

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

**PERU**

**ADAPTATION TO CLIMATE CHANGE OF THE FISHERY SECTOR  
AND MARINE-COASTAL ECOSYSTEM OF PERU**

**(PE-G1001/PE-T1297)**

**TECHNICAL COOPERATION AND INVESTMENT GRANT DOCUMENT**

This document was prepared by a team comprised by: Alfred Grünwaldt (INE/CCS) and Michele Lemay (INE/RND), Project Team Co-leaders; Inês Ferreira (INE/CCS); Alejandro Deeb (INE/CCS); Ana Iju (INE/CCS); Ana Rios (INE/CCS); Filippo Berardi (MIF/MIF); Ariel Rodriguez (FMP/CGU); Guillermo Eschoyez (LEG/SGO); Jaime Fernandez-Baca (CCS/CPE); Fernando Glasman (FMP/CPE); and Juan Carlos Gómez (INE/CCS).

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ADAPTATION TO CLIMATE CHANGE OF THE FISHERY SECTOR AND  
MARINE-COASTAL ECOSYSTEM OF PERU

(PE-G1001/PE-T1297)

I. BASIC INFORMATION

<b>Country/ region:</b>	Peru
<b>TC name:</b>	Adaptation to Climate Change of the Fishery Sector and Marine-Coastal Ecosystem of Peru
<b>TC number:</b>	PE-G1001/PE-T1297
<b>Name and number of associated loan:</b>	Program to Support the Climate Change Agenda III (PE-L1127)
<b>Project Team Leader/ members:</b>	Alfred Grünwaldt (INE/CCS) and Michele Lemay (INE/RND), Project Team Co-leaders; Inês Ferreira (INE/CCS); Alejandro Deeb (INE/CCS); Ana Iju (INE/CCS); Ana Ríos (INE/CCS); Filippo Berardi (MIF/MIF); Jaime Fernández-Baca (CCS/CPE); Guillermo Eschoyez (LEG/SGO); Ariel Rodríguez (FMP/CPE); Fernando Glasman (FMP/CPE); and Juan Gómez (INE/CCS).
<b>Date of authorization of the TC abstract:</b>	19 April 2013 (eligibility date)
<b>Beneficiary:</b>	Republic of Peru
<b>Executing agency and contact name:</b>	Ministry of Production (PRODUCE); Paul Phumpiu (Vice Minister of Fisheries)
<b>Donors providing financing:</b>	Sustainable Energy and Climate Change IDB Special Program (SECCI IDB Fund) and Sustainable Energy and Climate Change Initiative Multidonor Fund
<b>IDB funding requested:</b>	US\$2,500,000 (US\$1,500,000 from the SECCI IDB Fund and US\$1,000,000 from the SECCI Multidonor Fund)

<b>Local counterpart funding:</b>	US\$625,000 (in kind)
<b>Execution and disbursement periods:</b>	30 months and 33 months
<b>Required start date:</b>	December 2013
<b>Types of consultants:</b>	Firms and individual consultants
<b>Prepared by unit:</b>	INE/CCS, INE/RND
<b>Unit of disbursement responsibility:</b>	IDB Country Office in Peru
<b>Included in country strategy:</b>	Yes
<b>Included in CPD:</b>	Yes <sup>1</sup>
<b>GCI-9 sector priority 5:</b>	Protect the environment, respond to climate change, promote renewable energy, and ensure food security (document <a href="#">AB-2764</a> ).

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<sup>1</sup> The proposed project is included in the 2013 country program and is aligned with one of the ten priority areas of action identified in the Bank's country strategy with Peru 2012-2016: climate change and disaster risk management, under the commitment to support "activities to increase the resilience of climate-change-vulnerable ecosystems to economic activities that exert pressure on them."

## II. OBJECTIVES

2.1 The general objective of the project is to support the Government of Peru in reducing the vulnerability of coastal communities to the impacts of climate change on marine-coastal ecosystems and fishery resources. To meet this objective, a set of adaptation measures will be implemented both at the national level, in the form of institutional strengthening activities, and at the local level, in the form of work with artisanal fishing communities in Huacho-Chancay and Ilo. Climate change impacts will put additional stress on coastal ecosystems currently threatened by non-climate factors, consequently affecting the livelihoods of the coastal communities.

