Enabling poor rural people
to overcome poverty

Republic of Peru

Conservation and Sustainable use of High-Andean Ecosystems of Peru through Compensation of Environmental Services for Rural Poverty Alleviation and Social Inclusion

GEF Financing

Detailed design report - Main report

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CONTENTS

Executive Summary ix

Logical framework GEF Financing xii

PROJECT DESIGN REPORT 1

I. STRATEGIC CONTEXT AND RATIONALE 2

A. Country, Rural Development and Environmental Context 2
B. Rationale 6
C. Country eligibility, ownership and drivenness 15

PROJECT DESCRIPTION 16

A. Project area and target group 16
B. Project development objective 20
C. Components /Outcomes 20
D. Lessons learned and compliance with IFAD Policies 28
E. Consistency with GEF strategies and focal areas 31
F. Key stakeholders involved in the Project, and their respective roles 31
G. Coordination with other GEF and non-GEF initiatives 34

II. PROJECT IMPLEMENTATION 37

A. Approach 37
B. Organizational framework 38
C. Planning, monitoring and evaluation, learning and knowledge management 39
D. Financial management, procurement and governance 40
E. Supervision 42
F. Risk identification and mitigation 42

III. PROJECT COSTS, FINANCING, BENEFITS 44

A. Grant costs 44
B. Grant/Project financing 44
C. Summary benefit and economic analysis 46
D. Sustainability 47

Table 1: Summary of complementary reasoning (DELOSI and GEF) 10
Table 2: Synergies between DELOSI and the GEF Grant 11
Table 3: Summary of associated benefits (GEF) 13
Table 4: Global Environmental Benefits (GEF) 14
Table 5: Socioeconomic benefits delivered by GEF 16
Table 6: Population and poverty levels 19
Table 7: Summary of Component 1 23
Table 8: Summary of Component 2 28
Table 9:. Compliance with IFAD Policies 30
Table 10: Risks and mitigation measures 42
Table 11: Potential threats to PES effectiveness 43
Table 12: Grant costs by Component 44
Table 13: Grant Costs by Categories of Expenditure 44
Table 14: Grant financing by components 45

ANNEXES

ANNEX 1. COUNTRY RURAL AND ENVIRONMENTAL CONTEXT BACKGROUND

ANNEX 2. POVERTY, TARGETING AND GENDER

ANNEX 3. COUNTRY PERFORMANCE AND LESSONS LEARNED

ANNEX 4. DETAILED PROJECT DESCRIPTION

ANNEX 5. INSTITUTIONAL ASPECTS, LEGAL FRAMEWORK AND IMPLEMENTATION ARRANGEMENTS

ANNEX 6. PLANNING, MONITORING AND EVALUATION, LEARNING AND KNOWLEDGE MANAGEMENT

ANNEX 7. FINANCIAL MANAGEMENT AND DISBURSMENT ARRANGMENTS

ANNEX 8. PROCUREMENT

ANNEX 9. DETAILED COST CALCULATIONS

ANNEX 10. ECONOMIC AND FINANCIAL ANALYSIS

ANNEX 11. PROJECT IMPLEMENTATION MANUAL

ANNEX 12. COMPLIANCE WITH IFAD POLICIES

ANNEX 13. ENVIRONMENTAL AND SOCIAL REVIEW NOTE

ANNEX 14. DOCUMENTS IN THE PROJECT LIFE FILE AND REFERENCES

WORKING PAPERS

WP 1: PROJECT AREA, POPULATION AND INSTITUTIONAL FRAMEWORK (IN SPANISH)

WP 2: ANALYSIS OF ENVIRONMENTAL SERVICES IN PERU (IN SPANISH)

WP 3: DRAFT IMPLEMENTATION MANUAL (IN SPANISH)

WP 4: COSTS AND FINANCING

WP 5: PES MARKET ANALYSIS (IN SPANISH)

Currency equivalents

Monetary Unit	=	Nuevo Sol (PEN)
1 US$	=	PEN 2.80
1 PEN	=	US$ 0.36

Weights and measures

1 kilogram (kg)	=	2.204 pounds
1 000 kg	=	1 metric ton (t)
1 pound (lb)	=	450 grams (gr)
1 kilometre (km)	=	0.62 miles
1 meter (m)	=	1.09 yards
1 square meter (m^2)	=	10.76 square foots
1 acre (ac)	=	0.405 hectares (ha)
1 hectare (ha)	=	2.47 acres
1 arroba (@)	=	11.5 kilograms
1 quintal (qq)	=	45.3 kilograms
1 gallon (gl)	=	3.785 litres (l)

GOVERNMENT OF PERU

Fiscal year

January 1st – December 31st

ABBREVIATIONS AND ACRONYMS

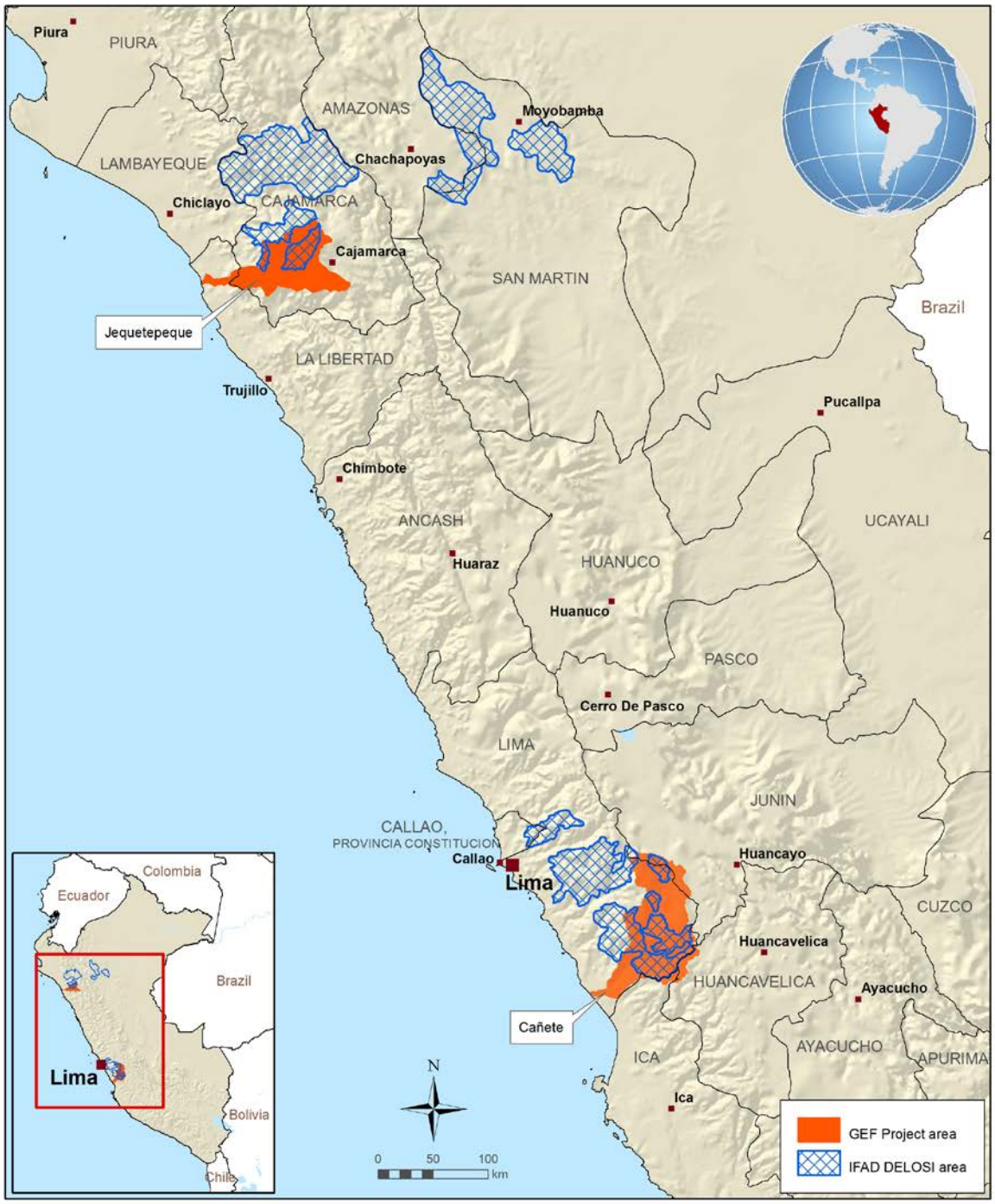
AGRO RURAL	Productive Rural Programme
ANA	National Water Authority
AWPB	Annual Work Plans and Budgets
BMU	Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
BSM	Benefit Sharing Mechanism
CAF	Andean Development Corporation
CAN	Andean Community
CEA	Country Environmental Assessment
CIAS	Inter-ministerial Committee on Social Affairs
CIAT	Centro Internacional de Agricultura Tropical
COFOPRI	Organization Responsible for Formalizing Informal Property
CONDESAN	Consorcio para el Desarrollo Sostenible de la Eco región Andina
COP	Conference of the Parties
CPM	IFAD Country Programme Manager
CPWF	Challenge Program of Water and Food
DELOSI	Strengthening Local Development in the Highlands and High Rain Forest Areas project
DPL	World Bank Environmental Development Policy Loan
ENAHO	National Household Survey
ENBD	National Biological Biodiversity Strategy
ENDB	National Strategy for Biological Diversity
EPS	Empresa Prestadora de Servicios Sanitarios
ESRN	Environmental and Social Review Note
GDP	Gross Domestic Product
GEF TF	Global Environment Facility Trust Fund
GIS	Geographic Information Systems
GPS	Global Positioning Systems
IBRD	World Bank
IDB	Inter-American Development Bank
IFAD	International Fund for Agricultural Development
ILO	International Labour Organisation
IMF	International Monetary Fund
INEI	National Institute of Statistics and Informatics
INEI	National Institute of Statistics and Informatics
LOI	Letter of Intent
LPA	Lead Project Agency
LRAC	Local Resource Allocation Committees
MARENAS	Management of Natural Resources in the Southern Highlands project
MEF	Ministry of Economy and Finance of Peru
MIDIS	Ministry for Development and Social Inclusion
MINAG	Ministry of Agriculture
MINAM	Ministry of Environment
MRV	Monitoring, reporting and verification
NGOs	Non-Governmental Organizations
OEFA	Environmental Assessment and Oversight Agency
PAC	Project Advisory Committee
PCM	Office of the Prime Minister
PCR	Project Completion Report

PES/CES	Payment for Environmental Services/Compensation for Environmental Services
PIF	Project Information Form
PIM	Project Implementation Manual
PIU	Project Implementation Unit
PLF	Project Life File
PPG	Project Preparation Grant
PROFONANPE	Peruvian Trust Fund for National Parks and Protected Areas
PRONANP	Strengthening Biodiversity Conservation through the National Protected Areas Program
RIMS	Results and Impact Measurement Indicators
SENAMHI	National Meteorology and Hydrology Service
SERNANP	National Service of National Protected Areas
SINACE	Servicio Nacional de Certificaciones Ambientales para las Inversiones Sostenibles
SINADIS	National Development and Social Inclusion System
SINANPE	National System of Protected Areas
SNIP	National Public Investment System
SPDA	Sociedad Peruana de Derecho Ambiental
STAP	Scientific and Technical Advisory Panel
STAR	System for Transparent Allocation of Resources
UNDP	United National Development Programme
UNEP	United Nations Environment Program
UNESCO	United Nations Education, Scientific and Cultural Organization
WUB	Water User Boards or Associations
WWF	World Wildlife Fund

MAP OF THE PROJECT AREA

Peru

Conservation and Sustainable Use of High-Andean Ecosystems of Peru through Compensation of Environmental Services for Rural Poverty Alleviation and Social Inclusion



The designations employed and the presentation of the material in this map do not imply the expression of any opinion whatsoever on the part of IFAD concerning the delimitation of the frontiers or boundaries, or the authorities thereof.

IFAD *Map compiled by IFAD* | 29-04-2013

Executive Summary

Project Rationale. The design of the Strengthening Local Development in the Highlands and High Rain Forest Areas (DELOSI)[1] project responds to the strong interest expressed by the Government of Peru to scale up of a number of innovations introduced by the International Fund for Agricultural Development (IFAD) during the last 15 years which have allowed the rural poor to participate fully in their own development. The DELOSI project co-funded by IFAD and the Government of Peru supports rural poor to administer resources transferred to them for identifying, formulating, implementing and monitoring initiatives aimed at addressing management of natural resources, pursuing business ventures of their own choice and furthering participation of rural women in the regulated banking system.

The DELOSI project, as designed, presents an innovative approach to deepen the effectiveness and relevance of public investments to improve the well-being of the rural population; however considering the high environmental vulnerability and fragility of the ecosystems and landscapes of the implementation area (and on the other hand the economic value of the High Andean ecosystems services currently undervalued) an GEF financing was considered to be complementary to the DELOSI project. At the petition of the Government, the Environment and Climate/Latin American and Caribbean Division (ECD/LAC) formulated a Concept Note (Project Identification Form –PIF) aiming to support conservation of biodiversity and provide environmental services through the implementation of Payment for Environmental Services /Compensation for Environmental Services (PES/CES) schemes. The original PIF from which this proposal originates was approved by the Global Environmental Facility (GEF) in early 2012. For the final design of the **"Conservation and Sustainable use of High-Andean Ecosystems of Peru Through Compensation of Environmental Services for Rural Poverty Alleviation and Social Inclusion – GEF Financing"** project two missions were fielded in July 2012 and March 2013.

Objectives. The objective of the GEF funding is to conserve and use sustainably High Andes ecosystems that provide environmental services, especially water[2], transferring economic resources from downstream beneficiaries to upstream rural communities providing them. The Project will support conservation systems that assign economic value to critical environmental services allowing the transfer of economic resources from the private and public sector. The Project will also assist the Government in the implementation of the legal and institutional framework for environmental services.

Components and activities. The interventions will help to improve the Institutional Framework for Environmental Services in Peru through implementation of PES/CES schemes, protecting High Andean ecosystems that are not receiving enough attention and/or being adequately managed due to isolation, spares population in surrounding areas and conservation biases[3]. This will be accomplished through two key components: 1) Conservation and Sustainable Management of High Andes Ecosystems and 2) Improvement of the Institutional Framework for ES in Peru through Implementation of PES/CES schemes**.**

Component 1: Conservation and Sustainable Management of High Andes Ecosystems. The objective of this component will be to further the conservation and/or

[1] DELOSI project was approved by the IFAD Executive Board in September 2012; the Loan Agreement between IFAD and the Ministry of Economy and Finance of Peru (MEF) was signed on 20 February 2013.
[2] The Project will support the implementation of PES schemes in two selected watersheds, Cañete and Jequetepeque.
[3] Chavez,j. et al, (2005). Las Áreas Naturales Protegidas del Peru: Informe Nacional (INRENA, Lima).

sustainable use of at least 23,866 hectares of High Andes ecosystems and landscapes, including relict forests, *bofedales or peat bogs* and other wetlands, using PES/CES schemes centered in better water management and biodiversity conservation. In particular, the Project will include conservation and sustainable management of ecosystems, that will result in a better delivery of water as well as improvement of agriculture productive activities as initiatives to further conservation efforts, funded under the DELOSI project such as improved livestock management and assistance with marketing and rural finance. Linkages with the IFAD-funded DELOSI[4] project will allow small-scale farmer associations and in particular peasant communities to undertake environmentally friendly agricultural development. Promotion of sustainable agriculture, including river bank protection and promotion of environment-friendly practices will be paramount in better protecting biodiversity and providing water.

Component 2, **Improvement of the Institutional Framework for Environmental Services in Peru through implementation of PES/CES schemes.** The objective of this component is to further promote an "economic retribution" concept at the national and selected watershed levels. This component will assist in setting the institutional framework and supporting implementation of the concept in the two watersheds selected. A significant activity of this component is the establishment of Trust Funds for each of the selected basins. This component also includes two other main activities: (a) PES Monitoring and Evaluation (M&E) and (b) Development of Rules and Regulations for the Law on Ecosystem Services. The Project will fund a number of M&E activities including the design of the system and its operations. Finally, the Project will support and fund the development of the institutional framework for environmental services in the country helping to implement the Environmental Services Law, once approved, and allow the Ministry of Environment (MINAM) to lead the preparation of rules and major guidelines for its application.

Results: In order to achieve its objectives, the project will produce closely six related results for the two mentioned components. Result 1.1: High Andean communities are able to recognize importance of conservation of natural resources and develop possible interventions for management of ecosystems; Result 1.2: High Andean communities conserve and/or adequately manage peat bogs, relict forests, marshlands, and rangelands; Result 2.1: High Andean communities and downstream beneficiaries of hydrological services, regional and local authorities able to jointly analyse and address problems and solutions towards establishment of a common institutional platform in relation to PES schemes; Result 2.2: Legally-viable PES schemes designed and agreed by watershed *ad hoc* committee; Result 2.3: High Andean communities able to undertake further conservation of ecosystems from proceeds of ecosystem trust funds an Result 2.4: Rules and regulations of the Peruvian ES legislation drafted considering Project outcomes, lessons learnt and inputs from multiple stakeholders that are pertinent in the national context

Costs and financing. The financing of the DELOSI project consists of : a) an IFAD loan of US$ 20 million (47.3%), b) a contribution from the Peruvian Government of US$ 16.4 million (39%); c) a contribution in kind from the Ministry of Environment equivalent to USD 447,770 (1%) and d) GEF grant of US5,3 million (12.7%). Specifically, the GEF financing will support, over the 60 months implementation period, key activiites and

[4] Through close collaboration with DELOSI, the GEF financing will also support the use of good agricultural practices by local farming communities such as: reducing erosion through hedging, ditching and terracing, application of fertilizers at appropriate moments and in adequate doses, maintaining or restoring soil organic content, by manure application, use of grazing, crop rotation, reducing soil compaction issues, maintaining soil structure, preventing soil salinization by limiting water input to needs, and recycling water whenever possible and avoiding drainage and fertilizer run-off among others.

investements under the two mentioned components: 1) Conservation and Sustainable Management of High Andean Ecosystems, US$ 2.3 million, equivalent to 44.1% of total costs; 2) Improvement of the Institutional Framework for ES for Implementation of PES/CES Schemes, US$ 2.7 million, representing 51.1% of total costs. Less than 5% of GEF funds will be applied to grant's administration (US$ 0.25 million or 4.8% of total costs).

Implementation arrangements. The Project will be implemented by a small Project Implementation Unit (PIU) to be located with the organizational structure of the Assessing, Valuing and Financing Natural Resources General Directorate of the Ministry of the Environment as the Lead Project Agency (LPA). Notwithstanding, the LPA will, by virtue of a Grant Agreement between IFAD and MINAM, entrust the Peruvian Trust Fund for National Parks and Protected Areas (PROFONANPE) the financial administration of the Grant. The PIU will be staffed by a Project Coordinator, a Monitoring and Evaluation specialist and an M&E assistant to be based in Lima and two Basin Coordinators one based in the city of Yauyos in the department of Lima and the second one in the city of San Miguel in Cajamarca department in Agro Rural[5] premises. Overall Project guidance will be provided by a Project Advisory Committee (PAC) at the central level and by Ad hoc Basin Committees at the watershed level.

Additional benefits to the DELOSI project. In addition to business –as- usual benefits, the proposed project will catalyze incremental benefits from better focused environmental-friendly agricultural practices. Furthermore, the establishment of ad hoc Basin Committees will further democratic decision-making process at the local level, making concerted efforts to disseminate the important benefits to be gained by PES participants.

[5] Agro Rural : Productive Rural Programme -Ministry of Agriculture (MINAG).

Logical framework GEF Financing[6]

Narrative	Target indicators	Verification methods	Assumptions
Goal Contribute towards increased incomes and improved livelihoods of small scale agricultural producers in areas of the highlands	• Contribute towards increased income of target populations by 30%, diminished malnutrition by 10 percentage points and 50 % of Project beneficiaries increase their food security. Broadly equal numbers of male and female beneficiaries.	• Baseline survey • Mid-term and end-of project evaluation, disaggregated by sex and including appropriate gender analyses of key issues • Living Standards Measurement Surveys (LSMS), targeting women, youth	• Availability of sex-disaggregated data and expertise
Objective Protect and sustainably use High Andes ecosystems for the provision of environmental services (biodiversity and water), by transferring economic resources from downstream beneficiaries to upstream rural communities.	• 23,866 hectares of High Andean ecosystems are conserved or sustainable used • ES users transfer economic resources to High Andean communities (ES providers)for the conservation and sustainable use of High Andean ecosystems	• Field verifications of effective implementation of proposed conservation and sustainable use measures in targeted areas • Formal agreements signed between ES users and Trust funds managers	• Expressed interest by communities in participating in Project activities • ES beneficiaries willing to contribute to PES schemes
Component 1. Conservation and Sustainable Management of High Andean Ecosystems			
R 1.1 High Andean communities are able to recognize importance of conservation of natural resources and develop possible interventions for management of ecosystems	• 110 community groups formed and trained 30% led by women headed households and youth aiming for equal participation in all groups • 110 Subproject proposals developed, funded and implemented by communities and including the concerns of men and women, youth and elderly groups	• Project progress reports • Mid-term and End of Project evaluation • Training reports and audio visual records • Sub-projects implementation contracts and arrangements • Banking records for financial resources transferred	• High participation rate by local communities in the Project area • Local groups are willing and able to implement the subprojects
R 1.2 High Andean communities conserve and/or adequately manage peat bogs, relict forests, marshlands, and rangelands	• 5,917 has. relict forests (26 sub projects) • 2 113 has. Peat bogs (“bofedales”) (14 subprojects) • 15 837 has. *grasslands (“paramos, punas and jalcas”)* conserved and/or managed (70 sub projects)	• Field verification reports and audio visual records • Geo referenced boundaries of conserved and adequately managed areas • Sub-projects implementation contracts	• Subprojects are resilient to extreme weather events • Invasive species are controlled • Water is available in the Project area • MINAM and Agro Rural share common approaches and work in a coordinated manner.

[6] NOTE: While most of the elements of the GEF financing will influence the DELOSI overall project’s goal , the key specific conservation –related outputs, target sand indicators for the GEF financing are shown in this Logical Framework.

Component 2. Improvement of the Institutional Framework for ES in Peru through Implementation of PES/CES schemes			
R2.1 High Andean communities and downstream beneficiaries of hydrological services, regional and local authorities able to jointly analyze and address problems and solutions towards establishment of a common institutional platform in relation to PES schemes.	• Communication strategy designed and implemented; • Signed formal ratification of actor's intention to participate in the PES schemes. • Two watershed *ad hoc* committees established and operational	• Dissemination materials • Meeting reports • Letters of Intent duly signed • Committee meetings • Summary records • Agreements subscribed by participants Audio visual material	• ES beneficiaries and providers are willing and interested in participating in PES negotiation and implementation • Communication strategy effectively implemented disseminating PES concept, objectives and required level of actor's participation. • Stakeholders including women willing to actively participate in the watershed *ad hoc* committees
R2.2 Legally-viable PES schemes designed and agreed by watershed *ad hoc* committee	• Legal framework revision with consideration of substantive issues for PES design; • PES procedures and operational manuals approved by watershed *ad hoc* committees; • Two Trust Funds created and operating.	• Meeting records and agreements subscribed agreements • Trust fund establishment documentation • Bank statements • Financial reports • PES operational manuals	• Participation of PES actors is legally viable • ES "buyers" disburse funds timely for Trust Funds creation • Watershed *ad hoc* committees are an enabling institutional platform to reach PES required agreements
R2.3 High Andean communities able to undertake further conservation of ecosystems from proceeds of ecosystem trust funds	• Amount of resources transferred to High Andean ES providers • Number of subprojects oriented to provide ES and conserve biodiversity developed, funded and implemented by communities in targeted areas	• Bank statements • Auditing reports • Legally binding contracts • Legal recognition documents • Field verification reports and audio visual records • Geo referenced boundaries of conserved and adequately managed areas	• Compliance with contractual conditions between payers and buyers of the environmental service • Administrative selection is adequate to meet project goals • Spatial spill overs are adequately observed by project implementers • Leakages are avoided purposefully by Project stakeholders • Trust fund contributors provide timely funding
R2.4 Rules and regulations of the Peruvian ES legislation drafted considering Project outcomes, lessons learnt and inputs from multiple stakeholders that are pertinent in the national context	• Working group on PES law rules and regulations established and recognized by the MINAM • Rules and regulation for ES legislation agreed upon with different stakeholders (including local communities, indigenous groups, regional and local authorities, multiple water user sectors.	• Consultation meetings proceedings and records • Summary of agreements • Signed list of participants • Final proposal of rules and regulations is officially submitted by the working group for Ministerial approval • Lessons learnt publications	• Peruvian Congress expeditious passage of the Environmental Services Law • Favourable political conditions for the approval and adoption of proposed rules and regulations

PROJECT DESIGN REPORT

1. The Project Design Report (PDR) for the Conservation and Sustainable use of High-Andean Ecosystems of Peru Through Compensation of Environmental Services for Rural Poverty Alleviation and Social Inclusion project described herein has been prepared following a request made by the Government of Peru in 2011 to support Peruvian priorities for conservation of water and environmental services through the implementation of PES/CES schemes in selected watersheds.

2. Following this request, IFAD prepared a concept note (Project Identification Form) for Global Environment Facility (GEF) funding to protect and use sustainably mountain ecosystems of Peru that provide vital environmental services, especially biodiversity and water. The PIF was prepared in November 2011 and approved by the GEF as part of the Work Program of February 2012. The formulation process, coordinated jointly by the MINAM and IFAD, started in May, ending in April 2013[7]. Following an IFAD review further consultations with national authorities were carried out during March 2013 in order to clarify several issues raised during a Panel review for quality enhancement.

3. The formulation team visited the Cañete and Jequetepeque River Basins and held stakeholder consultations with government authorities, water user associations, hydropower companies, Non-Governmental Organizations (NGOs) and peasant community representatives. IFAD and the Ministry of the Environment have signed two Aide Memoires outlining main design features and following steps in the approval process. A copy of the Aide Memoires are available in the Project Life File (PLF).The team also held discussions with the Executive Director of the Peruvian Trust Fund for National Parks and Protected Areas (PROFONANPE), Senior Management of the National Water Authority (ANA) and the Productive Rural Programme - Agro Rural of the Ministry of Agriculture (MINAG).

4. The formulation team took note of the comments made by GEF Council members to the PIF consisting mainly on the need to: (i) clarify the amount of co-financing envisaged; (ii) explain the relationship between improving management of water resources and biodiversity; (iii) determine the financial sustainability of the proposed PES scheme; (iv) provide information on how the Project relates to obligations under the Convention on Biological Diversity and more specifically the Aichi Targets, and (v) consider lessons learned by research centres and programmes mainly the National Forest Conservation Program for Climate Change. Due consideration was also given to the comments made by the GEF's Scientific and Technical Advisory Panel (STAP).

[7] The present report was prepared under the coordination of Jesús Quintana (Regional Environment and Climate Specialist, ECD/LAC, IFAD) and with the collaboration and support of Roberto Haudry (CPM Peru); Constanza di Nucci and Estibalitz Morrás (Program Management Officers, ECD/LAC); Dario Pulgar (Team Leader); Marcela Quintero (CIAT, PES Expert); Bernardete Neves (PES Expert); Carlos Llerena (Natural Resources Specialist); Rocío Malloux (Institutional Expert), Carlos Alborta (Financial Analyst); Rocio Chirinos and Adriana Bombardone (LAC & ECD Programme Assistants).

I. STRATEGIC CONTEXT AND RATIONALE

A. Country, Rural Development and Environmental Context

5. **Geographical context**. With an area of 1,285,216 km², the territory of Peru includes three very distinct areas: (i) the *Costa*, a desert plain interrupted by irrigated valleys occupying 11% of the total land mass; (ii) the *Sierra,* a mountainous region covering 30% of the land mass; and (iii) the *Selva*, a tropical rain forest in the eastern lowlands of the Amazon basin, which covers 60% of the total area. In terms of population, 54% of the population lives on the *Costa,* while the *Sierra* is home to 32% and the *Selva* to 13.4% of the total population. Average population density is approximately22 inhabitants/km², with a growth rate of 1.6% per year. Natural resources and environmental conditions are clearly defined by the particular characteristics of each geographical zone. The Project described herein would be implemented in two distinct watershed basins thus including segments of the *costa* and *sierra* regions.

6. **Political issues.** In a speech to Congress in 2012, President Ollanta Humala, reviewed progress made by his administration during his first year in office in furthering a process of social inclusion and outlined a number of new measures some of them directly related to management of natural resources and the importance of maintaining a close dialogue with communities in order to address conflictive situations which have taken prominence in several regions of the country.

7. The President put emphasis on the inclusion agenda which has resulted in new social programmes and expansion of existing ones. The new social protection initiatives have included *a* new non-contributory basic pension of around $90 a month for the elderly who lack other provisions, a state-run child-care programme, and more scholarships for poor students wanting a university education. A conditional cash-transfer scheme for poorer Peruvians is being expanded. All these programmes are under the *aegis* of the Ministry for Development and Social Inclusion (MIDIS) created in late 2011. MIDIS is the governing body of the National Development and Social Inclusion System (SINADIS) which consists of the Inter ministerial Committee on Social Affairs (CIAS) and includes public programs and projects related to development policies and social inclusion of ministries, regional governments and municipalities. The Ministry is the governing body of the system and is responsible for developing, planning, coordination, management, monitoring and evaluation of public policies aimed at reducing poverty, inequality, vulnerability and social risks.

8. *Mineral taxation*. A mineral taxation reform approved in September 2011 includes different pieces of legislation that together elevate the total tax take on the sector from 38.5% to 45.7%. Despite difficult negotiations, three main points were agreed. First, the government will charge a higher mining royalty calculated as a percentage of operating profits, instead of a percentage of revenue, as it is currently. This arrangement is seen as more progressive. Second, companies protected by tax stability agreements dating back to the 1990s will also be expected to contribute “voluntarily” 4-13% of their profits in a sliding scale). Third, all other companies will pay a royalty of 1-12% of profits and a regular tax of 2-8.4%.The measure is expected to raise a total of US$1.1 billion or 1.7% of estimated Gross Domestic Product (GDP) for 2011 per year, a six-fold increase over previous years. Under the approved scheme, the competitiveness of Peru’s important mining sector does not appear to be in jeopardy as judged by mining executives who participated in the negotiations.

9. *Prior consultation process*. Following considerable debate prior consultation legislation was approved by Congress. The consultation process contemplated in the law aims to obtain consent from indigenous communities on measures that will affect their rights and way of living. The introduction of the law, which complies with Convention 169 of the International Labour Organisation (ILO), is expected to help reduce the high number of ongoing conflicts resulting from investment projects in mining, energy and hydrocarbons. However, not all conflicts (of which there are more than 200 currently active) involve indigenous communities, and unless the State strengthens its overall mediation capacity, conflicts around the exploitation of natural resources are not likely to cease. There is also a risk that the consultation process becomes a hurdle for investors in natural resources, a key source of fiscal revenue and hard currency. Nevertheless, the law is an important step towards reducing levels of polarisation in the country.

10. In his speech to Parliament, the President not only reviewed progress but made a number of pronouncements on a multitude of issues. Relevant announcement included commitment to: (a) reduce poverty conditions from 27% to 15% by the year 2016, (b) improve the National Public Investment System (SNIP), (c) introduce a competitive awards mechanism to further entrepreneurial innovation, (d) implement reforms to the private pension system and, (e) increase salaries for teachers based on merit, a new training system and incentives for innovation.

11. National and political observers noted however, that in his speech the President omitted a specific reference to protests surrounding *Minas Conga*, which dominated political events after a brief post-election honeymoon period. Notwithstanding, the President indicated that: “We need to design and implement a new approach to the relationship that mining activities have with the environment and the exploitation of natural resources, based on a balanced management of the land and a rational use of water resources”. In this regard the Administration has introduced changes in the way it will address present and future conflicts by giving new authority to a High Commissioner for Conflicts and Sustainability within the Office of the Prime Minister (PCM) and establishing an inter-ministerial commission in charge of drafting a new legal framework for environmental impact assessments and compliance with environmental rules and regulations. In August 2012 the Council of Ministers announced that it had drafted a new law for the creation of the *Servicio Nacional de Certificaciones Ambientales para las Inversiones Sostenibles (SENACE)* under the *aegis* of MINAM.

12. **The economy and poverty**. Peru has been one of the best performing economies in Latin America enabling continuous recovery of Peru’s income per capita[8], growth on employment, decline in poverty rates and a small decline in inequality. It is estimated that between 2004 and 2010 about 4 million people exited poverty with the poverty rate falling by 17.3 percentage points from 48.6 percent to 31.3 percent. However, poverty rates in rural areas remain high. Six out of ten poor in Peru reside in rural areas, and extreme poverty is mostly a rural phenomenon. Over 60 percent of those living in the highlands or *Sierra* region of the country are poor.

13. The latest Staff Report on Article IV consultations with the International Monetary Fund [9] (IMF) underlines the fact that, discussions with national authorities which took place

[8] Income per capita US$ 4 200 according to the Atlas method and US$ 8120 in terms of international Purchasing Power Parity.
[9] February 2012, IMF Country Report No. 12/26.

late in 2011, focused on managing effectively challenging external conditions, including the scope, timing and sequencing of policies as well as possible enhancements of the macroeconomic framework. It was pointed out that achieving more social inclusive growth would need additional revenue mobilization to cover supplementary well-targeted social programs. High growth would require enhancing competitiveness and innovation, improving the business climate, investing in human capital and infrastructure, and further developing domestic capital markets while properly regulating the financial system.

14. Concerning poverty conditions the staff pointed out that sustaining poverty alleviation and achieving more social inclusive growth would require improvements in targeted social programs. Despite advances in reducing poverty (thanks to strong economic performance and rising employment opportunities), large regional disparities persist. Increasing the efficiency of public expenditures in education and infrastructure would reduce the regional gaps in physical and human capitals and bring about greater redistribution.

15. **Rural development.** Although progress has been made in advancing a rural development agenda mainly in terms of successes achieved by IFAD and World Bank funded projects implemented by Agro Rural, there are still outstanding limitations on agricultural and rural development in general. A substantive document prepared during appraisal of the World Bank ALIADOS project[10] underlined the fact that rural products are rarely linked to local markets primarily due to market failures caused by the presence of risk, uncertainty and lack of information, as well as the structural characteristics of rural areas among which are fragmentation of land ownership, limited cooperation between producers, organizational weakness, geographical dispersion, vulnerability to external shocks and climatic phenomena. This situation is compounded by the absence of public goods and services such as electricity, roads, highways and telecommunication services. Another limiting factor for rural development is the lack of appropriate public and private institutions at the national, regional and local levels.

16. The Administration's rural development strategy aims at promoting rural development in all regions of the country by enhancing productivity through innovation in poor regions. This strategy is being supported by initiatives by international multilateral financial institutions including IFAD, the World Bank and the Inter-American Development Bank (IDB). The IFAD DELOSI project to come on stream hopefully at the same time as this Project in the two selected watershed, will strengthen management of natural resources and support economic activities of the rural population. A possible expansion of the World Bank funded project ALIADOS may also contribute to the national strategy as well as support for the agricultural innovation system, continued implementation of a Water Resources Management Project and irrigation projects in the highlands would help improve water availability through the introduction of comprehensive river basin management approaches.

17. **The environment**. Peru is known as one of the world's 10 mega diverse countries, for its rich diversity in ecosystems, species, genetic resources and culture. According to the National Biological Biodiversity Strategy (ENBD), Peru's biodiversity is one of the pillars of its national economy, plays a direct role in sustaining a large part of the population, has an important role for culture, science and technology and provides essential environmental

[10] Agreda y Mendieta (2006) "Propuestas para una economía rural competitiva e incluyente, en el marco de un desarrollo territorial" Lima, CIES y Trivelli y De Los Ríos (2007) "Lineamientos y criterios operativos para implementar una estrategia de desarrollo rural para la Sierra" preparado para el MINAG en el marco del proyecto ALIADOS.

services in terms of water supply, soil fertility, air quality and carbon sequestration. Peru hosts about 25,000 plant species (10% of the world total) with 30% endemism. Of these, 4,400 species have known properties and are used by the population. Peru is also rich in ecosystem biodiversity with the major biomes being marine, mountain, forests, freshwater and agricultural ecosystems.

18. The most recent Country Environmental Assessment (CEA) (2006) indicates that if managed sustainably, Peru's profuse endowment of natural resources could become a pillar of an increasingly diversified and robust economy. Peru's fishing grounds and natural forests are among the most abundant in the world, while its ecosystems host a wide and highly endemic biodiversity. Each of these factors could support the development of commercially valuable products, broaden the range of activities fueling the country's economic growth, and generate significant revenues to support the country's social agenda. However, institutional and policy failures threaten the sustainability of Peru's natural resources and are largely responsible for leaving their potential fundamentally untapped. Other natural resources, such as water and cultivable lands, are under severe stress. The assessment ascertained that unless immediate actions are taken to modify the current patterns with which these resources are used, growing resource scarcity is likely to result in heightened social conflict and diminished contributions to the country's sustainable growth by the economic activities that are intensive in these factors, including agriculture.

19. The CEA concluded that although Peru has restructured its legal and regulatory landscape, undertaken numerous policy initiatives, and dramatically expanded and strengthened its institutional capacity for protecting and managing natural resources and environmental quality much needs to be done. The CEA noted that while the Government has made significant advances, such as establishing a system of national parks and forestry reserves that covers nearly a quarter of the national territory and phasing out leaded gasoline, it still faces the serious challenge of slowing and reversing environmental degradation.

20. **Strategic, institutional and legal frameworks.** Annex 1 of this document contains a detailed description of national, GEF and other multilateral agency's strategies. National strategies include: (i) National Strategic Development Plan 2021, (ii) National Strategy for Rural Development, (iii) National Water Resources Policy and Strategy, (iv) Agenda for Comprehensive Development of Rural Communities and the Fight against Poverty Conditions, (v) National Plan for Decentralization and Regionalization. Specific environmental strategies include: (i) National Environmental Policy, (ii) National Environmental Action Plan 2011-2021 and, (iii) the National Strategy for Biological Diversity. A recent national policy on water resources adopted by the *Acuerdo Nacional* has also been included.

21. National strategies are consistent with a myriad of international conventions of which Peru is a signatory including: the Convention on Biological Diversity; the United Nations Framework Convention on Climate Change; the Vienna Convention for the Protection of the Ozone Layer and Montreal Protocol; the Convention for the Protection of Flora, Fauna and Natural Scenic Beauty in the American Countries; the Convention on International Trade in Endangered Species of Wild Fauna and Flora; the Ramsar Convention on Wetlands; the Antarctic Treaty; the United Nations Education, Scientific and Cultural Organization (UNESCO) Paris Convention; the Basel Convention on the control of trans border movements of hazardous wastes and their deposits among others.

22. The present document further expands on compliance with GEF's biodiversity strategy and more specifically with Objective 2 of the strategy: Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes, Seascapes and Sectors. It also focuses on IFAD strategies on natural resources and climate change.

23. The Project's institutional and legal framework is described in detail in Annex 5. A full description of different agencies directly and indirectly involved is provided. Although not directly involved, a number of agencies are highlighted for the supporting roles they can provide. Among them are: the National Service of National Protected Areas, the National Meteorology and Hydrology Service, the Environmental Assessment and Oversight Agency, the Agency for Formalization of Informal Property and the National Institute of Statistics and Informatics.

24. The main legal framework encompasses: the National Protected Areas Law, the Water Resources Law and the Forest and Wildlife Law. Of significance is a proposal for a Promotion of Rewards Mechanisms for Ecosystem Services law aimed at promoting and regulating mechanisms to value and reward conservation and sustainable management of ecosystems as a source of ecosystem services. The Project will consider how best to mobilize the experiences and voices of men and women in the area of intervention to inform this proposal and any eventual legislation.

B. Rationale

25. **Rationale and Justification of DELOSI project.** The rationale of the project is based on the recognition of the need to address rural development beyond "the productivity vision" and the possibility to introduce successful approaches financed by IFAD in other areas of Peru while reinforcing new approaches include the development of local governments and other development actors.

26. In this direction, the DELOSI project is aligned with new policies for social inclusion, new directives for rural development and the country's National Strategy for Rural Development. The project is further aligned with IFAD's strategy for Peru, whose objectives include: (i) improved management knowledge and technical capacity of rural communities to further sustainable use and control of natural resources and physical assets; (ii) increased access to quality financial and non-financial services, public and private, and improved competitiveness and enhanced market linkages; and (iii) increased community involvement in decentralized policy and decision making processes by regional and local governments.

27. The development objective is to deepen the effectiveness, efficiency and relevance of public investments from central regional and local governments to improve the wellbeing of the rural population and increase the value of their natural, physical, human, social and financial assets in the project area.

28. Specific objectives of the DELOSI project include:

(a) Strengthening the capabilities and skills of groups and associations of the rural poor to participate fully in local development, increase productivity and competitiveness, including full access to citizenship;

(b) Transferring funds to groups of organized rural families and associations of rural men and women citizens for them to competitively: i) improve their natural resources and human settlements, ii) have grant funding to carry out profitable business ventures in a wide range of initiatives, and iii) mobilize savings and provide access to micro insurance access especially for rural women;
(c) Improving the management capacity of local governments to meet relevant demands of the rural poor, intended for self-development and leverage the resources available to municipalities working with the project ; and
(d) Strengthening the institutional capacity of the Implementing Agency to deepen a territorial and micro watersheds approach, mobilize additional private investment to complement project investments adequately implement an intercultural approach, institute monitoring and evaluation mechanisms and introduce a gender dimension in its projects and further strengthen its operational capacity at the district level.

29. Implementation of the DELOSI project includes three main components: (1) Valuing assets of small-scale farmers, (2) Providing access to financial and non-financial services and (3) Strengthening capacities for local development with territorial identity.

30. **Rationale and Justification of complementary GEF financing**. High Andean Ecosystems are recognized at different instances as strategic ecosystems that need to be preserved. The Convention on Wetlands of International Importance, especially as Waterfowl Habitat (RAMSAR convention) distinguishes High Andean wetlands found in *Paramo, Jalca* and *Puna* bioregions as strategic due to: a) their valuable and singular biodiversity, b) their function as regulators of water and c) for being a living space of many local and peasant communities and indigenous peoples. Similarly, these ecosystems are declared as fragile by the General Environmental Law (Law 28611) of Peru due to their strategic importance for biodiversity conservation and water provision.

31. In spite of this, High Andean ecosystems are not receiving enough attention and/or being adequately managed due to isolation, sparse population in surrounding areas, conservation biases[11] and the lack of resources to fund conservation measures. Furthermore, valuable species contained in these ecosystems and the critical environmental services, most notably water, that they provide can be reduced or even lost, if proper measures to stop environmental degradation such as overgrazing, deforestation, pollution and erosion are not put in place.

32. The lack of financial resources allocated for the conservation and preservation of these ecosystems reflects in part the non-recognition of the economic importance of High Andean ecosystem services (water, biodiversity, carbon capture, landscape,) to society. In the case of water, a critical resource for Peru's development, those who could contribute to their protection represented by upstream communities are not receiving a fair share for the services they help provide to downstream users including agricultural producers, hydropower companies, and cities.

33. In this regard, the MINAM believes that recognition of the economic value of environmental services through the creation of economic mechanisms that enable transfer of resources from ES beneficiaries to those whose actions contribute to their provision, can help achieve sustainable management of these ecosystems, and can reduce conflicts between resource users by procuring a fair share of the ES benefits and costs.

[11] Chávez, J. et al, (2005). Las Áreas Naturales Protegidas del Perú: Informe Nacional (INRENA, Lima)

34. On the other hand, national authorities have proposed passage and adoption of a Law for ES rewards that can provide the framework for developing and implementing PES schemes in Peru. However, the Law will need eventually to be ruled and regulated based on what has and is being demonstrated to work in practice. In this regard, pilot cases that have a replicable potential are determinant for informing the design of ES rules and regulations.

35. There are already some PES initiatives in watersheds of Peru. However, few of them have made substantial progress towards PES implementation and only one is considered operational (Moyobamba PES case[12]).

36. In spite of multiple efforts by several organizations to promote these economic mechanisms, there is still the need to put in place initiatives oriented at developing guidelines and capacities for negotiation and design of sustainable and feasible PES schemes from a financial, legal and institutional perspective. In this context, the main rationale of this Project is that by supporting implementation of PES schemes in selected watersheds, where technical advances towards PES design have been made, the Project may be able to focus on the institutional arrangements, actual investments in conservation activities, financial PES design, the application of the ES Law, and the identification of key aspects to be incorporated in the rules and regulations of the ES Law.

37. **Objective of GEF financing.** The GEF funds 'objective is to conserve and use sustainable High Andes ecosystems that provide environmental services, especially water, transferring economic resources from downstream beneficiaries to upstream rural communities providing them. The project will support conservation systems that assign economic value to critical environmental services allowing the transfer of economic resources from the private and the public sector. The Project will also assist the Government in the implementation of the legal and institutional framework for environmental services.

38. Thus, the Project intends to conserve, improve or use sustainably biodiversity and ecosystems in the central High Andes of Peru (peat bogs *bofedales*, *Polylepis* forests (*queñoales*) - high-altitude forests, *puna* –alpine grasslands) by investing, and promoting sustainable transfer of economic resources from the private and public sector for the conservation and sustainable use of these ecosystems. By engaging the private sector in general, but more specifically relevant water users, such as the agricultural sector, domestic users, industry, hydroelectricity generation and mining companies, the Project will contribute to improve the livelihoods of local communities and at the same time maintain or enhance the flow of ecosystem services. At the same time, assigning economic value to the protection of ecosystems will help reduce pressure over forest and wetland resources.

[12] The beneficiaries are the residents of the city of Moyobamba, represented through the *Empresa Prestadora de Servicios Sanitarios* (EPS) Moyobamba, who from 2009 have seen a rate increase approved by the National Sanitation Service -SUNASS. By channelling and management of this rate increase, the bidders receive non-monetary compensation (payment in kind) but technical support, training plans, environmental education, supplies and tools for the adoption of sustainable production practices. Although this mechanism is encouraging and promising, there are still difficulties and challenges that must be considered and resolved, for the proper development and functioning of this conservation tool. Perhaps the most important is the delay in development of policies and joint PSA with mechanisms referred to environmental standards. Other limitations that may be mentioned are: a) spatial targeting of PES in priority areas for ES provision, b) lack of continuity in the representation of farmers and, c) lack of a legal basis for the PSA.

39. **Complementarity DELOSI-GEF.** Significant linkages exist between DELOSI and GEF funding in term of introducing best agricultural practices along the production, transformation and marketing of agricultural products line, adequately managing productive resources under environmentally friendly development and building capacities of local organizations to participate in their own development while being able to democratically assign project resources.

40. The GEF Project would benefit from a number of DELOSI project activities mainly under **Component 1**, whose main objective is to value human, social, physical, cultural, and financial assets of rural producers in the project area by identifying, recording, capturing and disseminating good practice solutions that are functional for the livelihood strategies of beneficiaries, their families, associations and communities. Within this component the following two central activities are relevant:

41. (a) Strengthening capacities for natural resource management aimed at developing and strengthening the capacities and competencies, both among recipients and beneficiaries of associations and communities to manage innovation processes through the implementation of Territorial Management Plans with emphasis on natural resources in order to obtain expected results and impacts, and achieve sustainability and

42. (b) Funding of Territorial Management Plans. Through this sub component the project will finance activities that seek to increase the value of natural and physical assets of community groups and individual households at the same time reduce environmental risks and degradation of productive resources

43. **Under Component 2** the project will provide funding for allowing beneficiaries to access financial and non-financial services**.** Support will be provided for activities that seek to develop capacities of small-scale producers for managing local enterprises under a market approach with emphasis on entrepreneurship that will lead to better income through the use of a competitive funding mechanism. This mechanism is the means that will enable organizations to access resources for the procurement of technical assistance and overcome bottlenecks that restrict their production, processing and marketing activities.

44. Other significant activities under this component include: (i) Strengthening partnership and leadership of small-scale rural producers allowing them to share common interests in accessing technical support services under better conditions, improve their bargaining power, lower production costs and, confronted with greater market demand, add supply under quality standards. This sub component aims to develop skills and abilities so that producer organizations are integrated into second-level organizations while strengthening their market access, improving their knowledge and skills in response to higher levels of demand and, (ii) Strengthening community leadership to achieve more rapid transformation processes for which induction workshops for users, groups of women and community leaders have been considered.

45. **Component 3** of the DELOSI project aims at strengthening capacity for local development under a territorial approach which includes: (a) Capacity building of staff involved in local development aimed at building skills and competencies, both among recipients and beneficiaries as between technical teams and men and women leaders of associations and communities to manage innovation processes; (b) Strengthening partnerships in local governments by providing training through learning routes and *in situ*

training for mayors, municipal facilitators and staff of Local Economic Development Offices (ODEL), providing support to the formation of associations and economic corridors, and co-financing pilot initiatives developed by associations of municipalities. This activity includes the preparation of relevant teaching materials and; (c) Ownership of the Local Resource Allocation Committees (LRAC) Model which will strengthen municipalities so that they are prepared to carry out advocacy and monitoring of activities to be funded by the project and fund operation of the LRACs of municipalities thus ensuring that these operate in the long run and that decisions of these committees are made in a transparent manner and include accountability mechanisms.

Table 1: Summary of complementary reasoning (DELOSI and GEF)

DELOSI Project	GEF financing
Objective: to deepen the effectiveness, efficiency and relevance of public investments from central regional and local governments to improve the wellbeing of the rural population and increase the value of their natural, physical, human, social and financial assets in the project area.	**Additional objective:** to conserve and use sustainable High Andes ecosystems that provide environmental services, especially water, transferring economic resources from downstream beneficiaries to upstream rural communities providing them.
Components **Component 1.** Valuing assets of small-scale farmers. **Component 2.** Providing access to financial and non-financial services. **Component 3.** Strengthening capacity for local development through a territorial approach.	**Components** **Component 1.** Conservation and Sustainable Management of High Andes Ecosystems **Component. 2.** Implementation of the Institutional Framework for Environmental Services in Peru through the implementation of PES/CES Schemes.

1. **Project area DELOSI:** The project area includes the central and northern sierra and a small portion of the high rainforest region in the department of San Martín. It comprises provinces and districts in the departments of Lima, Cajamarca, Amazonas and San Martín. In total, the area covers 12 provinces and 85 districts with an area of 20,226.6 km².

2. **Project area GEF financing:** The area of intervention consists of two basins, Cañete and Jequetepeque. These basins were selected in consultation with national authorities and also coincide with the geographical coverage of the DELOSI project (See map of project area).

Table 2: Synergies between DELOSI and the GEF Grant

Potential GEF Grant proposals aimed at conserving and protecting environmental services in high Andean areas [13]	DELOSI (Detailed project description)	Complementarity
Recovery and conservation of terraces in the middle and upper segments of the Cañete river basin.	Rehabilitation of terraces for cultivation	Rehabilitation of terraces with DELOSI support may be part of incentives to be provided for conservation in the upper part of the basin when the beneficiary groups are the same ones and would commit themselves in conservation activities in the selected area with grant resources
Reforestation	Forestation or reforestation of areas subject to erosion or not protected by vegetation cover	Reforestation plans would be coordinated so as to avoid duplication of investments in terms of financing purchase of seedlings and establishment or nurseries among others.
Conservation and or recovery of pastures in high Andean areas	Harvesting and reseeding of native grasslands	Complementarity would be sought under GEF funded management and conservation of grasslands sub projects with incentives considered in both initiatives
Improvement of potable water supply to the Huancaya village	Improvement of community human settlements and housing aimed at enhanced living conditions and livelihoods	The DELOSI support could be used as an incentive in order to engage the community in participating in relevant conservation of biodiversity activities and hydrological services
Establishing a solid waste disposal system in the Yauyos provincial capital	Improvement of community human settlements and housing aimed at enhanced living conditions and livelihoods	This DELOSI initiative could also involve communities and farmer groups as incentive for meeting conservation objectives foreseen by the grant.
Strengthening the capacity for managing high Andean tubers.	Rehabilitation of terraces soil improvement and use of sustainable agro ecological practices	DELOSI may equally contribute to furthering grant objectives aimed at conservation.
Production and commercialization of high Andean products such as alpaca meat, trout, and Andean crops quinoa and kiwicha	Rehabilitation of terraces, soil management, livestock improvement and agro ecological management and furthering access to financial services valuing beneficiary assets including market access and partnerships	

[13] Extracted from a diagnostic study commissioned by MINAM as an input to Payment for Environmental Services design in the Cañete watershed

	Sustainable management of wildlife flora and fauna	Complementarity may be sought aimed at ensuring that DELOSI support initiatives that are relevant in terms of biodiversity conservation around the three main actions supported by the grant , mainly conservation and management of peat lands , relict forests and grasslands
	Biomass energy consumption alternatives such as firewood and manure by using ecological stoves	These DELOSI funded initiatives maybe considered as an incentive in order to engage the community in participating in biodiversity conservation activities and hydrogel services These sub projects could be part of strategy aimed at reducing threats to relict forests. The use of manure may also be utilized to improve management of natural pastures.

46. **Key expected outputs.** The GEF funds will focus on key activities/investments related to conserve and use sustainable High Andes ecosystems that provide environmental services, especially water, seeking as key outputs the following: i) improved livelihoods of small scale producers through better management and conservation of ecosystems; ii) increase of income through the strengthening and promotion of sustainable management practices and iii) environmental benefits. For further information please see table 3 and table 4 (Summary of associated benefits and GEF and Global Environmental Benefits)

Table 3: Summary of associated benefits (GEF)

Complementarity between DELOSI project and GEF funding
• Increased income of target population by 30% • Malnutrition diminished by 10 percentage points • 50% of project beneficiaries increase their food security
Expected associated benefits to be delivered by GEF funds: • Improved capacities for better use, management and protection of High Andes Ecosystems and provision of environmental services • A better understanding of the specific importance of conservation of natural resources and adequately management of ecosystems. • Improved management of natural resources (water, biodiversity, soil).

Table 4: Global Environmental Benefits (GEF)

Biodiversity - Enhanced protection and maintenance of biological diversity in the northern and central Peruvian highlands

Key indicators	Baseline situation	Expected post project situation	Method of measurement	Means of verification
Level of human impact and degradation of grasslands, forest and peat lands	Ecosystems within target areas under continued pressure from overgrazing and deforestation by local communities	Conservation and management of at least 5917 ha of high-altitude forests, 15 897 ha of grasslands and 2113 ha of peat lands in Cañete and Jequetepeque basins and improvement of water provision	Continuous biodiversity and hydrological monitoring	Assessment reports Midterm and end of the project evaluations
Available funding for watershed management of two basin headwaters	Non-existing funding for conservation and management of target areas	Funding for conservation and management of forests, grasslands and peat lands leveraged. Recurrent cost for biodiversity conservation and PES monitoring and evaluation covered by 2 endowment funds	Financial reports and bank statements. Income reports from Trust funds	Budget allocations of national, regional and local government agencies
Has with minimum impact and under formal protection	Grasslands, forests, and peat lands in target areas continue under threat	Grasslands, forests and peat lands at headwaters under community conservation and sustainable management	Evaluation of established technical procedures and progress	Midterm and end of the project evaluations. Local, regional and national governmental support
Comprehensive management of the grasslands, forests and	Watershed committees non- existent in the target areas	2 watershed committees established, properly organized and supported.	M$& E of watershed committees	Committee meetings Summary records Agreements
Specific legislation for ES protection and valuation	Non-existent ES national legislation	ES law and regulation	Consultation meetings proceedings and records Signed lists of participants Summary of agreements Final law and regulations proposal submitted for Ministry approval	

C. Country eligibility, ownership and drivenness

47. **Consistency with GEF.** The Republic of Peru is eligible for GEF financing in accordance with the GEF Instrument indicating that funding shall be made available for activities within the focal areas defined in the Instrument.

48. The Republic of Peru also meets eligibility criteria established by the relevant Conference of the Parties (COP) of the Convention on Biological Diversity and is eligible to borrow from the World Bank (IBRD) and is an eligible recipient of United National Development Programme (UNDP) technical assistance through country programming.

49. The Project is geographically relevant and strategic for the GEF, since most of the previous PES efforts are concentrated in forest ecosystems. The Project will work in High Andean ecosystems where there is an important overlap of areas that are relevant for both, water provision and biodiversity conservation. This holds true for many other Andean watersheds whose upper part ecosystems play a dual role in the provision and regulation of water benefiting millions of water users and in the conservation of biological diversity[14].

50. The Republic of Peru is eligible to receive funding under the GEF System for Transparent Allocation of Resources (STAR) system [15] under all focal areas, is a Party to the relevant Convention and meets the eligibility criteria decided by the COP to that Convention, is not a member of the European Union as of July 1st, 2010; and has had at least one national project in the past 5 years in any focal area.

51. In this sense, the Project is consistent with Objective 2 of the GEF-5 **Biodiversity Focal Area**, "Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes, Seascapes and Sectors". The Project also contributes to Objective 1 of the GEF-5 **Land Degradation Focal Area**, "Maintain or improve flow of agro-ecosystem services to sustaining the livelihoods of local communities", improving soil conservation and agricultural management in disturbed areas. Finally, the Project will have an impact on Objective 1 of the GEF-5 Sustainable Forest Management/REDD+ and Land Use, Land-Use Change and Forestry (LULUCF Strategy), "Reduce pressures on forest resources and generate sustainable flows of forest ecosystem services", through the reforestation of relict forests and the application of sound management practices for existing forests via mechanisms for environmental services. The Project is well linked with other global and regional strategies, for example with Strategic Objectives 2.1 and 6.6 of the **National Strategy for Biological Diversity**[16] (ENDB) and the **Regional Strategy for the Conservation and Sustainable Use of High Andean Wetlands**[17], contributing directly to its Objective 3 and indirectly to Objective 2.

[14] These High Andean Ecosystems are declared as fragile ecosystems by the General Environmental Law (Law 28611) of Peru due to its strategic importance for biodiversity conservation and water provision. Similarly are officially recognized by the RAMSAR convention due to *their valuable biodiversity, their function as regulators of water, and as living space of many local and peasant communities and indigenous peoples* that need to be preserved.

[15] http://www.thegef.org/gef/sites/thegef.org/files/documents/C.36.6%20STAR.FInal_.pdf

[16] CONAM (2001). *Perú: Estrategia Nacional sobre Diversidad Biológica*. Lima

[17] Estrategia Regional de Conservación y Uso Sostenible de los Humedales Altoandinos. Agua, Vida, Futuro (CONDESAN, 2008).

52. **Consistency of GEF funds to national strategies and policies[18].** The Project is fully aligned with national policies and strategies as already described and ownership and drivenness of this initiative is demonstrated by the considerable efforts being made by the Assessing, Valuing, and Funding of Natural Heritage Directorate of the MINAM in furthering implementation of PES schemes in the selected watersheds, in some cases with donor support. The MINAM is also actively involved in moving forward passage of a proposed Payment for Environmental Services Law.

Table 5: Socioeconomic benefits delivered by GEF

The GEF funds will contribute to the DELOSI objective of reducing the environmental vulnerability of poor rural families in order to increase their income, employment and food security, within a framework of gender equality and youth inclusion.	
Increased knowledge of target population, linked to the environmental services schemes, on the causes and effects of ecosystems degradation, allowing them to be able to respond.	A better understanding of the specific need of poor small producers and their formal and informal organizations regarding the direct environmental impacts they face;
Increased capacity of Government Agencies and rural users to manage environmental services to promote conservation of biodiversity.	Improved capacities for decision taking by the targeted users-beneficiaries, and key operating units within MINAG and other government bodies
Increased resilience of agriculture systems by promotion the implementation of environmental friendly agricultural practices.	Strengthened local participation around the management of natural resources and their relation to agriculture.
Improved management and conservation of natural resources (water, soil, biodiversity).	Increased incomes for rural poor families.

PROJECT DESCRIPTION

A. Project area and target group[19]

53. **Project area**. The area of direct Project intervention for GEF funding consists of two basins: Cañete and Jequetepeque. **The Cañete River basin** covers 29 districts, 5 in the province of Cañete, one in the province of Huarochiri and 23 in the province of Yauyos of the department of Lima. The total area is approximately 601.734[20] ha. These basins were selected in consultation with national authorities and are the result of changes made to the geographical coverage of the IFAD-funded DELOSI project which determined the non-inclusion of the department of Ancash where the Santa river basin considered in the PIM is located. **The Jequetepeque river basin** covers 29 districts of 6 provinces of the department of Cajamarca (Cajamarca, San Pablo, San Miguel and Contumazá; and

[18] For more information See Annex 12: Compliance with IFAD policies

[19] See Annex 2: Poverty. Targeting and Gender.

[20] Source: Recursos Hídricos en el Perú. Autoridad Nacional de Agua, 2012.

Pacasmayo and Chepén in the department of La Libertad. The total area of the basin is 393.545[21] ha.

54. The **Cañete Watershed** is located on the central coast of Peru covering an area of 6,017.34 km^2 in three provinces of the department of Lima: Yauyos, Cañete and Huarochirí and 29 districts in the three provinces. Altitudes range from sea level to 4,429 m. According to the physiographic configuration, the basin has two distinct areas: a mountainous section covering approximately 95% of the total area and an alluvial plain located in the lower part of the basin and covering the remaining 5%. Precipitation is directly related with altitude, the lower part of the watershed receiving less precipitation than the upper areas. In the lower part of the watershed, with altitudes ranging between 150-1370 m, average annual precipitation ranges between 7.8 mm and 24.8 mm. In the upper part of the watershed it rains throughout the year, with higher precipitation from January to March, and lower values from July to September. In the lower watershed, precipitation is minimal. Temperature varies from 20°C in the coastal desert to below 0°C above de 4000 m level.

55. Evaporation in the lower part of the basin presents higher values between December-April, while evaporation in the upper part of the watershed is higher during July-October in the dry season. The most important soils are paramasols and litosols with paramasols representing nearly 40% of the basin area.

56. The economy in the basin depends on agricultural and livestock activities mainly in the middle and upper part of the watershed, including breeding of South American camelids *llamas* and *alpacas*, while in the lower part of the basin, specifically in the Cañete Valley, agriculture is the most important economic activity, some of it of an export nature. The main crops include are corn, sweet potato, cotton, grapes, potatoes, cassava, and fruits.

57. The **Jequetepeque watershed** is located in northern Peru in the western part of the Andean mountain range with an area of 393 545 ha distributed in the department of La Libertad (Pacasmayo and Chepen provinces) and Cajamarca (Cajamarca, Contumazá, San Pablo, and San Miguel provinces and 29 districts in the selected provinces. Altitudes range from sea level to 4,188 m. Topographic configuration determines three ecological regions with diverse microclimates, including: a) Lower Jequetepeque, ranging from 0 to 225 m, formed by desert slopes and plains, b) middle Jequetepeque, from 225 to 600 m, formed by the arid and semi-arid Andes, with some seasonal tributary rivers and, c) upper Jequetepeque, from 600 m to the divide, formed by the Western mountain range, with climates from semi-arid to pluvial peri-glacial, with numerous lakes. Average annual rainfall in the upper part of the watershed is 500-1,000 mm. The lower part receives less than 200 mm. There is also a clear contrast in precipitation distribution over time. In the upper part of the watershed it rains throughout the year, with higher precipitation from January to March, and lower values from July to September. In the lower part of the watershed most of the precipitation falls during the hottest months. Rainfalls are intense, sometimes with catastrophic results. The El Niño climatic phenomenon has important effects on the lower part of the watershed. Temperature varies from 23°C in the coastal desert (400-800 m) to 3°C in the Andean *paramos* (4,000 m). Evaporation varies from 200 mm in the valley up to 1,500 mm in the Andean zone. Relative humidity ranges from 80 to 90% in the valley to 60% in the upper part of the basin. Basin soils include luvisoles and andesoles.

[21] Source: Idem - Recursos Hídricos en el Perú. Autoridad Nacional de Agua, 2012.

58. The economy of the basin is mainly agriculture including cultivation of wheat, corn, barley, peas and potatoes. In the lower part the main cops are rice and corn. Livestock breeding is also an important economic activity in the upper part where cows are kept for milk production. Other activities include handicrafts, mining and forestry.

59. **Natural Protected Areas in the watershed.** The Project area includes two natural protected areas which are part of the National System of Protected Areas, SINANPE**:** a) the Nor Yauyos Cochas Landscape Reserve and b) the Sunchubamba Hunting Reserve.

60. **Nor Yauyos Cochas Landscape Reserve** was established in 2001 covering around 35% of the total area of the basin (2106.069 km$^{2)}$. A total of ten types of vegetation have been identified principally High Andean grasslands. There are a great variety of birds and in lesser extent mammals, fish, reptiles and amphibians. Some of the most representative birds found in the reserve are: *Podiceps spp.*, ("zambullidores"), *Egretta thula*, *Casmerodius albus* y *Nycticorax nycticorax* ("garzas"), *Plegadis ridgwayi (*"yanavico"), *Chloephaga melanoptera (*"huallata"), *Bubo virginianus (*"lechuza"), *Vultur gryphus (*"cóndor") and *Glaucidium brasilianum (*"paca paca"). According to Appendix 1 of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), two species found at the reserve are in danger of extinction: *Vultur gryphus* ("cóndor andino") and *reailurus jacobita (*"gato andino").

61. The **Sunchubamba Hunting Reserve.** The reserve, established in 1977, is located in the department of Cajamarca, province of Cajamarca with a surface of 59 735 hectares. Present flora includes: molle (*Schinus molle*), aliso (*Alnus jorollensis*), chamana (*Dodonea viscosa*), llaulli (*Barbadesia dombeyn*), Kikuyo (*Pennistum elandestinum*), grevillea (*Greville robust*), pine tree (*Pinus rdit*) and cyprees (*Cupressus sp*.). The following fauna is present in the reserve: partridge (*Nothoprocta pentlandiio*), the turttledore (*Metriopelia melanopter*), fox (*Pseudalopex culpaeus*), wild rabbit (*Sylvilagus brasiliensis*), skunk (*Conepatus sp*), zariguellas (*Didelphis sp*.), vizcacha (*Lagidium peruanum*) and, falcons (*falco fermoralis).*

62. **Target group.** According to the 2007 Census of the National Institute of Statistics and Informatics (INEI) the population of the Cañete Basin totalled 97,101 inhabitants, with a population projection of 106,880 habitants for 2012. Approximately 75% of the population lives in Cañete province, while 23% live in Yauyos and 2% live at Huarochirí provinces.

63. On average, the Cañete Basin has a rural population of 26.89%. In the case of the province of Cañete its rural population accounts for 21.69%, while in the province of Huarochiri and Yauyos it accounts for 18.20% and 48.46% respectively. It is important to state, that most of the urban population still maintains relationship with the rural sector. As direct Project interventions in the upper part of the basin it can be ascertained that Project activities will directly benefit the rural population mainly in Yauyos province.

64. **Poverty levels** reach 31.7%, being Yauyos province the most poverty struck. In this province, the districts of Tupe and Yauyos exceed 60% of poverty and have a 31.1% and 27.6% respectively of extreme poverty. Other districts such as Huancaya, Vitis and Azangaro also show high rates of poverty. On the other hand, in the lower part of the basin of Cañete province, the poorest district is Pacaran with 41.1%. This data further confirms that potential beneficiary families in districts where the Project would directly intervene are considered poor or extreme poor. These figures are consistent with the overall poverty

figures for Peru which indicate that the most severe poverty conditions are to be found in the highlands.

65. According to INEI, the population of Jequetepeque River Basin is approximately 479 755 inhabitants: 373,573 in the department of Cajamarca and 106,182 in the department of La Libertad.

66. Most rural inhabitants are settled in the department of Cajamarca with an average of 68%, while La Libertad has only 13%. The provinces of the department of Cajamarca with larger rural population are San Miguel and San Pablo with 84% and 85% respectively where direct Project activities will be implemented.

67. The Cajamarca department also has higher poverty levels, being the poorest districts Cospán (87%), Assumption (86%), Chetilla (85%), Jesus (83%), Guzmango (78%), San Juan (75%), Cupisnique (73%) and Calquis (72%), of which Cospán, and Assumption Chetilla exhibit extreme poverty of more than 50%. On the other hand, in the lower part of the basin of the Department of La Libertad, the poorest districts are Guadalupe and Chepen.

68. The following table provides relevant information on a province-wide basis. As can be seen the areas of direct Project interventions are essentially rural and poverty and extreme poverty levels are high mainly in the highlands region of the department of Cajamarca.

Table 6: Population and poverty levels

Department	Provinces	Population	% Urban	% Rural	% Poverty	% Extreme poverty
Lima	Cañete	82,711	84.0	16.0	31.0	6.7
	Huarochiri	1,621	67.7	32.3	23.9	6.4
	Yauyos	22,548	57.2	42.8	40.1	15.0
Cajamarca	Cajamarca	284,066	55.3	44.7	70.6	40.1
	Contumaza	28,772	42.4	57.6	62.7	31.7
	San Miguel	36,850	16.2	83.8	57.0	21.5
	San Pablo	23,885	15.5	84.5	53.5	21.4
La Libertad	Chepen	48,318	81.8	18.2	40.1	8.1
	Pacasmayo	57,864	92.9	7.1	24.3	5.7

69. **Social organization.** Rural inhabitants, who are fundamentally small-scale subsistence farmers, are organized around Peasant Communities[22] of which there are 12 in the Cañete river basin and 8 in the Jequetepeque river basin. It is estimated that a total of

[22] Peru's legal framework recognizes ownership, possession rights, leaseholds, and communal rights to peasant and native community lands. Land ownership rights may be private, communal, or held in partnership. In fact, rural and native community lands are usually held collectively and are known as *comunidades*. This tenure form is used by both indigenous people and peasant communities (Constitution of Peru 1993; Lastarria-Cornhiel and Barnes 1999). The actual management and administration of communal land depends on local conditions including production, resources, ecology, and historical use patterns (IDB 2007; Burneo de La Rocha 2005; Fuentes and Wiig 2009). The general assemblies of communities have the power to give, rent, sell or mortgage community lands. The assemblies in coastal communities must have a 50% majority support for their actions; in the highlands and the *selva*, assemblies must have a two-thirds majority (IDB 2007; Fuentes and Wiig 2009).

8618 families are members of these communities based on updated information in 1998 of data contained in the 1994 agricultural census. This data is subject to change as a new Agricultural Census will be undertaken in September 2012 that will allow for a more precise estimate of potential beneficiary families within these communities. The importance of these communities and their direct linkage to conservation efforts is due to the fact that the selected ecosystems are generally managed under common property regimes in which the role of Peasant Communities is of great importance.

70. **Specific targeting and direct beneficiaries for GEF funding.** Direct Project beneficiaries will be determined by a combination of geographic self and direct targeting among groups settled in 21 districts: 13 in the province of Yauyos, 3 in Cajamarca, 3 in Contumazá and 2 in San Miguel. Based on census information and the need to address specific conservation of peat lands, grasslands and relict forests by providing incentives to communities for that purpose it has been possible to determine that a total of 1322 rural families will benefit in the Jequetepeque watershed, and 842 rural families in the Cañete watershed.

71. **Gender dimension**. On average, the female presence in the basins is 48%. In rural areas the main economic activity is agriculture, which is led by men however; other economic activities like trade, manufacturing, education and other services are led by women, representing 40% of the economically active population (EAP). The illiteracy rate for women ranges from 6.6% and may reach 14% in higher areas of the basins. Among the total population without identity documents, 56% to 70% are women. Approximately 30% of household heads are women and the fertility rate is two children. The Project will pay particular attention in ensuring that women-headed households participate actively in implementing conservation sub projects in both basins.

B. Project development objective

72. The **Project's objective** is to protect and use sustainably High Andes ecosystems that provide environmental services, especially water, by transferring economic resources from downstream beneficiaries to upstream rural communities providing them. Specific objectives are (a) the conservation and sustainable management of High Andes ecosystems, and (b) the improvement of the institutional framework for ES in Peru through implementation of PES/CES schemes.

73. **Impact indicators.** Selected impact indicators under the GEF financing comprise:

- Increased income of target population by 30%
- Malnutrition diminished by 10 percentage points
- 50% of project beneficiaries increase their food security

C. Components / Outcomes[23]

74. In addition to Project Management (Component 3), the GEF project will be executed around two key components:

[23] See Annex 4: Detailed Project Description.

- Component 1: Conservation and Sustainable Management of High Andes Ecosystems
- Component 2: Improvement of the Institutional Framework for ES in Peru through Implementation of PES/CES schemes

75. **Component 1. Conservation and Sustainable Management of High Andes Ecosystems.**

76. **Objective:** The objective of this component is to further the conservation and/or sustainable use of at least 23,866 hectares of High Andes ecosystems and landscapes, including relict forests, *bofedales* and other wetlands, using PES/CES schemes centred in better water management and biodiversity conservation.

77. **Intervention approach.** Aligned with the agricultural productive activities funded under the DELOSI project[24], the GEF fund's intervention approach under this component will identifies some key measures that will aim to: i) creating and strengthening human and institutional capacities on conservation and proper management of ecosystems; ii) supporting environmentally friendly- agricultural productive activities that would result in a better delivery of water and biodiversity conservation and iii) promotion of sustainable forest and grassland management, including river bank protection will be paramount in better protecting biodiversity and providing water.

78. **Activities.** Implementation of this component entails the provision of incentives to small-scale farmer associations and peasant communities located in the upper parts of the basins. In essence the Project will finance the conservation and management of three of the main High Andes ecosystems or vegetation cover types: peat lands, grasslands, and forests, whose proper care and use can make the upper basin able to provide water to users at lower elevations. In order to fulfil these goals, conservation and management community plans, with specific activities for each ecosystem have been considered.

79. Implementation of this component will be undertaken using a phased approach including the following activities:

- 1.1 Consultations and site selection
- 1.2 Sub-project implementation
- 1.3 Biodiversity and hydrological monitoring and
- 1.4 Communications and information dissemination to be funded under Component 2

80. **1.1 Consultations and site selection.** During a first phase, local consultations will ensure the active participation of local actors and their inputs and feedback during the life of the Project to ensure sustainability.

81. Component design has considered the fact that most of the High Andes ecosystems are poorly studied and understood, for which an initial evaluation and baseline definition will be undertaken to adequately monitor and assess activities of the Project as a whole. A better knowledge of the potential intervention sites will also allow for prioritizing specific sites in order to better allocate Project funds looking for the best possible investment returns mainly

[24] Linkages with the IFAD-funded DELOSI project may allow small-scale farmer associations and in particular peasant communities to realize the benefits of undertaking agricultural development, by improving their access to markets and adding value to high Andean products and services.

in terms of higher water production and biodiversity conservation. Evaluation, baselines and prioritization will be done in sequence using modern technology Global Positioning Systems (GPS), Geographic Information Systems (GIS), satellite images and maps) with adequately organized and timed field work and control. In these activities support from local agencies such as Agro Rural, regional and local governments, universities and Non-Governmental Organizations (NGOs) will be crucial. After the definition of the broad Project prioritized areas, specific intervention areas will be defined with participation of local actors and communities.

82. **1.2 Sub-project implementation**. Having identified specific intervention areas it will be possible to undertake implementation of sub projects in accordance with operational modalities contained in a Project Implementation Manual (PIM). In brief, to start execution of a sub-project, beneficiary organizations will prepare a sub-project proposal and operational plan for approval by a Project Approval Committee constituted under A*d hoc* Basin Committees to be established. Once approved beneficiary organizations will sign a Sub-Grant Agreement with PROFONANPE as administrator of Project funds. PROFONANPE will transfer to beneficiary organizations approved funds, according to a work plan to be attached to the agreement. To this end, beneficiary organizations will open a specific account in a recognized bank. Further operational details are sketched out in Annex 11 and in detail in the draft PIM available in the Project Life File in Spanish.

83. Sub-projects for conservation of **peat lands** could include the creation of artificial ponds as well as the use of re vegetation techniques to stimulate the recovery of cushion and other typical vegetation types. **Grassland conservation** sub projects could include zoning of pasture for recovery and sustainable use. Protection of patches of grassland from cattle grazing would allow for recovery in cover density, as well as in biodiversity. Support will be provided for assessing and controlling carrying capacity of land parcels and providing support to increase productivity (better fodder, animal health) and access to market. **High Andean forests** sub-projects could include the use of the “protection forest” concept understood as maintenance of forests biodiversity which is intimately related on the one hand to the species and community-related ecological needs of flora and fauna living in the forest and on the other hand the disturbance regimes of the specific forest type. Eligibility criteria for participants will include priority given to community groups located in biodiversity and/or hydrological priorities areas, and led by women and/or youth.

84. **1.3 Biodiversity and hydrological monitoring**. Component implementation will also include biodiversity and hydrological monitoring to be performed across the board with some specific indications for each ecosystem. Peat lands vegetation cover vitality and density monitoring will be performed using simple short vegetation inventory equipment similar to that commonly used for grasslands, by means of a 1m x 1m square frameworks for counting diversity of species and cover density, looking for relative improvement or degradation of the peat lands vegetation since the baseline definition and among the different working sites. Grasslands vegetation cover vitality and density monitoring will be performed using simple grass inventory equipment similar to that used for peat lands. Forests vegetation cover vigour, density and natural regeneration monitoring will be performed using forest inventory methods and installing permanent plots to check the evolution of the forests vegetation since the baseline and among the different regions.

85. Hydrological function monitoring will address the need to determine basic water balance information on rainfall and discharge, as well as measurements of soil infiltration capacity, soil moisture, soil erosion and sedimentation. A set of automatic meteorological and

hydrological stations for continuous precipitation and discharge measurements will be implemented at each upper basin.

86. **1.4 Communications and information dissemination to be funded under Component 2.** Close collaboration with the DELOSI project (Component 1) will support the use of good agricultural practices by local farming communities such as: reducing erosion through hedging, ditching and terracing, application of fertilizers at appropriate moments and in adequate doses, maintaining or restoring soil organic content, by manure application, crop rotation, rainwater harvesting and efficient water use; assistance with access to market and rural finance (Component 2) may be provided as incentives for the adoption of these good practices.

87. **Outputs and outcomes.** The Project will achieve the following environmental benefits: (i) conservation of 5,917 hectares of high-altitude relict forests, (ii) conservation and sustainable management of at least 2,113 hectares of *bofedales (peat lands)*; and (iii) conservation and sustainable use of at least 15,837 hectares of other wetlands and high-altitude grasslands (*pajonales*, *páramos*).

88. **Expected environmental benefits** These achievements will contribute to the following global environmental benefits: (a) protection of species that are important for maintaining biological diversity; (b) conservation of important and significant natural habitats for in situ conservation of biological diversity, including endemisms, vulnerable species and threatened ecological communities and;

Table 7: Summary of Component 1
Conservation and Sustainable Management of High Andes Ecosystems

Objective: The objective of this component is to further the conservation and/or sustainable use of at least 23,866 hectares of High Andes ecosystems and landscapes, including relict forests, *bofedales* and other wetlands, using PES/CES schemes centred in better water management and biodiversity conservation.

Intervention approach:

- creating and strengthening human and institutional capacities on conservation and proper management of ecosystems;
- supporting environmentally friendly- agricultural productive activities that would result in a better delivery of water and biodiversity conservation and
- promotion of sustainable forest and grassland management, including river bank protection will be paramount in better protecting biodiversity and providing water.

Expected environmental benefits:

- protection of species that are important for maintaining biological diversity;
- conservation of important and significant natural habitats for in situ conservation of biological diversity, including endemisms, vulnerable species and threatened ecological communities

Main Activities	Key Target indicators
1.1 Consultations and site selection 1.2 Sub-project implementation. 1.3 Biodiversity and hydrological monitoring 1.4 Communications and information dissemination	• 110 Community groups formed and trained (30% led by women) • 110 Subproject proposals developed, funded and implemented • 5917 has relict forests (26 subprojects) • 2113 has Peat bogs (14 subprojects) • 15837 has grasslands (70 subprojects)

89. **Component 2**, **Improvement of the Institutional Framework for ES in Peru through Implementation of PES/CES schemes.**

90. **Objective.** The objective of this component is to further the "economic retribution" concept at the national and selected watershed levels. This component will assist in setting the institutional framework and supporting implementation of the concept in the two watersheds selected. Additionally the authorities have suggested that complementary studies in the Santa River basin[25] will be undertaken, which had been considered in the PIP although no scheme will be implemented during the life of this Project as the department of Ancash was excluded from the coverage of the DELOSI project. Consulant services have been considered for the preparation of additional studies on hydrological services in the basin.

91. **Intervention approach.** Specifically the GEF funds will assist in setting the institutional framework and supporting implementation for environmental services in the two watersheds selected, including the execution of a communication strategy that will address the needs of different actors.

92. **Activities**. Implementation of this component includes four main sets of activities:

- 2.1 Preparatory activities for setting up the PES schemes
- 2.2 Creation of PES schemes
- 2.3 PES monitoring and evaluation and
- 2.4 Development of Rules and Regulations for the Law on Ecosystem Services

93. **2.1 Preparatory activities for setting up PES schemes.** This preparatory phase will ensure that stakeholders are aware, understand and agree on Project objectives, activities and expected outcomes. More specifically this activity includes developing a communications

[25] **Santa River Basin.**The Santa River basin is located in all or parts of Bolognesi, