PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: FULL SIZE
THE GEF TRUST FUND

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PART I: PROJECT IDENTIFICATION

GEFSEC PROJECT ID: 3749
GEF AGENCY PROJECT ID: 4147
COUNTRYIES: Chile, Peru
PROJECT TITLE: Towards ecosystem management of the Humboldt Current Large Marine Ecosystem
GEF AGENCY: UNDP
OTHER EXECUTING PARTNER(S): IFOP, IMARPE
GEF FOCAL AREA (S): International Waters, Biodiversity
GEF-4 STRATEGIC PROGRAMS: IW/SP1, BD SP2 & indirectly SP4
NAME OF PARENT PROGRAM/UMBRELLA PROJECT: NA

INDICATIVE CALENDAR	
Milestones	**Expected Dates**
Work Program (for FSP)	November 2008
CEO Endorsement/Approval	April 2009
GEF Agency Approval	May 2009
Implementation Start	July 2009
Mid-term Review (if planned)	July 2011
Implementation Completion	July 2013

A. PROJECT FRAMEWORK

Project Objective: Ecosystem-based management in the HCLME is advanced through a coordinated framework that provides for improved governance and the sustainable use of living marine resources and services

Project Components		Expected Outcomes	Expected Outputs	Indicative GEF Financing*		Indicative Co-financing*		Total ($)
				($)	%	($)	%	
1. Planning and policy instruments for ecosystem-based management (EBM) of the HCLME are agreed and in place at regional and national levels (SAP, NAPs, EDA and NPAS) **(GEF IW US$ 900,000 / BD US$300,000)**	TA	• Regional agreement on priority trans-boundary and ecosystem issues enables development of policies & plans for EBM • Regional agreement on governance reforms lays the foundation to address priority TB/ecosystem issues and facilitates the inter-sectoral coordination threat abatement • National Inter-ministerial Committees functioning • Strengthened National Protected Areas Plans (NPAP) and strategies enables the reduction of marine and coastal ecosystem conservation gaps in the mid to long term (Baseline Chile 1%, Peru <1%; national policy targets 10% of relevant habitats) • Increased national financial commitments for critical actions for EBM including MPA financing strategies and pollution abatement, enables long term compliance with biodiversity conservation targets and assures effective operations of 5 new MPA –see targets values in component 4)	• Critical knowledge gaps filled to develop EBM- HCLME, including biodiversity conservation targets, and taking into account the 5 module approach to LME management • Ecosystem Diagnostic Analysis (EDA) developed including the definition of trans-boundary issues, causes & MPA conservation targets • Strategic Action Programme (SAP) formulated & endorsed at highest levels (with threats abatement measures & MPA expansion costs) • Permanent bi-national work forum for SAP development and implementation functioning and coordinated with national agencies • Awareness programme on EBM for decision-makers, sectors and resource-user groups including project web site consistent with IW:LEARN guidance and tools • Participation in biennial GEF IW Conferences as well as other IW Learn type activities • Capacities strengthened for negotiation of agreements in relevant fora and for conflict resolution • Suite of process, stress reduction and environmental status indicators for the SAP defined and agreed • System level plans with targets and financial strategies defined for future expansion of MPA	1.20	16.75	5.96	83.25	7.16
2. Institutions	TA	• Sectoral and investment decisions	• Effective LME Information System	1.30	25.0	3.90	75.0	5.20

