture the cross-sectoral nature of water, land and forest degradation cannot systematically address their root causes. In response to this and to leverage the scope and impact of existing and planned interventions, the project adopts a programmatic landscape approach.

**Innovation:** The project innovativeness lies in the fact that it will be the first of its kind to take a landscape and integrated approach to coastal wetland management, focusing on both the ecological and socioeconomic components. Through Component III, the project introduces on-the-ground application of innovative sustainable financing mechanisms for habitat conservation, such as the Conservation Landscapes category and biodiversity compensation payments of SBAP. It will be also introducing incentives for sustainable management in productive sectors such as forestry, agriculture, fisheries and tourism, through certification, eco-labelling and Clean Production Agreements, to address the very causes of degradation by shifting unsustainable practices towards more sustainable ways, and doing so through a public-private partnership. The project combines BD with SLM and Socioeconomic incentives to focus both on coastal wetlands – as cornerstones of a landscape - as well as land outside of these, which is critical for the wetlands and its biodiversity and important for people given its economic use. These innovative approaches, if proved successful, can go a long way in resolving the habitat fragmentation threats and ensuring long term stability of the populations of important species. The Project is innovative within the physical and legal frameworks it has to face to date; there have been few attempts at establishing an integrated approach to land-use management in wetland basins, incorporating conservation priorities, zoning, sustainable use of resources at the landscape level and clean/sustainable production agreements with the private sector. There has also been limited vertical integration and linking of planning processes from the national level down to the provincial, district and community levels. This project will be innovative in its support for mainstreaming of sustainable management of coastal wetlands through all levels of governance. (refer to Coastal wetlands governance in II 1.1)), simultaneously carrying out local pilot activities and knowledge and information management actions which provides bottom-up inputs for discussion of national environmental policies related to wetlands, improving these in ways which generate a regulatory framework adapted to local conditions. Finally, innovation is also comprised in the contribution of assessing little known endemic species that need to be protected but have not made it into the international listings such as IUCN.

**Sustainability:** The project design by itself is aiming at ensuring that unprotected coastal wetland systems with globally important biodiversity benefit from mechanisms that last for the long term. The operational and financial sustainability strategy is based on ensuring participation and commitment of local communities and stakeholders, strengthen the capacity to better plan and monitor within an integrated landscape approach, successfully deploy incentive tools, economic instruments and sustainable management practices within the targeted ecosystems and by commitment of Government to allocate core financing from baseline projects sufficient for the optimal management of ecosystems after the project ends.

The sustainability of the project action will also derive from:

- The information is incorporated into the EM's information management infrastructure. Actions for strengthening capacities target permanent staff members of public institutions (Ministries and Regional and Municipal Governments).
- Each pilot project will be coherent and sustainable at the local level, carried out in all its phases with the participation of the stakeholders relevant to each scale. Systematizing, monitoring and evaluation actions will be carried out in conjunction with all pilot activities, to ensure identification, and dissemination of best practices.
- Project contributions in the realm of environmental institutions, legality and norms are sanctioned by the national environmental authority within the scope of its competency.
- The socio-economic impact of the project will be substantial since it will enhance income and resilience of beneficiaries and assist to diversify agricultural output.

**Potential for scaling up:** The potential for scaling up the project's approach and impact will be encouraged through the dissemination of tested models for planning at the ecosystem level, lessons learned and experiences in implementing dynamic conservation in coastal wetlands landscapes, together with raising awareness to ensure that local communities and stakeholders understand and adopt incentives and tools for biodiversity conservation and SLM practices in these ecosystems. A multiplying effect will be encouraged through strategic policy support, regulatory frameworks in place and capacity building at state and national level to consolidate effects within the project period. The heterogeneous nature of pilots within the project, covering from semi-desert to temperate areas, with different landscape mosaics of land uses and different productive sectors involved, provides many ways to achieve multiplier effects, replication and upscaling. Project implementation will be integrated in existing district institutions and will conduct workshops across areas with highest replication potential to demonstrate the experience and help other users and stakeholders to implement the same practices, thereby providing the systemic capacity needed for scaling up the initiative to other districts. The project will support the development of an exit strategy, which will cover all aspects handled by the project.

2. Stakeholders. Will project design include the participation of relevant stakeholders from civil society organizations (yes ☒ /no ☐) and indigenous peoples (yes ☒ /no ☐)? If yes, identify key stakeholders and briefly describe how they will be engaged in project preparation.