### A. Rationale

2.2 Peru has the world's most productive fisheries, generating approximately 10% of the global fish catch. The main factors behind this enormous productivity include the physical and chemical characteristics of the country's coastal upwelling (Chávez et al., 2008), which foster efficient growth of primary producers, high survival rates for larvae, and efficient trophic transfer of energy to forage fish and predators. In the last decade, external sales of Peru's fisheries sector increased from US\$1.2 billion in 2000 to US\$2.4 billion in 2008.<sup>2</sup> Additionally, in 2009, US\$30 million in tax revenue was collected from the fisheries sector, according to the National Superintendency of Customs and Tax Administration (SUNAT) (Kisner et al., 2010). The bulk of the sector's economic impact is related to anchoveta fishing for Peruvian fishmeal production and the country's fish oil industry, which account for roughly 35% of the global supply.

2.3 Large-scale industrial fishing for export production creates approximately 30,000 jobs (Instituto del Mar del Perú [Peruvian Sea Institute] (IMARPE)). This is supplemented by artisanal fishing, which is both a direct and an indirect source of employment. A fraction of the artisanal fishing catch is used as food for direct human consumption (DHC) by the Peruvian population, while the rest is exported. Artisanal fishing in Peru employs 65,000 people directly involved in the various types of work related to this activity (transporters, ship owners, filleters, stevedores, etc.). Another 19,200 work at plants processing fish-based food for DHC, according to sources at the Ministry of Production (PRODUCE).

2.4 Recent scientific findings, including by the Intergovernmental Panel on Climate Change (IPCC) in 2007, indicate that the global effects of climate change are becoming increasingly evident. Climate change is expected to have effects on biodiversity, quality of habitats, and lifecycles of marine organisms and ecosystems, as well as on socioeconomic services such as fish catch potential and

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<sup>2</sup> Centro para la Sostenibilidad Ambiental [Center for Environmental Sustainability] (CSA), Universidad Peruana Cayetano Heredia (UPCH), 2011. "La pesquería peruana de la anchoveta: evaluación de los sistemas de gestión pesquera en el marco de la certificación a cargo del Marine Stewardship Council" [Peruvian anchovy fishing: evaluation of fishery management systems as part of Marine Stewardship Council certification]. CSA Working Papers Series No.1.

fishermen's income and means of subsistence, in turn increasing the vulnerability of marine-coastal ecosystems.

- 2.5 At the local level, studies by IMARPE and others (Chávez et al., 2008; Demarcq, 2009; Gutiérrez et al., in press) have confirmed the presence of these global trends and explored the ecological response to these changes. Although their initial conclusions point to a reduction in the primary productivity of marine ecosystems, there is still a need to expand our current knowledge of the impacts of climate change on these ecosystems through the use of sophisticated monitoring systems. The communities along the Peruvian coast, accounting for 15% of the country's urban population, are currently very vulnerable to potential changes in fish production stemming from variables such as climate exposure, fishing sensitivity or dependence, and limited adaptive capacity (Allison, EH et al., 2009). In the long term, climate change is expected to jeopardize the sustainability of artisanal fishing through direct and/or indirect impacts on the ecosystems. Consequently, a drop in artisanal fishing productivity would have a significant impact on the local economies and entail a decline in the means of subsistence of the fishing communities.
- 2.6 In view of this, the general challenge of the proposed project is to increase the resilience of the marine-coastal ecosystems and the coastal communities of artisanal fishermen to the impacts of climate change. Through its components, this project seeks to address three specific challenges:
- a. **Limited knowledge of the nature and scope of climate change impacts on marine resources and coastal ecosystems**, due to: (i) insufficient modeling and forecasting capabilities,<sup>3</sup> which limits any understanding of oceanographic and climate dynamics and rules out the possibility of adaptive fisheries management; and (ii) insufficient platforms to monitor oceanographic and meteorological conditions on the required time scales.
  - b. **Rising vulnerability of coastal fishing communities**, due to: (i) a reduction in income from their fishing activities, in turn related to lower productivity associated with global warming and changes in ocean chemistry; (iii) sensitivity (degree affected) of the ocean's physical and chemical variables to climate change;<sup>4</sup> and (ii) uncertainty as to sustainable fishing targets in the face of climate impacts on the productivity of fishing activities. The vulnerability of marine-coastal ecosystems may be aggravated by improper use of coastal areas and the resulting pollution of the marine environment.

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<sup>3</sup> The current computational equipment is insufficient to process the data and simulate complex physical and biological models as required in order to assess the vulnerability of marine-coastal resources to climate change.

<sup>4</sup> The deterioration of fishery habitats due to pollution, primarily associated with nontreatment or improper treatment of wastewater and solid waste generated in coastal cities (SUNASS, 2008). Industrial and other manufacturing activities (Sánchez Rivas G. et al., 2010) also contribute to the increased vulnerability of marine-coastal systems, but this issue will not be directly addressed in this project.