and individual have the skills for SAP implementation and for up-scaling the results of pilot interventions to the systems level **(GEF IW US$780,000/ BD US$520,000)**		integrate guidance on MPA management & responses to the HCLME's natural high variability • Increased % of fisheries management decisions based on integrated information that includes multi-disciplinary parameters including natural and ENSO related variability • Increased % artisanal sector representatives participating in fisheries fora with an enhanced understanding of ecosystem goods and services and their regulatory frameworks, enables future up scaling of MPA pilots • Responsible institutions have capacities and internal processes for prioritizing the creation of new MPA and for effective management (measured by institutional assessment scorecards) • Oversight by PA authorities assures compliance with national standards for MPAs.	developed with GIS components to generate scenarios (variability, management approaches, trade-offs) • Institutions strengthened for effective use of information for decision-making for HCMLE governance including the creation of new MPAs in line with NPAPs (resources, skills & procedures) • Market place governance tools developed for fisheries management (e.g. ecosystem service valuation, , fishing-gear, transformation processes, new market opportunities) • Artisanal fisheries stakeholders capacity strengthened for information use, participation in relevant fora, & informed decision making • National authorities trained for MPA management approaches • Fisheries management enforcement strengthened for multi- species approaches & by-catch monitoring • Enforcement capacities strengthened for applying pollution abatement regulations					
3. Implementation of priority measures for MPA & fisheries regulation advances knowledge of options for enhanced protection of HCLME and guides SAP implementation **(GEF IW US$ 585,000 / BD US$700,000)**	TA	• Bi-nationally coordinated and analogous norms, operational standards and knowledge advances the application of the ecosystem approach to fisheries and MPA management. • 3 MPA operating to these standards and within a Guano Master Plan increases the % of marine/coastal interface under protection in Peru from: 3.4% baseline to 6.3%. In Chile 2 MPAs increase off-shore protection from 858km^2 to 4,358 km^2. This reduces biodiversity pressure and improves status as follows: (i) protection of key reproductive sites for flagship species, key habitats, (ii) compatibility of fishing pressures in adjacent sea with biodiversity management goals; (iii) management of threats such as fisheries (by-catch, stress from reduced food availability, (iv) provides increased security for movements across seascapes	• Coordinated bi-national ecosystem management approaches piloted for shared anchovy stock e.g. multi-species assessments, joint monitoring • Strategies & norms for HCLME - MPAs coordinated between countries • Bi-national MPA knowledge management programme • MPA management approaches developed to address background environmental variability, long-term climate change, and migratory and transzonal species (boundaries; no take zones; fishing catches) • Guano Islands, Isles and Capes Master Management Plan developed with financing strategy & management categories within the overall guidance of SERNANP • Operational management procedures and categories for off-shore MPA integrated in Chiles PA policy Chile • M&E systems operational for the Project and at the ecosystem level including new impact indexes to improve predictive & preventive capacity for the use of living marine resources and coastal-marine areas	1.28	20.58	4.94	79.42	6.22
4. Marine and coastal protected areas piloted that underpin conservation and sustained ecosystem productivity **(GEF IW US$600,000 / BD US$1,840,000)**		• Increased protection of fish stocks and coastal & marine habitats in BD pilots • Interagency coordination mechanisms in pilots enable regulation and management of economic activities within multiple use areas of the pilot MPAs • 5 habitat types unprotected in the baseline are effectively managed representing 4,260 km^2 of <u>additional</u> seascape and coastal area. As follows (km^2) ➢ Guano Capes (Peru) 212.5km^2	• 5 MPAs gazetted; management plans developed with objectives and procedures for PA functions; local institutional roles & responsibilities agreed; zones agreed; monitoring & finance plans developed with costs & revenue options defined. Pilots are: (a)Protection of seamounts in Chile, (b)3 representative sites of the Guano islands, isles and capes in Peru; (c) Protection of sea canyons in both • Awareness programme on MPA role in fisheries management implemented for relevant stakeholders in pilots • Mechanisms for joint monitoring,	2.44	23.62	7.89	76.36	10.33

		➢ Guano Isles/islands 254 km^2 ➢ Seamounts (Chile) 3,400 km^2 ➢ Canyons (Chile &Peru) 350 km^2	enforcement & conflict resolution established for the relevant Fisheries and PA authorities in pilot MPAs					
5. Project management			**(GEF IW US$300,000 / BD US$400,000)**	0.70	21.88	2.50	78.13	3.20
Total project costs				6.92	21.55	25.19	78.45	32.11

B. INDICATIVE FINANCING PLAN SUMMARY FOR THE PROJECT ($)

	Project Preparation*	Project	Agency Fee	Total
GEF	75,000	6,925,000	700,000	7,700,000
Co-financing	75,000	25,190,000		25,265,000
Total	150,000	32,115,000	700,000	32,965,000

C. INDICATIVE CO-FINANCING FOR THE PROJECT (including project preparation amount)

Sources of Co-financing	Type of Co-financing	Amount
Project Government Contribution	Grant	10,310,000
Project Government Contribution	In-kind	9,680,000
GEF Agency	Grant	50,000
Private Sector	Grant	510,000
Private Sector	In-kind	800,000
NGO	Cash	500,000
Universities	In-kind	100,000
Others	Grant	620,000
Others	sIn-kind	2,620,000
Total co-financing		25,190,000

D. GEF RESOURCES REQUESTED BY FOCAL AREAS, AND COUNTRIES

GEF Agency	Focal Area	Country Name/ Global	Project Preparation	Project $	Agency Fee $	Total $
UNDP	IW	Chile, Peru	75,000	3,105,000	320,000	3,500,000
UNDP	BD	Chile	0	1,820,000	180,000	2,000,000
UNDP	BD	Peru	0	2,000,000	200,000	2,200,000
Total GEF Resources			75,000	6,925,000	700,000	7,700,000

PART II: PROJECT JUSTIFICATION

A. THE ISSUE; HOW THE PROJECT SEEKS TO SOLVE IT, & EXPECTED GLOBAL ENVIRONMENTAL BENEFITS:

1. The Humboldt Current, actually a complex mosaic of currents, supports one of the world's most productive Large Marine Ecosystems, with an estimated primary productivity of 1500 gC/m^2/yr. Although primary productivity is similar to the other four major up-welling areas in the world, fisheries productivity is unmatched, representing approximately 18-20% of the global fish catch. Total fish catch averages over 10 million mt/yr, with a record of 19.4 million mt/yr in 1994. Anchovy represents 60-80-% of the total marine fish catch, 99% of which is converted to fish meal for consumption by cultured fish and livestock. The high environmental variability in the HCLME associated with short, medium and long term climate changes (seasonal, inter-annual, decadal, and multi-decadal) including the El Niño-Southern Oscillation (ENSO) events, has recurrent and dramatic effects on ecosystem productivity, stock distribution, and trophic structure.

2. In addition to its famous fisheries, the Humboldt Current System has globally significant biodiversity and is recognised as a WWF Global 200 Ecoregion. Biodiversity assessments recognise 4 marine ecoregions exclusively within the Humboldt Current, one of which is bi-national[1]. However, when defining bio-geographical discontinuities of the HCLME with more complete oceanographic information such as wind forcing and associated upwelling patterns, three distinct spatial areas can be defined along the latitudinal axis[2]. These have a clear correlation between differences in species composition and dominance. For example, the three discrete anchovy stocks are each associated with a region and

[1] According to Spalding et al. (2006) these are the Central Peru Ecoregion, Humboldtian (bi-national), Central Chile, & Araucanian
[2] A northern zone between 5°-14°, a central zone between 14°-30°, and a southern zone between 30°-42° although the system of currents goes beyond these three areas.

are genetically differentiated. Historic fisheries catch records evidence general trends, but there are marked differences between the regions. Emerging research indicates that there may be an ecological barrier between the southernmost and northern zones leading to speciation processes in response to the high volatility of this environment. In addition to this, ENSO creates permanent bottlenecks which also drive these adaptation and speciation processes along the HCLME. Recent research indicates that the South American fur seal, considered a single population ranging from Uruguay to Peru, may in fact contain three distinct groups.

3. The heterogeneity of the physical features, unique characteristics of water circulation, and adaptation to natural variability gives rise to significant biodiversity in the HCLME. Over 25 different habitats are recognized as conservation targets including seamounts, river estuaries, and sea canyons. There are high levels of endemism, especially in some taxonomic groups; 52% of benthonic invertebrates in Chile are endemic. There are also many migratory and transzonal species ranging from the main commercial pelagic species - jack mackerel, anchoveta, Pacific mackerel, and bonito - to cetaceans for which upwelling regions between 18°S and 30°S are important feeding stations. It is estimated that more than 1000 fish species depend on the Humboldt Current within their life cycles. Diversity in other taxa is similarly high[3].

4. A range of anthropogenic activities are exerting pressure on this unique ecosystem. In terms of biodiversity, in a recent analysis led by TNC with the participation of national experts, the top four threats that collectively account for 90% of frequency distribution are overfishing, pollution, coastal development, and resource exploration. In Chile the growing aquaculture sector generates increasing pressures while in Peru large-scale plans for oil and gas exploration off the coast and planned mega ports constitute emerging threats. In the case of fisheries, anthropogenic pressures are exacerbated by increasing frequencies of ENSO events. The main fisheries include anchovy, sardine, mackerel, large ocean pelagics (including swordfish and tuna), and demersal fisheries (including hake). The anchovy fishery, which predominates, has two main stocks: a transboundary one and one located in central Peru. There are two major stocks of southern mackerel: one in Peru and one in central-southern Chile. In cooler years the fishery can extend beyond the 200nm EEZ and it is a significant international fishery. In both countries, large-scale industrial fisheries dominate the sector. Artisanal fisheries account for only 3% of total catch in Peru and 28% in Chile but target a greater number of fish and invertebrates, and generate higher numbers of employment. In Peru, fish mills constitute the single largest industrial pollution source.

5. Intensive fishing effort has generated impacts along the trophic chain. Historically, 85.6% of anchovy available biomass was consumed by top predators and 14.4% by sea birds. Until 2006, industrial fisheries extracted 85% of available anchovy biomass, leaving just 15% for all other top predators. Reduced prey availability undermines these species' resilience to ENSO events, frequently resulting in population crashes. Before the onset of large scale industrial fisheries, these populations were able to bounce back after each ENSO event, but now take longer to recover to ever reducing numbers. Seabirds and marine mammals under threat include Humboldt penguin, Peruvian diving petrel and sea otter. The iconic guano birds, which include the Peruvian cormorant, Peruvian booby and Peruvian pelican, have experienced notable population decreases over the past decades. Moreover, excessive fishing effort generates changes in the genetic composition in a population, leading individuals to breed at younger ages, and therefore when smaller in size, thereby decreasing stock productivity.