Among the stakeholders to be taken into account are the following: the Armed Forces Under-Secretariat, DIRECTEMAR, MINVU, MOP, Regional Governor, the Clean Production Council, private companies, State companies (if applicable), local communities, small-scale fishermen, local NGO's and Municipalities.

Key stakeholders	Interest in the project	Role in the project
Ministry of Environment <ul style="list-style-type: none"> <li>SEA (Environmental Evaluation Department)</li> <li>SMA (Environmental Superintendency)</li> </ul>	The EM defines Policies to promote conservation of natural resources, including hydrological resources, soil, flora and fauna, and wetlands. The EM should ensure the conservation of fragile and degraded ecosystems and must enforce international conventions and propose to the President of the Republic policies and standards that promote these principles and that protect the natural environment. Being wetlands a fragile ecosystem being degraded by unsustainable uses, the EM is responsible for formulation and promotion of policies and regulations for the conservation of wetlands.	Main project executing partner. ME has a Department for Conservation of Aquatic Ecosystems that will provide support to the different project components, as well as carrying out its coordination, and monitoring
MINVU/SUBDERE	MINVU is the ministry in charge of urban development and SUBDERE the underministry for regional development. MINVU is developing urban infrastructure in sectors where coastal wetlands are located and is interested in introducing in its regulations good practices and protocols for the conservation of wetlands in future developments	Executing partners, MINVU and SUBDERE will provide technical support to the project within their mandates
Ministerio de Obras Publicas (Ministry of Public Works) <ul style="list-style-type: none"> <li>DGA (General Water Department)</li> <li>DOP (Port Works Department)</li> </ul>	The General Water Directorate (DGA) is the institution that authorises uses of water and monitors water quality in Chile. It contributes key background information on hydrology and basin configuration	Executing partners, as an institution with water quality and monitoring experience will provide its technical expertise during project implementation
Ministry of National Assets	This Ministry is in charge of the administration of state land, it has the role to declare the use of the land, which can be for production or as protected areas if ecological value is demonstrated. The Ministry can set the management conditions and modalities for protecting the state interests in the land	Executing partners, will provide technical support to the project within their mandates
Armed Forces Subsecretariat, National Commission for the Use of the Coastline, and DIRECTEMAR	The Underministry of the Armed Forces and the Direction of Maritime Interests of DIRECTEMAR are both part of the Ministry of Defence. Each of them has been assigned an important role for the management of coastal wetlands, be it the management of beaches or coastal marine resources	Play a key role in the project as participants and coordinators of local initiatives
Municipalities	Being the subsidiary public body and the one closest to the citizen, they have an important role in promoting local dialogue and initiatives.	Play a key role in the project as local coordinators of initiatives for restoration, land use planning and zoning, and environmental education.
Regional Governments	Regional governments are responsible for elaborating and approving regional social, cultural and economic-development plans and programmes and for assigning it resources. Sustainable management of wetlands is in their interest under its responsibilities of promoting and supervising environmental protection and conservation and the development of production activities within a responsible framework.	They monitor results of the project useful for their decision-making and planning activities in its respective territories.

Key stakeholders	Interest in the project	Role in the project
Local Communities and indigenous people	Local communities will be engaged with during the PPG and implementation phases to ensure that community priorities are addressed by the project. Local-level consultations will take place to identify needs, initiate dialogue and promote community participation in restoration and conservation activities. The project will ensure a strong emphasis on gender representation during stakeholder consultations as well as gender-sensitive activities during implementation.	Local communities will participate actively in the design, planning and implementation of proposed project activities.
NGOs	A number of NGOs focussed on conservation and sustainable management of wetlands. These include Funadacion Kennedy, WWF, Senderos de Chile, among others. These will be consulted during the PPG phase to identify opportunities for alignment of this project with ongoing initiatives. In particular, such organisations have insights into local socio-economic and environmental priorities related to community needs. The inclusion of NGOs in project design will ensure that interventions address real priorities in local communities in a manner that is culturally sensitive and environmentally sustainable.	As a key institution with wide experience in the research of conservation and restoration of Wetlands in Chile, provide technical support to project implementation.
Private sector	Forest companies, tourism companies, agricultural cooperatives and fisheries cooperatives will participate in clean production agreements to use better management practices to conserve wetland biodiversity and decrease land degradation. These will be consulted during the PPG phase to identify opportunities for alignment with this project.	Private actors will participate in APL agreements in the implementation of project activities
CPL	The Clean Development Commission promotes cleaner production through sectorial voluntary agreements	Associated partner that will provide support and technical assistance in the development of the Clean Production Agreements in the pilot areas
UN Environment	Support project development and supervision of implementation including M&E and fiduciary standards.	UN Environment is the GEF Implementing Agency that will provide technical assistance during the full project cycle
LDN focal point for Chile	Coordination with the institution that will cover LDN measures in the Ministry of Agriculture will be consolidated in PPG phase. Due to a renovation process of CONAF (the current focal point on LDN), who's responsibilities will be separated into two new institutions. One will be the Law Project that creates the National Forest Service, and the other, the Law Project that creates the SBAP (National Service of Biodiversity and Protected Areas), which will be part of the Ministry of Environment.	Participate in the design of activities related to Chile's LDN targets as well as monitoring progress and contributions

3. *Gender Equality and Women's Empowerment.* Are issues on [gender equality](#) and women's empowerment taken into account? (yes ☒ /no ☐). If yes, briefly describe how it will be mainstreamed into project preparation (e.g. gender analysis), taking into account the differences, needs, roles and priorities of women and men.

Local stakeholders and communities are to be involved during the overall design and implementation of the project proposal. Gender sensitive participatory methods will be used to collect disaggregated information regarding to interests, capacity development needs, organisational needs, traditional use and responsible marketing. The project will be designed taking into account the perceptions and motivations of different interest groups and considering men and women needs, age, education level, social conditions and established indigenous groups. Gender specific information in the pilot areas will be assessed and integrated during the project preparation phase.

4 *Risks.* Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (table format acceptable).

<b>Risks that might affect the project achievements</b>	<b>Appraisal L=Low, M=Medium, H=High</b>	<b>Mitigation actions</b>
National and local authorities may not consider coastal wetlands important	L	The current regulatory framework does not adequately include conservation and sustainable use measures. Different subnational authorities have already been contacted in relation to the development of this proposal and are involved in initiatives complementary to this project. They are invited to be strategic partners in the project and they can participate in all of its components. The approach of the Ministry of Environment will not be solely concerned about wetland conservation, but also about promoting innovative alternatives of commercial use substituting current unsustainable practices that jeopardize the medium-term economic potential of these ecosystems.
Local communities and stakeholders from key sectors do not adopt the proposed good practices and voluntary sustainable management measures	M	Different actors have declared an interest in supporting the piloting of good practices and incentive schemes. PPG stage should allow for the deepening of this discussion and the incorporation of means-tested monitoring tools for such pilot experiences.
Restoration may be unfeasible	M	Promoting joint work between ministries will focus on overcoming technical challenges in relation to restoration and the establishment of policies to secure an improvement of funding for the restoration of coastal wetlands and sustainable local development.
The law that creates the National Service for Biodiversity and Protected Areas (NSBAP) is not approved before the Project terminates or is in an advanced phase	L	The proposed legislation is in its final approval phase and has the technical and political support of various sectors
Local and regional authorities fail to assume their role in ensuring the participatory management of resources at the productive landscape level and the regulatory support required for coastal wetland conservation	L	Project design, development and implementation is based on the premise and commitment of multi-stakeholder participation. As such, structures and mechanisms to ensure the active involvement and feedback of stakeholders groups will either be established or strengthened where they exist.
Climate change may increase the threats to coastal wetlands. Under changing climate conditions, threats to vulnerable ecosystems such as coastal wetlands can increase through new invasions of exotic species (IAS) that are more resistant to new climate conditions, through droughts that increases the likelihood of fires, flooding and increase stress of native populations.	M	The design of the project focusing on enhancing the ecosystem services provided by coastal wetlands and its role in the mitigation of adverse climate change impacts e.g. floods, droughts etc. will seek to integrate the system needs into the country's evolving climate change strategy. The removal of threats, pressures and stresses that impact biodiversity and lead to land degradation will also ensure the ecosystems are more resilient to the impacts of climate change and therefore less vulnerable to its effects. Finally, site-level local communities, government officials and private sector individuals will be trained to better understand the impacts of climate change on biodiversity/ecosystems and to adopt conservation and management strategies for mitigating climate change and enhancing resilience.

**5. Coordination.** Outline the coordination with other relevant GEF-financed and other initiatives.

The Ministry of Environment, through the Natural Resources Division, will establish communication and coordination mechanisms with other relevant GEF and donor projects under development or implementation with thematic links with the project objectives. Among the ongoing GEF projects of relevance for this initiative, are:



- *GEF NBSAP* (implementing agency: UNDP) is currently under implementation at both the national and local (regional) levels. The regional workshops it holds develop regional strategies that feed the National Biodiversity Strategy and its Action Plans. These workshops are facilitated by the EM, which can coordinate its results for feeding into the present proposal.
- *GEF ID 4104 Sustainable Land Management Project* (implementing agency: World Bank). The activities that this project is funding would benefit from the mainstreaming of sustainable land management that the project is bringing to Chile's agricultural and forestry incentive policy. The project hereby proposed will fund local activity in different areas from the ones in this project. The EM's Natural Resources Division participates in both projects and will ensure the adequate flow of information between them.
- *GEF ID 5135 Protecting Biodiversity and Multiple Ecosystem Services in Biological Mountain Corridors in Chile's Mediterranean Ecosystem*. Synergies with this project in the evaluation and assessing of ecosystem services will complement the different regions the projects will be working on, Andes and coastal areas, adding to the mainstreaming at the national level of biodiversity and conservation issues.
- *GEF ID 5429 Mainstreaming the Conservation, Sustainable Use and Valuation of Critically Threatened Species and Endangered Ecosystems into Development-frontier Production Landscapes of the Arica y Parinacota, and Biobio Regions*. With the EM's Natural Resources Division participating in both projects, synergies can be developed to highlight the importance of wetlands ecosystems, both in provision of ecosystem services and as the habitat of endangered national species.
- *GEF ID 4968 Integrated National Monitoring and Assessment System on Forest Ecosystems (SIMEF) in Support of Policies, Regulations and SFM Practices Incorporating REDD+ and Biodiversity Conservation in Forest Ecosystems*. FAO is also acting as implementing agency for the implementation of this national forest inventory project to collect accurate data and information related to natural forest and plantations for better planning, management and policy monitoring. It develops an inventory methodology to assess forest cover, use and users of trees and non-timber forest products (NTFP) including biodiversity. The project has recently started with the support of the forest assessment team in FAO HQ, in collaboration with the Institute of Forestry (INFOR).

The Ministry of Environment will also establish a Multi-sectorial Directive Committee comprised of representatives from DIRECTEMAR and DGA, the Council of Clean Production (CPL) of the Ministry of Economy and representatives from the participating Regional Governments. The principal functions of this Committee will be to ensure policy alignment, operational consistencies, intra institutional coordination, and maximum complementarities among relevant actors, programmes and operations.

In the project design phase, a series of preliminary meetings will be conducted with these agencies representatives, relevant donors and baseline partners, to collectively identify areas of complementarity and joint collaboration.

**6. Consistency with National Priorities.** Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes ☒ /no ☐ ). If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

The project is consistent with Chile's NBSAP Strategic Objectives (SOs) of projecting research and applied information for its use in decision-making, of promoting sustainability in renewable natural resources and of securing the maintenance of the integrity of representative ecosystems of the country.

More specifically, the project is in line with NBSPA strategic goal no 3.2 of promoting the adoption of voluntary guidelines of good management practices in production activities based on and/or affecting renewable natural resources, and strategic goal no 4, promoting capacity building and research that informs management of biological diversity, through public-private cooperation and international financial institutions. Finally, the project is also coherent with strategic goal no 5.3, aiming to incorporate biological diversity into terrestrial and marine spatial planning.

Chile has a Strategy and Action Plan for Wetlands, derived from the NBSAP and the Ramsar Convention. This project is consistent with SO-2 and associated action lines 1, 2, 5, 7 and 8 of this Action Plan, that refer to maintaining a national wetland inventory, identifying and prioritizing wetlands for conservation, strengthen research on wetland structure, function and sustainable use, developing wetland monitoring systems, developing a national wetland information system, and promoting cooperation and exchange with other countries sharing similar goals and interests regarding wetlands. Also, it will contribute to SO-3.3 on reconciling and complementing national regulations allowing wetland conservation and sustainable use. The project has also been conceived under the premise of SO-4, which promotes cooperation between public and private sectors, as well as NGOs and research institutions, to engage in wetland conservation and sustainable use activities. The project is in line with SO-5 in contributing to the development and implementation of planning tools for the conservation and sustainable use of wetlands, through prioritization, participation, monitoring, impact assessment, and the promotion of incorporating this information into



national and regional territorial planning. Finally, the project is consistent with SO-6 that points to encourage participation of Chile in the international agenda, especially regarding research, technical assistance and exchange of information.

**7. Knowledge Management.** Outline the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

The project will ensure that an appropriate knowledge management platform is developed and shared with all relevant actors. The platform developed in component 1 will bring together both existing knowledge and that which will be generated throughout the project. Existing information generated from development institutions and public and private sector institutions will be systematized to ensure consistency and compatibility. This information, together with the outputs generated by the project, will be made available to relevant stakeholders including decision makers at local, regional and national levels. An appropriate mechanism to disseminate and manage this information will be further developed in the project preparation phase and implemented under the external communications strategy in component 2.


### **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):**

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Miguel Stutzin S.	GEF OFP	Ministry of the Environment	

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

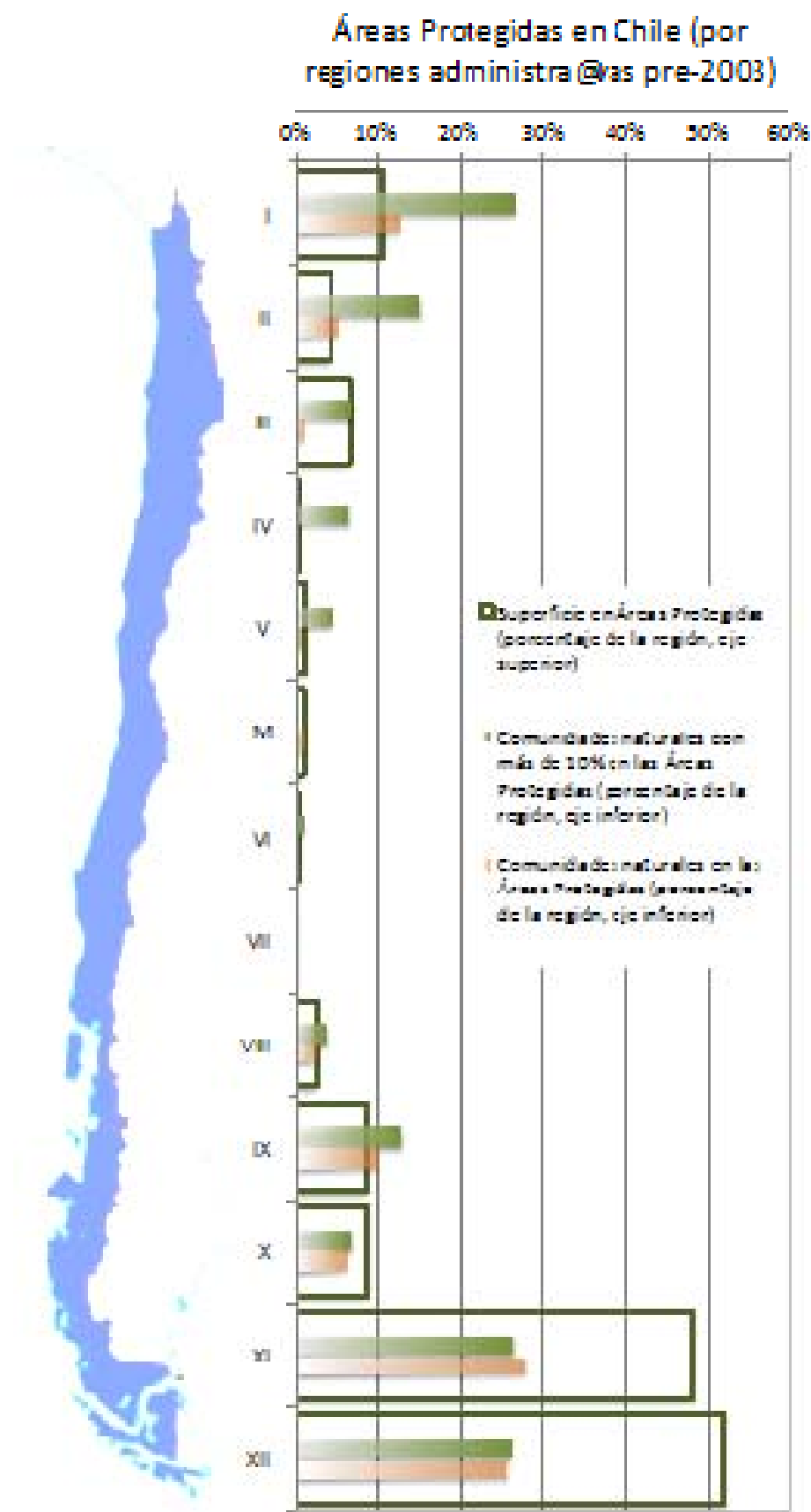
**This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for project identification and preparation under GEF-6.**

Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email
Brennan Van Dyke Chief, Strategic Donor Partnerships and Global Funds Coordination  UN Environment		April 3, 2017	Robert Erath UN Environment Task Manager	+507 305 3171	robert.erath@unep.org

**Annex 1: Localities of the four Landscapes where piloting will start its interventions**



Annex 2: Graph showing the occurrence of Protected Areas per region in Chile



### **Annex 3: References**

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#### **Annex 4: Acronyms**

<b>CONAF</b>	National Forestry Corporation
<b>CPA</b>	Clean Production Agreement
<b>CPC</b>	Clean Production Council
<b>CW</b>	Coastal Wetlands
<b>DGA</b>	General Water Department
<b>DIRECTEMAR</b>	General Department of Oceanic Territory and Merchant Marine
<b>DOP</b>	Port Works Department
<b>EM</b>	Environmental Ministry
<b>FFAA</b>	Armed Forces Under-Secretariat
<b>FPA</b>	Environmental Protection Fund
<b>INE</b>	National Institute of Statistics
<b>MINVU</b>	Ministry of Housing and Urbanization
<b>MBN</b>	Ministry of National Assets
<b>MOP</b>	Ministry of Public Construction
<b>NAMA</b>	Nationally Appropriate Mitigation Action
<b>SBAP</b>	National Department for Biodiversity and Protected Areas
<b>SEA</b>	Environmental Evaluation Department
<b>SEIA</b>	Environmental Impact Evaluation System
<b>SMA</b>	Environmental Superintendence
<b>SNASPE</b>	National System of State-Protected Wild Areas
<b>SUBDERE</b>	Under ministry for regional development
<b>SUBPESCA</b>	Fisheries Under-Secretariat
<b>UNEP</b>	United Nations Environment Programme

## Annex 5: List of species with conservation status

### O'higgins District: Cahuil wetland pilot basin

Scientific name	Endemism	IUCN category
<i>Numenius borealis</i>	Native	Critically Endangered
<i>Lontra felina</i>	Native	Endangered
<i>Caudiverbera caudiverbera</i>	Endemic only to Chile	Vulnerable
<i>Jubaea chilensis</i>	Endemic only to Chile	Vulnerable
<i>Rhinella atacamensis</i>	Endemic only to Chile	Vulnerable
<i>Dermochelys coriacea</i>	Native	Vulnerable
<i>Leopardus guigna</i>	Native	Vulnerable
<i>Lepidochelys olivacea</i>	Native	Vulnerable
<i>Alsodes nodosus</i>	Endemic only to Chile	Near Threatened
<i>Rhinella arunco</i>	Endemic only to Chile	Near Threatened
<i>Larosterna inca</i>	Native	Near Threatened
<i>Laterallus jamaicensis</i>	Native	Near Threatened
<i>Phalacrocorax bougainvillii</i>	Native	Near Threatened
<i>Phalacrocorax gaimardi</i>	Native	Near Threatened
<i>Phoenicopterus chilensis</i>	Native	Near Threatened

Scientific name	Endemism	National category	IUCN category
<i>Adiantum pearcei</i>	Endemic only to Chile	Critically Endangered	Not assessed
<i>Alstroemeria mollensis</i>	Endemic only to Chile	Critically Endangered	Not assessed
<i>Cnemalobus pognai</i>	Endemic only to Chile	Critically Endangered	Not assessed
<i>Pyrrhocactus simulans</i>	Endemic only to Chile	Critically Endangered	Not assessed

Valparaiso District: Mantagua wetland pilot basin

Scientific name	Endemism	IUCN category
<i>Eriosyce chilensis</i>	Endemic only to Chile	Critically Endangered
<i>Numenius borealis</i>	Native	Critically Endangered
<i>Liolaemus leopardinus</i>	Endemic only to Chile	Endangered
<i>Lontra felina</i>	Native	Endangered
<i>Caudiverbera caudiverbera</i>	Endemic only to Chile	Vulnerable
<i>Dermochelys coriacea</i>	Native	Vulnerable
<i>Jubaea chilensis</i>	Endemic only to Chile	Vulnerable
<i>Leopardus guigna</i>	Native	Vulnerable
<i>Lepidochelys olivacea</i>	Native	Vulnerable
<i>Alsodes nodosus</i>	Endemic only to Chile	Near Threatened
<i>Calidris canutus</i>	Native	Near Threatened
<i>Chelemys megalonyx</i>	Native	Near Threatened
<i>Larosterna inca</i>	Native	Near Threatened
<i>Laterallus jamaicensis</i>	Native	Near Threatened
<i>Leopardus colocolo</i>	Native	Near Threatened
<i>Octodon lunatus</i>	Endemic only to Chile	Near Threatened
<i>Phalacrocorax bougainvillii</i>	Native	Near Threatened
<i>Phalacrocorax gaimardi</i>	Native	Near Threatened
<i>Rhinella arunco</i>	Endemic only to Chile	Near Threatened
<i>Thalassarche melanophris</i>	Native	Near Threatened

Scientific name	Endemism	National category	IUCN category
<i>Adiantum pearcei</i>	Endemic only to Chile	Critically Endangered	Not assessed
<i>Asplenium obtusatum</i>	Endemic only to Chile	Critically Endangered	Not assessed
<i>Callisphyris ficheti</i>	Endemic only to Chile	Critically Endangered	Not assessed
<i>Chloraea disoides</i>	Endemic only to Chile	Critically Endangered	Not assessed
<i>Phymaturus alicahuense</i>	Endemic only to Chile	Critically Endangered	Not assessed
<i>Phymaturus darwini</i>	Endemic only to Chile	Endangered	Not assessed
<i>Aegla papudo</i>	Endemic only to Chile	Endangered	Not assessed
<i>Diplomystes chilensis</i>	Endemic only to Chile	Endangered	Data Deficient
<i>Liolaemus kuhlmanni</i>	Endemic only to Chile	Endangered	Data Deficient
<i>Mordacia lapicida</i>	Endemic only to Chile	Endangered	Data Deficient
<i>Liolaemus gravenhorsti</i>	Endemic only to Chile	Endangered	Data Deficient



O'higgins District: Cahuil wetland pilot basin.

Scientific name	Endemism	IUCN category
<i>Numenius borealis</i>	Native	Critically Endangered
<i>Rhinoderma rufum</i>	Endemic only to Chile	Critically Endangered
<i>Eriosyce aspillagae</i>	Endemic only to Chile	Endangered
<i>Chelonia mydas</i>	Native	Endangered
<i>Echinopsis bolligeriana</i>	Endemic only to Chile	Endangered
<i>Lontra felina</i>	Native	Endangered
<i>Alsodes tumultuosus</i>	Endemic only to Chile	Vulnerable
<i>Caudiverbera caudiverbera</i>	Endemic only to Chile	Vulnerable
<i>Dermochelys coriacea</i>	Native	Vulnerable
<i>Jubaea chilensis</i>	Endemic only to Chile	Vulnerable
<i>Leopardus guigna</i>	Native	Vulnerable
<i>Lepidochelys olivacea</i>	Native	Vulnerable
<i>Octodon bridgesi</i>	Native	Vulnerable
<i>Rallus antarcticus</i>	Native	Vulnerable
<i>Alsodes montanus</i>	Endemic only to Chile	Vulnerable
<i>Larosterna inca</i>	Native	Near Threatened
<i>Laterallus jamaicensis</i>	Native	Near Threatened
<i>Phalacrocorax bougainvillii</i>	Native	Near Threatened
<i>Phalacrocorax gaimardi</i>	Native	Near Threatened
<i>Rhinella arunco</i>	Endemic only to Chile	Near Threatened

Scientific name	Endemism	National category	IUCN category
<i>Sclerostomulus nitidus</i>	Endemic only to Chile	Critically Endangered	Not assessed
<i>Asplenium obtusatum</i>	Endemic only to Chile	Critically Endangered	Not assessed
<i>Callyntra hibrida</i>	Endemic only to Chile	Critically Endangered	Not assessed
<i>Liolaemus curis</i>	Endemic only to Chile	Critically Endangered	Data Deficient
<i>Aegla laevis</i>	Endemic only to Chile	Endangered	Not assessed
<i>Myrceugenia colchaguensis</i>	Endemic only to Chile	Endangered	Not assessed
<i>Beilschmiedia berteriana</i>	Endemic only to Chile	Endangered	Not assessed
<i>Avellanita bustillosii</i>	Endemic only to Chile	Endangered	Not assessed
<i>Diplomystes chilensis</i>	Endemic only to Chile	Endangered	Data Deficient
<i>Liolaemus gravenhorsti</i>	Endemic only to Chile	Endangered	Data Deficient
<i>Mordacia lapicida</i>	Endemic only to Chile	Endangered	Data Deficient
<i>Nematogenys inermis</i>	Endemic only to Chile	Endangered	Data Deficient
<i>Percilia gillissi</i>	Endemic only to Chile	Endangered	Data Deficient
<i>Pristidactylus alvaroi</i>	Endemic only to Chile	Endangered	Data Deficient

Araucania District: Queule wetland pilot basin

Scientific name	Endemism	IUCN category
<i>Numenius borealis</i>	Native	Critically Endangered
<i>Telmatobufo bullocki</i>	Endemic only to Chile	Critically Endangered
<i>Araucaria araucana</i>	Native	Endangered
<i>Eupsophus contulmoensis</i>	Endemic only to Chile	Endangered
<i>Eupsophus migueli</i>	Endemic only to Chile	Endangered

<i>Eupsophus nahuelbutensis</i>	Endemic only to Chile	Endangered
<i>Lontra felina</i>	Native	Endangered
<i>Lontra provocax</i>	Native	Endangered
<i>Pelecanoides garnotii</i>	Native	Endangered
<i>Pitavia punctata</i>	Endemic only to Chile	Endangered
<i>Pseudalopex fulvipes</i>	Endemic only to Chile	Endangered
<i>Alsodes barroi</i>	Endemic only to Chile	Vulnerable
<i>Buteo ventralis</i>	Native	Vulnerable
<i>Caudiverbera caudiverbera</i>	Endemic only to Chile	Vulnerable
<i>Dermochelys coriacea</i>	Native	Vulnerable
<i>Leopardus guigna</i>	Native	Vulnerable
<i>Lepidochelys olivacea</i>	Native	Vulnerable
<i>Octodon bridgesi</i>	Native	Vulnerable
<i>Rallus antarcticus</i>	Native	Vulnerable
<i>Rhinella rubropunctata</i>	Native	Vulnerable
<i>Austrocedrus chilensis</i>	Native	Near Threatened
<i>Calidris canutus</i>	Native	Near Threatened
<i>Chelemys megalonyx</i>	Native	Near Threatened
<i>Dromiciops gliroides</i>	Native	Near Threatened
<i>Eupsophus roseus</i>	Endemic only to Chile	Near Threatened
<i>Eupsophus vertebralis</i>	Native	Near Threatened
<i>Larosterna inca</i>	Native	Near Threatened
<i>Laterallus jamaicensis</i>	Native	Near Threatened
<i>Leopardus colocolo</i>	Native	Near Threatened
<i>Phalacrocorax bougainvillii</i>	Native	Near Threatened
<i>Phalacrocorax gaimardi</i>	Native	Near Threatened
<i>Phoenicopterus chilensis</i>	Native	Near Threatened
<i>Rhinella arunco</i>	Endemic only to Chile	Near Threatened
<i>Thalassarche melanophris</i>	Native	Near Threatened

Scientific name	Endemism	National category	IUCN category
<i>Aegla denticulata</i>	Endemic only to Chile	Critically Endangered	Not assessed
<i>Chloraea cuneata</i>	Endemic only to Chile	Critically Endangered	Not assessed
<i>Chloraea volkmanni</i>	Endemic only to Chile	Critically Endangered	Not assessed
<i>Nigroperla costalis</i>	Endemic only to Chile	Critically Endangered	Not assessed
<i>Paraholopterus nahuelbutensis</i>	Endemic only to Chile	Critically Endangered	Not assessed
<i>Berberidopsis corallina</i>	Endemic only to Chile	Endangered	Not assessed
<i>Bullockia maldonadoi</i>	Endemic only to Chile	Endangered	Data Deficient
<i>Diplomystes camposensis</i>	Endemic only to Chile	Endangered	Data Deficient
<i>Nematogenys inermis</i>	Endemic only to Chile	Endangered	Data Deficient
<i>Percilia gillissi</i>	Endemic only to Chile	Endangered	Data Deficient