- c. **Limited capacity to integrate information on the fisheries sector's vulnerability to climate change into sector policies, and limited organization by fishermen to participate in supply chains.** In order to achieve the objectives of the proposed project, all relevant stakeholders, communities, and national and regional players need access to better-quality information on the marine environment and its relationship to the marine ecosystem's productivity, as well as greater awareness of the effects of climate change on the fisheries sector (FAO Fisheries Report No. 870).
- 2.7 In view of these problems, the Government of Peru has opted for a set of activities aimed at consolidating the sector's decision-making process, so as to ensure that decisions are made on the basis of better scientific and technical information regarding the sector's fishery resources. Thus, the country has strengthened its scientific capacity through IMARPE and is now promoting actions designed to improve the capability to study and model the complex marine-coastal system within its territory. Consequently, the proposed operation is intended to supplement binational and international work to improve the monitoring and understanding of the Humboldt Current.<sup>5</sup> In particular, IMARPE will be better able to model and simulate marine ecosystems of interest, producing higher-quality information on current and future fisheries productivity, including expected impacts under various climate change scenarios.
- 2.8 This technical and scientific capacity translates into preparing more detailed and reliable analyses of the vulnerability of the various ecosystems of interest and of the consequences for the welfare of communities that depend on these resources for their livelihood. This operation will support the preparation of detailed vulnerability studies at both the national (for anchoveta) and the local levels, initially in the Huacho community. Moreover, a strong influence is known to exist between the marine-coastal resources and activities carried out on the beaches and nearby land. Consequently, the project also supports the activities carried out by the Ministry of the Environment (MINAM) through the Integrated Coastal Area Management (ICAM) plans. In addition, under the leadership and supervision of MINAM, the project will reinforce initiatives associated with the development of local ICAM plans in pilot areas and will finance the development of a national ICAM policy proposal and a concomitant national program (action plan).
- 2.9 The aforementioned activities will translate into specific actions in two pilot areas, Huacho-Chancay and Ilo, although with differing degrees of intensity. These areas complement the Peruvian government's implementation of pilot projects on climate change adaptation in coastal communities to preserve marine ecosystems. All the aforementioned information, scientific findings, local and national vulnerability studies, and outcomes of the pilot projects to improve management of the artisanal

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<sup>5</sup> Ocean current that originates from the upswelling of deep, cold waters along the western coast of South America. It is one of the world's most important cold currents, with notable aridity effects on the central and northern coasts of Chile and coastal Peru.

fishing sector will be used by the Government of Peru as inputs to develop sector plans and set policies aimed at encouraging sustainable management of the country's valuable fishery resources.

## **B. Alignment with the sector**

- 2.10 The proposed project is aligned with at least five of the eight strategic objectives recently proposed for the fisheries sector by the Government of Peru (PRODUCE, 2012). Several of these objectives seek to transform the sector by adopting policies focused on developing artisanal fishing through an ecosystemic approach, making this activity more resilient to future climate variability and climate change. Specifically, the project will provide a scientific basis and strategic guidance for development of the policies recently put forward by the Government of Peru for the fisheries sector. Several management documents have been prepared as part of this guidance, such as the Multiyear Strategic Sector Plan (2011-2016), National Artisanal Fishing Development Plan, and National Aquaculture Development Plan (2010-2021), which include climate change adaptation as a priority action in their environmental sustainability components.
- 2.11 The project is also aligned with the National Environmental Policy, the National Environmental Action Plan (2010-2021), and the results and conclusions of the Second National Communication presented to the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, in view of the importance of fishmeal and fish oil production for the export sector, the National Strategic Exporting Plan (2003-2013) identified the need to implement best practices in sector management, including capacity-building at research institutions, IMARPE among them. The proposed project also directly addresses this request.
- 2.12 At the same time, the Government of Peru has prepared a large-scale project to be presented to the Adaptation Fund. The project's objective is to reduce the vulnerability of two coastal communities to the impacts of climate change on marine-coastal ecosystems and fishery resources. Although the two projects share a common objective, the pilot areas of intervention and the adaptation activities are different and complementary. This way, the Government of Peru seeks to generate the information necessary to: (i) properly plan the management of the marine-coastal area and its resources; and (ii) develop new policy tools or improve existing ones, in pursuit of sustainable management of its marine-coastal resources.

## **C. Alignment with Bank priorities**

- 2.13 The project is aligned with the Bank's priorities in the region, particularly with: (i) the IDB Integrated Strategy for Climate Change Adaptation and Mitigation, and Sustainable and Renewable Energy (document [GN-2609-1](#)); and (ii) the Ninth General Capital Increase (GCI-9) (document [AB-2764](#)) in its sector priority of protecting the environment, responding to climate change, promoting renewable energy, and ensuring food security. The project is also consistent with the Sector Framework Document on Agriculture and Natural Resources Management (document [GN-2709-2](#)). In addition, the proposed project will facilitate the

dissemination of scientific knowledge and lessons learned on adaptation, as well as generate information on climate change impacts on the sector and sector vulnerability, as an important input for the fisheries sector adaptation strategy, contributing to the efforts begun under operation 2985/OC-PE.

### III. DESCRIPTION OF COMPONENTS AND BUDGET

- 3.1 The proposed operation has three components, as follows:
- 3.2 **Component 1. Strengthening of current scientific knowledge of climate change impacts on Peruvian fisheries.** This component will finance the acquisition of a cluster of high-performance computers for using and analyzing climate change models, equipment for measuring and monitoring oceanographic and climate variables, and consulting services to assess ecological vulnerability and risk. These investments will help to solidify current scientific knowledge of climate change impacts on Peruvian fisheries and make it possible to strengthen modeling and forecasting capacities at IMARPE, while complementing the current system of physical and biogeochemical observational monitoring and surveillance. In addition, regional projection scenarios will be developed to examine climate change impacts on the distribution and catch potential of key species for the Peruvian economy, such as the anchoveta. Furthermore, these activities will make it possible to conduct a study of marine-coastal vulnerability to climate change for the Huacho pilot area, which will serve as an effective support for implementing adaptation measures in the area's artisanal fishing community.
- 3.3 **Component 2. Climate change mainstreaming in coastal area management plans.** This component will finance consulting services whose outcomes are aimed at reducing the vulnerability of marine-coastal ecosystems through better land management. In particular, the component seeks to strengthen the ICAM programs. To this end, it will finance: (i) capacity-building of fishermen's organizations in terms of formalization, data collection and processing, creation of microenterprises, and economic diversification through courses and workshops conducted by specialized consultants; (ii) workshops on data collection and validation of diagnostic assessments of vulnerability to climate change, with the participation of actors involved in the project, authorities, and users. Invitations will be sent to the Lima regional government and the municipalities of Ilo and Huacho to ensure their participation in these workshops; (iii) development of action plans for climate change adaptation and local Integrated Marine Coastal Area Management (IMCAM) plans for the pilot areas; and (iv) development of a national ICAM policy proposal and a national ICAM program emphasizing a land-use plan under a climate change scenario. In addition, this component will finance the preparation of a study of socioeconomic vulnerability to climate change at the national level for anchoveta fishing.
- 3.4 **Component 3. Design and implementation of small-scale adaptation actions in two artisanal fishing communities.** The objective of this component is to



implement sustainable fishing practices in the pilot community of Huacho and subsequently expand them to the communities of Chancay and Ilo, in order then to be able to replicate these practices in other Peruvian artisanal fishing communities. Accordingly, this component will finance the following activities: (i) training workshops for groups of artisanal fishermen on the collection and use of information for fishery management and on the design, implementation, and use of sustainable fishing gear and methods for catching anchoveta for DHC;<sup>6</sup> (ii) training of professionals and fishermen to supervise the use of good fishing practices as part of the PRODUCE “A Comer Pescado” [“Let’s Eat Fish”] program that can lead to the inclusion of artisanal fishermen in supply chains for DHC; and (iii) a socioeconomic and financial assessment of the implementation of sustainable fishing gear and methods in the two pilot areas.

3.5 The following electronic link contains the [Results Matrix](#) for the operation.

**Table 1. Indicative Budget (US\$)**

	Project cost			Total financing
	IDB funds		Local contribution (in kind)	
	OC	Multidonor		
Component 1	427,000	828,000	469,247	1,724,247
Component 2	230,000	0	63,376	293,376
Component 3	509,000	172,000	92,377	773,377
Project management:	204,000	0	0	204,000
• Project coordinator	129,000	0	0	0
• Project support assistant	21,000	0	0	0
• Procurement specialist	54,000	0	0	0
Subtotal	1,370,000	1,000,000	625,000	2,995,000
Final evaluation	40,000	0	0	40,000
Audit	90,000	0	0	90,000
<b>Total</b>	<b>1,500,000</b>	<b>1,000,000</b>	<b>625,000</b>	<b>3,125,000</b>

Note: For further information, see the [Itemized Budget](#).

#### IV. EXECUTING AGENCY AND EXECUTION STRUCTURE

4.1 The proposed project will be executed by PRODUCE, acting through its Vice Ministry of Fisheries, which has an execution unit, known as Fomento al Consumo Humano Directo – A Comer Pescado [Support for Direct Human Consumption – Let’s Eat Fish] (EU-003) that will be responsible for project execution. EU-003 will be strengthened using Bank resources to engage a project coordinator, an

<sup>6</sup> The current harvesting system is not ideal and needs to be changed by encouraging and implementing the use of ecological fishing nets, with a view to promoting DHC with a higher selective response. Using these nets will make it possible to obtain high volumes and good quality for the transformation processes within established standards. This will lower the pressure on the fisheries resource in the coastal areas and not lose it in the first step of the process.

- administrative assistant, and a procurement specialist. EU-003 was created by PRODUCE to operate on an ongoing basis in order to fulfill the full range of goals and achievements which the Government of Peru has set for the fisheries sector. EU-003 is responsible for managing the following budgetary programs, currently under the Office of Direct Human Consumption: Aquaculture Organization and Development, Strengthening of Artisanal Fishing, and “A Comer Pescado,” the last of these created under [Supreme Decree 007-2012-PRODUCE](#). An institutional capacity assessment of EU-003, conducted in order to assure the governance structure for the project, resulted in a series of recommendations to be considered before and during project execution. These recommendations include: (i) prepare a project Operations Manual that clearly delineates the profiles and roles of the unit’s members during execution; (ii) sign interagency agreements with the technical institutions involved in the project, including MINAM; (iii) conduct a project launch workshop; and (iv) verify implementation of the central government’s Integrated Financial Administration System (SIAF) at UE-003.
- 4.2 With the support of the project coordinator, EU-003 will be responsible for tasks that include: (i) preparing and updating the project Operations Manual and procurement plan and submitting them for the Bank’s no objection; (ii) preparing the disbursement requests; (iii) conducting all procurement processes in accordance with Bank policies;<sup>7</sup> (iv) delivering a final project report to the Bank within 60 days after the end of the disbursement period; and (v) engaging the external auditing firm.
- 4.3 The project Operations Manual will be prepared and approved by the executing agency with the Bank’s prior no objection, and will include the following items: (i) procedures for the procurement of goods and services; (ii) financial and accounting, control, and internal auditing procedures; (iii) management and coordination procedures; (iv) monitoring, supervision, and evaluation systems; and (v) environmental and social safeguards.
- 4.4 **Conditions precedent to the first disbursement.** The following will be conditions precedent to the first disbursement: (i) approval of the project Operations Manual by the executing agency with the Bank’s prior no objection; (ii) selection of a project coordinator; (iii) official assignment of the proposed project’s execution to UE-003; and (iv) opening of a special bank account to be used by the project.
- 4.5 **Condition precedent to the first disbursement for component II.** Prior to the first disbursement of the proceeds for project component II, evidence will be provided to the Bank that an interagency agreement has been signed between PRODUCE and MINAM, establishing, among other things, the cooperation terms for execution of this component’s activities.

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<sup>7</sup> The procurement of goods and the selection and contracting of consultants to be paid with project funds will be conducted in accordance with the Bank policies contained in documents [GN-2349-9](#) and [GN-2350-9](#).

## V. PRINCIPAL RISKS

- 5.1 The institutional capacity assessment of the executing agency indicates that its risk level, in general, is medium. The principal risks identified are: (i) failure to meet commitments under the technical cooperation agreement due to lack of awareness of responsibilities; (ii) project execution delay due to difficulty in defining the terms of reference and budgets for activities to move the project forward; and (iii) project execution delay because the staff engaged for EU-003 are not trained in the Bank's procurement policies and fiduciary management procedures. Actions to mitigate these risks will be pursued both before and during project execution, as recommended in the [institutional capacity assessment](#) report for the project.

## VI. EXCEPTIONS TO BANK POLICY

- 6.1 There are no exceptions to Bank policy.

## VII. ENVIRONMENTAL SAFEGUARDS

- 7.1 The proposed project includes no activities capable of generating adverse environmental and/or social impacts. Consequently, it been classified as category "C" under the Bank's Environment and Safeguards Compliance Policy (Operational Policy OP-703). The outcomes are expected to benefit both the local communities in Ilo and Huacho-Chancay and, at the national level, the entities involved in the project. Although the typology of the interventions is already known, it is necessary to determine details related to the actual implementation of these interventions with a view to incorporating climate change considerations and monitoring and evaluation needs, as indicated in the [Environment and Social Safeguards Strategy](#).

## VIII. REQUIRED ANNEX

- 8.1 Annex I: Procurement plan.

## IX. ELECTRONIC LINKS

- 9.1 [Client request letter](#)  
9.2 [Terms of reference](#)  
9.3 [Results matrix](#)  
9.4 [Spreadsheet for ICAS analysis of executing agency](#)  
9.5 [Profile and selection of pilot sites](#)  
9.6 [Bibliography](#)

**ADAPTATION TO CLIMATE CHANGE OF THE FISHERY SECTOR AND  
MARINE-COASTAL ECOSYSTEM OF PERU**

<b>PE-T1297</b>	<b>US\$1,500,000</b>	<b>SCI</b>
<b>PE-G1001</b>	<b>US\$1,000,000</b>	<b>MSC</b>

**CERTIFICATION**

I hereby certify that these operations were approved for financing under the Fund for the Sustainable Energy and Climate Change IDB Special Program (SCI) and the Sustainable Energy and Climate Change Multi-Donor Fund (MSC) through a communication sent by Gerhard Lair (ORP/GCM) on April 23, 2013 and extended on October 21, 2013.

Also, I certify that resources from the SCI are available up to US\$1,500,000 and US\$1,000,000 from the MSC in order to finance the activities described and budgeted in this document. This certification reserves resources for the referenced project only until December 10, 2013. If the project is not approved by the IDB within that period, the reserve of resources will be cancelled. The commitment and disbursement of these resources shall be made only by the Bank in US dollars. The same currency shall be used to stipulate the remuneration and payments to consultants, except in the case of local consultants working in their own borrowing member country who shall have their remuneration defined and paid in the currency of such country. No resources of the Fund shall be made available to cover amounts greater than the amount certified herein above for the implementation of this operation. Amounts greater than the certified amount may arise from commitments on contracts denominated in a currency other than the Fund currency, resulting in currency exchange rate differences, for which the Fund is not at risk.

[Original Signed]

10/31/2013

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Sonia M. Rivera  
Chief  
Grants and Co-Financing Management Unit  
ORP/GCM

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Date

## PROCUREMENT PLAN

<b>Country:</b> Peru	<b>Executing agency:</b> Ministry of Production (PRODUCE)	<b>Sector:</b> Public
<b>Project number:</b> PE-G1001/PE-T1297	<b>Project title:</b> Adaptation to Climate Change of the Fishery Sector and Marine-Coastal Ecosystem of Peru	
<b>Period covered by the procurement plan:</b>		
<b>Threshold for ex post review of procurements:</b>	Goods and services US\$1,800,000	Consulting services US\$700,000

Item no.	Description of procurement	Estimated cost of procurement (US\$000s)	Procurement method <sup>1</sup>	Procurement review (ex ante/ex post) <sup>2</sup>	Source of financing and percentage		Estimated date of procurement notice or start of contract	Technical review by PTL <sup>3</sup>	Comments
					IDB %	Local/other %			
<b>Component 1: Strengthening of current scientific knowledge of climate change impacts on Peruvian fisheries</b>									
<b>1</b>	<b>GOODS</b>	<b>820</b>							
1.1.1	Group of high-performance servers with InfiniBand for simulation models and data storage equipment	350	NCB/S	Ex ante	100	0	Second half 2014	Ex ante	
1.1.2	Air conditioning for servers	10	S	Ex post	100	0	Second half 2014	Ex post	
1.1.3	Glider to measure oceanographic variables, with personnel training	336	NCB/S	Ex ante	100	0	Second half 2014	Ex ante	
1.1.4	Two cameras to measure sea conditions	4	S	Ex post	100	0	Second half 2014	Ex post	
1.1.5	ADCP equipment to measure currents	50	S	Ex post	100	0	Second half 2014	Ex ante	
1.1.6	Data logger for automatic field data storage with temperature and salinity sensors	10	S	Ex post	100	0	Second half 2014	Ex post	
1.1.7	Multiparameter equipment to measure temperature, oxygen, conductivity, pH	5	S	Ex post	100	0	Second half 2014	Ex post	
1.1.8	CTD equipment to measure temperature, conductivity, and density.	55	S	Ex post	100	0	Second half 2014	Ex ante	

Item no.	Description of procurement	Estimated cost of procurement (US\$000s)	Procurement method <sup>1</sup>	Procurement review (ex ante/ex post) <sup>2</sup>	Source of financing and percentage		Estimated date of procurement notice or start of contract	Technical review by PTL <sup>3</sup>	Comments
					IDB %	Local/other %			
<b>2</b>	<b>WORKS</b>	<b>8</b>							
1.2.1	Infrastructure works for glider calibration	8	S	Ex post	100	0	First half 2014	Ex post	
<b>3</b>	<b>CONSULTING SERVICES</b>	<b>246</b>							
1.3.1	Consulting services for ecological risk assessment (ERA) in the context of climate change impacts	5	NICQ	Ex post	100	0	Second half 2015	Ex post	
1.3.2	Consulting services for a course on ecological risk assessment (ERA) in the context of climate change impacts: anchoveta case study	5	NICQ	Ex post	100	0	Second half 2015	Ex post	
1.3.3	Consulting services to develop climate change scenarios for the ocean	66	NICQ	Ex ante	100	0	Second half 2015	Ex ante	
1.3.4	Consulting services to develop climate change scenarios for the atmosphere	36	NICQ	Ex post	100	0	Second half 2015	Ex ante	
1.3.5	Consulting services to develop climate change scenarios for anchoveta	36	NICQ	Ex post	100	0	Second half 2015	Ex ante	
1.3.6	Consulting services for information technology management of databases and modeling on high-performance computer equipment	36	NICQ	Ex post	100	0	First half 2015	Ex ante	
1.3.7	Consulting services for training on physical vulnerability analysis of the marine-coastal ecosystem in the Huacho area	5	NICQ	Ex post	100	0	Second half 2015	Ex post	
1.3.8	Consulting services for a physical vulnerability study of the marine-coastal ecosystem of Huacho	27	S	Ex post	100	0	Second half 2015	Ex post	
1.3.9	Consulting services for design, implementation, and dissemination of a geographic information system for environmental data associated with climate	30	NICQ	Ex post	100	0	First half 2015	Ex post	

Item no.	Description of procurement	Estimated cost of procurement (US\$000s)	Procurement method <sup>1</sup>	Procurement review (ex ante/ex post) <sup>2</sup>	Source of financing and percentage		Estimated date of procurement notice or start of contract	Technical review by PTL <sup>3</sup>	Comments
					IDB %	Local/other %			
	change at the local scale.								
<b>4</b>	<b>NONCONSULTING SERVICES</b>	<b>181</b>							
1.4.1	Bandwidth expansion for access to international climate and oceanographic data by IMARPE scientists	40	S	Ex post	100	0	First half 2014	Ex ante	
1.4.2	Workshops on ecological risk assessment (ERA) in the context of climate change impacts on anchoveta	30	S	Ex post	100	0	Second half 2015	Ex post	
1.4.3	Workshop on physical vulnerability of the marine-coastal ecosystem	15	S	Ex post	100	0	First half 2015	Ex post	
1.4.4	Miscellaneous training services (travel, attendance at conferences) and publications	96	S	Ex ante	100	0	First half 2015	Ex ante	
<b>Total Component 1</b>		<b>1,255</b>							
<b>Component 2: Climate change mainstreaming in coastal area management plans</b>									
<b>1</b>	<b>CONSULTING SERVICES</b>	<b>230</b>							
2.1.1	Consulting services for diagnostic assessment, vulnerability analysis, and proposed action plan for climate change adaptation of the artisanal fishing sector in two pilot areas of Peru, Huacho-Chancay (Lima) and Ilo	40	NICQ	Ex post	100	0	First half 2015	Ex post	
2.1.2	Consulting services for analysis of socioeconomic vulnerability of anchoveta fishing to climate change scenarios at national level	50	NICQ	Ex post	100	0	Second half 2015	Ex post	
2.1.3	Consulting services to develop an ICAM proposal: policy proposals, program proposal, and training courses for developing local plans	30	NICQ	Ex post	100	0	Second half 2014	Ex ante	

Item no.	Description of procurement	Estimated cost of procurement (US\$000s)	Procurement method <sup>1</sup>	Procurement review (ex ante/ ex post) <sup>2</sup>	Source of financing and percentage		Estimated date of procurement notice or start of contract	Technical review by PTL <sup>3</sup>	Comments
					IDB %	Local/ other %			
2.1.4	Consulting services to develop an ICAM proposal: two integrated coastal marine area management plans for Huacho-Chancay and Ilo	110	NICQ	Ex post	100	0	Second half 2014	Ex ante	
<b>Total Component 2</b>		<b>230</b>							
<b>Component 3: Design and implementation of small-scale adaptation actions in two artisanal fishing communities</b>									
<b>1</b>	<b>GOODS</b>	<b>360</b>							
3.1.1	Purchase and implementation of sustainable fishing gear in Huacho.	360	NICQ	Ex post	100	0	Second half 2014	Ex ante	
<b>2</b>	<b>WORKS</b>	<b>54</b>							
3.2.1	Consulting for outfitting of warehouses in Huacho	54	NICQ	Ex post	100	0	First half 2015	Ex post	
<b>3</b>	<b>CONSULTING SERVICES</b>	<b>20</b>							
3.3.1	Consulting services for comprehensive evaluation of the pilot implementation of sustainable fishing in artisanal fishing communities	20	NICQ	Ex post	100	0	Second half 2014	Ex post	
<b>4</b>	<b>NONCONSULTING SERVICES</b>	<b>247</b>							
3.4.1	Workshops on sustainable gear in Huacho	10	S	Ex post	100	0	First half 2015	Ex post	
3.4.2	Demonstration and installation of sustainable fishing gear in Ilo-Pisco	166	S	Ex ante	100	0	First half 2015	Ex ante	
3.4.3	Workshops on sustainable gear in Ilo-Pisco	11	S	Ex post	100	0	First half 2015	Ex post	
3.4.3	Training workshops on good practices for extraction, preservation, and sale of anchoveta for DHC	30	S	Ex post	100	0	First half 2015	Ex post	



Item no.	Description of procurement	Estimated cost of procurement (US\$000s)	Procurement method <sup>1</sup>	Procurement review (ex ante/ ex post) <sup>2</sup>	Source of financing and percentage		Estimated date of procurement notice or start of contract	Technical review by PTL <sup>3</sup>	Comments
					IDB %	Local/ other %			
3.4.4	Training workshops for artisanal fishing communities on organization, formalization, processing, and sale through the “A Comer Pescado” [Let’s Eat Fish] program of PRODUCE	30	NICQ	Ex post	100	0	Second half 2014	Ex post	
<b>Total Component 3</b>		<b>681</b>							
<b>Project management</b>									
<b>1</b>	<b>Consulting services</b>								
4.1	Project final audit	90	NICQ	Ex ante	100	0	1 <sup>st</sup> half 2016	Ex -ante	
4.2	Project final evaluation	40	NICQ	Ex ante	100	0	1 <sup>st</sup> half 2016	Ex ante	
4.3	Individual consultant: project assistant	21	NICQ	Ex ante	100	0	1 <sup>st</sup> half 2014	Ex ante	
4.4	Individual consultant: procurement specialist	54	NICQ	Ex ante	100	0	1 <sup>st</sup> half 2014	Ex ante	
4.5	Individual consultant: project coordinator	129	NICQ	Ex ante	100	0	1 <sup>st</sup> half 2014	Ex ante	
	<b>Total project management</b>	<b>334</b>							
	<b>TOTAL project resources</b>	<b>2,500</b>							
<sup>1</sup> <b>Consulting firms:</b> CQS: Selection based on the consultants’ qualifications; QCBS: Quality- and cost-based selection; LCS: Least-cost selection; FBS: Selection under a fixed budget; SSS: Single-source selection; QBS: Quality-based selection.									
<sup>1</sup> <b>Individual consultants:</b> NICQ: National individual consultant selection based on qualifications; SSS: Single-source selection.									
<sup>2</sup> <b>Ex ante/ ex post review:</b> In general, the standard modality is ex post review, depending on the institutional capacity and risk level associated with procurement. Ex ante review may be established for critical or complex processes.									
<sup>3</sup> <b>Technical review:</b> This column will be used by the Project Team Leader (PTL) to identify procurement processes considered “critical” or “complex,” requiring ex ante review of the terms of reference, technical specifications, reports, outputs, or other elements.									

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-\_\_\_/\_\_\_

Perú. Nonreimbursable Investment Financing GRT/\_\_\_-\_\_\_\_-PE and  
Nonreimbursable Technical Cooperation ATN/\_\_\_-\_\_\_\_-PE  
Adaptation to Climate Change of the Fishery Sector and  
the Marine-coastal Ecosystem of Peru

The Board of Executive Directors

RESOLVES:

1. That the President of the Inter-American Development Bank, or such representative as he shall designate, is authorized in the name and on behalf of the Bank, to enter into such agreements as may be necessary with the Republic of Peru, and to take such other measures as may be pertinent for the execution of the project proposal contained in document AT-\_\_\_ with respect to a nonreimbursable investment financing and a nonreimbursable technical cooperation for a program for adaptation to climate change of the fishery sector and the marine-coastal ecosystem of Peru.

2. Authorize for the purposes of this resolution: (i) up to the amount of US\$1,000,000, chargeable to the resources of the Sustainable Energy and Climate Change Multi-Donor Fund; and (ii) up to the sum of US\$1,500,000, chargeable to the resources of the Fund for the Sustainable Energy and Climate Change IDB Special Program.

3. That the above-mentioned sums are to be provided on a nonreimbursable basis.

(Adopted on \_\_ \_\_\_\_\_ 201\_\_)