6. ENSO events led to sequential changes in the dominance of certain species including the main commercial ones, such as anchovies and sardines. This can have negative consequences for the fishing industry and, when coupled with high fish catch levels, has resulted in mass mortalities and migrations of fish, mammals, and sea-birds. For example, an El Niño event, combined with over-fishing, resulted in the dramatic collapse of the anchovy fisheries in 1972-73 in Peru. Landings fell from a record high of 13 million tons in 1970 to under 2 million, with partial recovery only a full decade later. In addition to increasingly frequent ENSO events, there are also long-term regime shifts, associated with climate variability. The diminished resilience of fish stocks and other species limits their ability to respond to existing and emerging threats.

7. In addition to the effects of high catch levels of some species, biodiversity is also being threatened by certain fishing practices which include bottom trawling scouring the sea bed, long-lines, and use of dynamite by artisanal fisheries. Bycatch levels are undetermined as they are not monitored. However, anecdotal information and a few limited studies indicate that in some localities impacts can be high, affecting up to 20% of certain populations, such as the Humboldt penguin. Overall, projected increases in the frequency of ENSO events, together with growing anthropogenic pressures, signal an ecosystem under increasing stress.

8. In both Chile and Peru there are few refuges from these pressures, with few fish spawning and juvenile grow out areas under protection. The PA systems in both countries have been heavily skewed to terrestrial areas. In Chile, recent progress has been made with GEF support to set up coastal and near shore MPAs and strengthen links with artisanal fisheries.

[3] Despite significant gaps in the information records, in Peru 1,052 fish species are registered, 100 molluscs, 512 crustaceans and 681 marine algae. The 108 bird species include endemics and migratory such as the Humboldt Penguin, the Peruvian diving petrel, and the Rumped storm petrel. Also important are the Peruvian booby, and pelican, the Neotropic, Guanay and Red legged cormorants. Among sea gulls are the Band-tailed gull, the Grey and Kelp gulls, the Inca and Peruvian terns. There are 36 mammals including 8 Baleen whale and 12 toothed whale species and 2 sea lion species.

However, Chile's existing MPAs still fail to encompass many ecosystem types and processes and are imbalanced in their coverage of habitat for globally significant biodiversity. Although the nearshore zone is more directly impacted by human activities, the complex dynamics of HCLME indicate that there is a need to provide for other habitats linked with industrial fisheries. From the viewpoint of the functionality and structure of the HCLME, the interactions between coastal and oceanic areas are critical, and more comprehensive coverage of main habitats - that contain distinct faunistic components – is called for[4]. For example, areas associated with centers of greater biological activity (BAC) which are highly relevant in terms of biodiversity, conservation and sustainability of the whole ecosystem, such as coastal upwelling zones, sea canyons, and sea mounts, are currently not included in Chile's MPA system[5].

9. In Peru, ecosystem representativity of marine and coastal areas is even lower with <1% of the coastal zone under protection. The only PA that includes the nearshore areas (335,000 ha) is the Paracas National Reserve. The Government supports the designation of the National Reserve System of Guano Islands, Isles and Capes to protect biodiversity along the entire coast, but the proposal has not yet been made operational. Peru would benefit from Chile's experience in the establishment of MUMPAS. Moreover, from an ecosystem perspective, the design of the suite of MPAs for the Humboldt Current system should be a coordinated effort between Chile and Peru in order to properly monitor ecosystem health and responses to natural and anthropogenic induced variability.

10. Given the importance of fisheries and of the coastal interface to both countries' economies, Chile and Peru are taking serious steps to address anthropogenic pressures. These include coastal zone management initiatives and establishment of sectoral regulatory and normative frameworks and mechanisms to reduce the impact of land based activities on coastal and marine assets. However these efforts are largely focused within single sectors and developed within national boundaries, and are inadequate to address this highly complex, variable and shared ecosystem. Both countries therefore seek to advance ecosystem management of the Humboldt Current System thereby enabling sustained use of its living marine resources and the services. Achieving this faces a number of barriers summarised below:

Deficient information and planning frameworks for consensus building and collaborative action: Both Chile and Peru have frameworks that govern both sectoral development along the seaboard and fisheries. However, these do not take into account multi-disciplinary, inter-sectoral considerations nor the complexities and interrelationships of HCLME subsystems and trophic linkages, or of migratory and transzonal living marine resources. While both countries have incorporated the concept of ecosystem-based management in national legislation, including the need for marine and coastal protected areas (MPA), specific mechanisms for its implementation are still incipient. In this poorly studied ecosystem there are still considerable information gaps regarding the key forces governing living marine resources such as coastal upwelling, dynamics of the OMZ, natural variability including ENSO events, and impacts of terrestrial systems on the ocean. Existing information is incomplete and dispersed, and not translated for decision makers. Preliminary marine and coastal conservation targets for Chile and Peru have been identified but, again, information gaps on spatial distribution of habitats impedes the determination of their rarity and hence the definition of specific goals to afford adequate conservation. Moreover, there is no common bi-national vision of the ecosystem as such, nor mechanisms for agreeing on priorities, and collaborative action and reforms for joint management of the HCLME. The understanding of the benefits of EBM approaches is still incipient, including the linkages between productivity and resilient inter-species relations, and the dynamics between species, volatility, and potential economic losses. Despite the key role of fisheries in both economies, awareness of the importance of MPAs, and of ecosystem services and trophic linkages is low among both decision-makers and the general public, limiting interest in underwriting the costs of EB management including MPAs, as well as reduction of pollution in coastal areas. In addition to this, national inter-sectoral plans need to be developed, to determine the investments and reforms required to provide for the environmental health of the coastal interface, high seas, and associated living marine resources.
Weak institutional frameworks and capacities for EBM: Chile and Peru have, respectively, 6 and 4 national institutions with mandates over coastal and marine areas, each with specific geographical and thematic authority. This hinders the management of larger habitat complexes both within national boundaries and along the entire HCLME. In Chile new institutional arrangements are being set up to enable the governance of coastal and near shore PAs, however these need to be expanded to address off shore and high seas areas. In Peru institutional arrangements for coastal area management and specific mechanisms and procedures for governance of MPA have yet to be developed. In both countries the recent creation of Ministries of the Environment provide an excellent opportunity to advance institutional arrangements for marine PA and for ecosystem based management and address these asymmetries in capacities. However relevant procedures, resources and staffing tables need to be updated to facilitate the inter-agency cooperation, inter-thematic decision-making, and oversight functions required for these approaches nationally and bi-nationally. Moreover given the links of MPAs with both industrial and artisanal fisheries as well as the broader range of on-shore activities, the development of effective forums and interfaces will be needed to enable the informed participation of relevant stakeholders in the creation and management of MPA and for the incorporation of EBM procedures in key fisheries institutions. Differentiated systems exist for regulating the main fisheries at levels deemed to be sustainable locally thus in theory enabling

[4] Based on spatial and dominant environmental processes, habitats with distinct faunistic components can be identified e.g. the coastal transition zone (100-300 miles from shore) where there is substantial exchange of fauna and flora between oceanic & coastal zone. On a vertical plane, near shore habitats include submarine canyons, coastal upwelling centers and estuarine areas, and in the open ocean relatively shallow sea mounts, cold seeps & mesopelagic systems represent completely different environments with their own fauna.

[5] Chile has 1 Marine Park, 5 Marine Reserves, 6 MUMPAs covering 80,620ha as opposed to approx 2.8million ha terrestrial PAs

recovery of stocks. However, sustainable levels of catches are based on mono-specific stock assessments and impacts on the trophic chain are not clear. Furthermore monitoring of catch and landings also focus on the target species, so the effects on other species has not been quantified, further debilitating the governance frameworks for EBM across the HCLM. There is a general understanding that ENSO events puts stocks at increased risk if catches are high but this is only recently beginning to be internalized into decision making. Information is dispersed, data often not comparable and sharing between the two countries is limited. In terms of pollution, efforts are being made to define permissible emission levels, but these need to be referenced to specific coastal areas, and improved monitoring provided for.

Limited knowledge of management options for protecting living marine resources and their habitats. Management of living marine resources and habitats varies greatly between both countries, and in the case of fisheries, between stocks. Case in point, although both countries have long-standing arrangements for exchange of information on their independent stock assessments of the shared anchovy stock, each country has different management strategies, which are not coordinated or analogous. Concerted efforts are needed to assess the different management approaches with a view to evaluating best practices, tools and lessons. In terms of MPA, operational guidance and management approaches in both countries are largely based on terrestrial PA practices and are deficient for the specific challenges of marine and coastal biodiversity conservation where boundaries are fluid and management approaches needs to be rooted in larger land and seascape and incorporate potential spatial and temporal variations. In Chile advances have been made for defining the operational standards for coastal and near shore multiple use PAs but these need tailoring for the challenges of protecting off shore habitats and vital fish stocks. Furthermore there is tremendous uncertainty on the links between different habitats, biodiversity and fish stocks particularly regarding spawning areas, thus challenging the siting of MPA to maximise benefits. Where information is more consolidated, knowledge on valid management approaches is scarce. Knowledge on basic standards and norms required for different habitats requires strengthening and there is a need to decodify management approaches and nest these within the broader NPAS operational guidance. These requirements are compounded by the fact that there are three subsystems in the HCLME that provide differentiated assets and services and impart high levels of natural resilience to the entire system in the face of high variability and climate change, and that may require targeted management approaches. However the full comprehension of their interrelationships, and of varying levels of vulnerability to different anthropogenic pressures, is still incipient. This evidences a requirement for advancing management options that provide for bi-national collaboration in order to lay the foundations for progressing towards ecosystem-based management approaches.

Incomplete coverage and representativity of MPAs in both countries. MPA coverage in both countries is deficient. In Peru, less than 3.4% of the coastal area is under any form of protection, and the only marine area under a management category corresponds to the area adjacent to a natural reserve (216.408 km^2). There are no specific guidelines, operational plans or financial strategies for addressing the unique requirements of coastal and marine areas. Increased protection of these areas is important not only to safeguard biodiversity but as a security conservation measure given the need to maintain resilience in the face of growing threat levels from existing and merging threats, as well as the increasing frequency of ENSO events and overall natural variability. Even in the case of pelagic species such as anchovy, coastal areas are critical refuge areas during ENSO events. In Chile there are no off-shore areas under protection. Effective protection of high seas areas (e.g. sea mounts) is a largely untested field and despite increasing interest by the international community, there is a need to pioneer and test management options. For example, the high cost of marine patrolling means enforcement of regulations presents a challenge for the EBM of fisheries and the effective operations of future high seas MPAs, and partnerships with the private industry will need to be explored. Both countries have identified preliminary representativity gaps but have not defined strategies for addressing these and given the cost of this enforcement testing of approaches will be required to ensure the largest return for investment. Moreover, although both countries are advancing plans for sustainable financing of their PA systems with GEF support, specific mechanisms and strategies tailored for marine and coastal MPAs need testing prior to up-scaling to systemic levels. Overall, it is necessary to test management approaches in both countries and bi-nationally, to define management approaches and advance towards a pragmatic understanding of what EBM means, while providing effective protection over the short term.

11. GEF support is being sought to overcome these barriers and advance towards ecosystem governance. Building on IW practice, the project will put in place a bi-national governance framework and build foundational capacities for effective long-term ecosystem management, while in the short term, drawing from BD experience, provide protection from the most immediate pressures to ecosystem health and globally significant biodiversity. The process will deliver: Governments' commitment to unambiguous goals, investments, and reforms over the long term; strengthened institutional capacities to implement these commitments with an emphasis on fisheries management and MPAs but also for the broader SAP implementation; engaged constituencies and models for MPA linked to fisheries management through specific pilots to conserve previously un-protected biodiversity and enhance ecosystem productivity; and improved systemic capacities for upscaling management models further increasing ecosystems representativity and catalyzing the sustainability of national protected areas systems.

12. It will do this through four Outcomes as follows: 1) ***Planning and policy instruments for ecosystem-based management (EBM) of the HCLME*****.** In keeping with GEF IW practice, this foundational intervention will undertake a process for development of an Ecosystem Diagnostic Assessment (EDA) and a Strategic Action Programme (SAP) that will lead to the establishment of a permanent bi-national forum, coordinated with national levels, for its implementation. The EDA and SAP processes will incorporate the 5 LME modules: Fish/Fisheries, Productivity, Pollution & Ecosystem Health, Socioeconomics and Governance. It will also tailor National Protected Areas Plans for marine and coastal

biodiversity considerations and guide expansion of MPAs in the future; 2) ***Institutions and individual have the skills for SAP implementation and for up-scaling the results of pilot intervention to the systems level.*** Sectoral decisions and planning incorporate EBM perspectives including MPA targets and management challenges, using integrated information based on multi-disciplinary parameters and considerations, available though a robust Integrated Information System (IIS), and supported by improved managerial, technical and enforcement capacities. Marketplace governance tools further promote application of EBM approaches and reduce pressure on living marine resources; 3) ***Implementation of priority measures for MPA & fisheries regulation advance knowledge of options for enhanced protection of living marine resources and their habitats*** through coordinated bi-national approaches, strategies and operational standards, especially for fisheries management and for MPAs. Notably, both countries commit to advancing towards joint, ecosystem-based management of the shared anchovy stock; 4) ***Marine and coastal protected areas piloted that underpin conservation and sustained ecosystem productivity,*** overcome specific management challenges under different threat scenarios and thus increased the area of currently unprotected habitats in Chile and Peru while generating models to strengthen systemic representativity over the long-term. The results framework in Part I Section A provides more details of proposed interventions and outcomes. Sites for pilots were identified using criteria that include global biodiversity values, potential resource generation, stakeholders' interest, and threat abatement feasibility.

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

13. Chile committed, in its 2001 Environmental agenda and the National Biodiversity Strategy and Action Plan (2002), to the conservation of 10% of terrestrial and aquatic ecosystems of the country, including coastal and marine ecosystems. Work with TNC on the definition of priority areas for conservation includes seamounts and river mouths. In 2005 the Decree on Marine Parks and reserves was issued, which regulates protected areas management and more recently it has defined a National Protected Areas Policy that seeks to bring its disparate subsystems under a consolidated framework. Peru seeks to promote the sustainable use of aquatic resources by establishing reserves to protect biodiversity, as provided for in the recently approved Law for the establishment of the System of Guano Islands, Isles and Capes. This responds to both the Peruvian National Biodiversity Strategy and the Law on Natural Protected Areas which call for increased coverage of marine and coastal species and ecosystems. In addition both countries' fisheries strategies recognize the need for ecosystem based management of fisheries. The project will also support priorities at the regional and global levels. The goals of establishing marine protected areas and the sustainable uses of coastal resources and living marine resources are consistent with the Convention on Biological Diversity Jakarta Mandate and Protected Areas Programme, and WSSD targets related to both fisheries and protected areas.

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

14. This IW-BD initiative is fully compliant with defined priorities under GEF4. As called for under IW-SP1 it provides for the "development of ministerially-agreed collective programs of action on fish stocks and habitat conservation for LMEs that should benefit from use of marine protected areas (MPAs) through funding from the biodiversity focal area". Biodiversity resources have been allocated to set-up and make operational MPAs to conserve currently unprotected off- and near-shore sea and coastal habitats increasing representation of effectively managed marine PA Areas in both Chile and Peru by approximately 500km^2 in coastal areas, and by over 3000 km^2 off-shore, clearly contributing to SO1/SP2. A management plan for the Guanero System will lay the bases for effective protection of approximately an additional 1,414 km^2. Moreover by strengthening systemic and institutional capacities for MPA management nationally and across the HCLME, GEF biodiversity resources will enable the up-scaling of pilot experiences and further contribute to the BD-SO1 objective. The project will also lay the foundations for ecosystem based management (EBM) approaches that will provide for more sustainable livelihoods, improved food security, and biodiversity conservation and protection as called for in both the IW and BD focal areas. Through the SAP process, the project will help the two countries agree upon needed national and regional policy, legal and institutional reforms, and provide for the system-wide application of science to evaluate and ensure the long-term sustainability of the LME's living marine resources. In turn this will increase the sustainability of biodiversity benefits gained through the MPAs by reducing pressures on these over the long-term. The incorporation of biodiversity conservation considerations into fisheries policy and regulation through advancing multi-species monitoring and marketplace governance mechanisms will contribute to BD-SP4 goals and this, together with the IW approaches to build bi-national foundational for threats abatement, will further contribute towards the BD-SO2 of incorporating sustainable use of biodiversity in the productive seascape. A key focus of the project will be to assist both countries and communities to adapt to fluctuating fish stocks and coastal climatic regimes, including through the incorporation of climate change scenarios into fisheries and ecosystem management strategies and PA system design. Therefore significant lessons for the emerging field of adaptation to climate change will be generated.

D. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES:

15. In Chile there are two GEF projects, one ongoing and one under development, that have strong linkages with this proposal. The project, *Conserving Globally Significant Biodiversity along the Chilean Coast*, has set the bases for establishing a network of coastal and near-shore marine protected areas that integrate development and conservation objectives, and is addressing a suite of specific barriers that impede this solution. This effort will be complemented by a

second project which will provide a financial and operational framework for a consolidated protected areas system in Chile in which the marine areas would be nested. The HCLME project will coordinate with these two initiatives both in terms of providing a broader seascape focus to Chile's marine and coastal-marine areas, as well as by replicating lessons, practices and tools developed in support of Peru's marine protected areas.

16. In Peru, a GEF-WB project *Strengthening Biodiversity Conservation through the National Protected Areas Program* aims to support the decentralized management of protected areas. This project will strengthen the overarching institutional framework for protected areas in Peru, including the establishment of a specialized unit for marine and coastal areas that will facilitate the expansion of the MPA system in the future. In order to foster synergies between the GEF-WB and the HCLME projects, consultations have already been undertaken that will be ongoing throughout the preparatory phase. This coordination will continue during implementation of the projects, through formal mechanisms to be defined. Finally, given the similarities between HCLME and the Benguela Current, a counterpart eastern boundary upwelling system, consultations and exchanges will be undertaken to benefit from the BCLME's experience.

E. DISCUSS THE VALUE-ADDED OF GEF INVOLVEMENT IN THE PROJECT (INCREMENTAL REASONING):

17. Without a functional and effective regional management framework, countries will continue to manage their fisheries based on uni-species information, without an understanding of requirements for maintenance of ecosystem integrity and resilience. Trophic relations will be ignored, leading to the possible collapse or affectation of certain species. Given the high variability of the system, and the increasing anthropogenic multi-sectoral stresses that impact on it, there is a need to provide for decision-making processes based on integrated information that takes into account ecosystem dynamics and processes. Similarly, both countries require support in order to harmonize and coordinate management approaches for resource use and spatial planning and for building national capacities at the systemic level to achieve conservation targets over the long-term. The value of networks of marine protected areas is recognized globally, and in the case of HCLME common or harmonized management approaches and operational norms need to be defined in order to advance towards this goal. Without GEF support to overcome these and other barriers that impede the creation and operations of MPA, globally significant biodiversity will remain unprotected. Moreover, given the predominance of fisheries in both countries, multi-sectoral approaches are required that effectively mainstream BD considerations. Global benefits will be demonstrated through more stable fish stocks, increased regional co-operation, and enhanced protection for biodiversity of global significance. In addition, HCLME constitutes a natural laboratory that offers unique opportunities for understanding ENSO and climate change impacts at a global level and the project will strengthen understanding of system variability (temporal, spatial and biological production). Project implementation will also enhance understanding and strengthen tools for developing appropriate management responses to increasingly frequent ENSO events, their impacts on abundance and distribution of fish stocks, the resulting challenges for fisheries and biodiversity conservation management, and the negative social, economic and human health consequences.

F. RISKS AND RISK MEASURES THAT WILL BE UNDERTAKEN:

Risk		Response measure
Changes in administrations in both countries affect the continuity of the SAP development process	M	The Project contributes to the achievement of established national strategies (BD, others); from the outset efforts will be made to raise awareness with key stakeholders; existing cooperation mechanisms will be strengthened (eg IFOP-IMARPE Agreement); through the EDA other technical cooperation mechanisms will be developed
Prioritization of development objectives limit the effectiveness of efforts for ecosystem protection	L	Both countries are currently establishing Ministries of the Environment, and there is increasing recognition of the need for multi-sectoral platforms to address the range of impacts on key habitats.
The current commitment to cooperate at a bi-national level is diminished	L	Participation in APEC promotes joint work strategies; tradition of cooperation on marine-coastal issues within CPPS; highest level, inter-sectoral support for this project, and participation in its development in both countries; common areas of interest have been identified; there are strong opportunities for cross-fertilization of national experiences (eg Chile's work with marine-coastal PAs)
Limited will to share information between institutions in public and private sectors at national and bi-national levels –	M	Consultation mechanisms and formal working groups will be established; framework for information exchange between IFOP and IMARPE can be replicated or broadened; establishment of MoEs will streamline information flows; participation by scientific and academic sectors will be promoted
Financial sustainability of MPAs established under the pilots is weak –	M	Chile is developing a financial framework for the PA system at a national level in which a range of potential resource generating mechanisms will be explored that could be applied to marine areas. Given high costs associated with effective protection of high sea seamounts the project will develop a strategy for partnering with the private sector to share the cost burden & it will also include actions to promote greater understanding of productivity benefits that should create incentives for private sector participation.

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

18. From an ecosystem perspective, management of shared living marine resources, both in terms of extraction and protection, will clearly benefit from a bi-national framework which provides for a single integrated information system, common tools, and harmonized norms for ecosystem-based management of fisheries and protected areas. Building upon this, regional cooperation on ecosystem-based fisheries management will provide for improved resilience of living marine resources so that stocks can grow to their fullest economic potential and associated biodiversity will not be impacted. In terms of laying the bases for the establishment of a network of marine and coastal protected areas, the project will enable Peru, which aims to establish a National Reserve for the Guano Islands and Capes System, to benefit from Chile's considerable experience in the creation of multiple use coastal protected areas – as indeed has already been the case in the preparatory phase. From a biodiversity perspective, establishment of MPAs is a conservation security feature that will deliver immediate abatement to the most important threat (fisheries) while at the same time providing a safeguard to other existing and emerging threats, and constitutes a mechanism for enhancing the capacity of living marine resources to respond to natural variability. Mainstreaming alone does not effectively respond to a range of inter-sectoral threats, yet the project will incorporate key elements such as improvement of practices and increased awareness.

H. JUSTIFY THE COMPARATIVE ADVANTAGE OF GEF AGENCY:

19. This project fits under UNDP comparative advantage. UNDP was selected as the GEF IA by the GoC and GoP for its experience in establishing governance systems and mechanisms for LME and PA systems. UNDP has an extensive portfolio of protected area projects many of which focus on marine and coastal areas and has served as IA for more LME projects than any other agency. To date it has implemented nine LME projects, including PEMSEA which encompasses 5 LMEs; these LME projects have delivered 9 ministerially endorsed SAPs or equivalent. Moreover, the project is fully within UNDP's CA as it relates to integrated policy development, human resources development, institutional strengthening, and non-governmental and community participation. Furthermore UNDP is uniquely positioned to support the project as it is working with different institutions and stakeholders in Chile on PA and environmental and governance issues. It is thus in a good position to ensure inter-project learning between the two countries and to share its experience in both GEF LME and GEF MPA projects around the world.

PART III APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINTS & AND GEF AGENCY

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

Ximena George-Nascimiento GEF Operational Focal Point National Commission for the Environment – CONAMA Chile	Date: 21 August 2008
Ruth Aubert Focal Point Ministry of the Environment Peru	Date: 19 August 2008

B. GEF AGENCY CERTIFICATION

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for project identification and preparation.	
Y. Glemarec Yannick Glemarec UNDP-GEF	Paula Caballero Regional Technical Advisor, UNDP-GEF
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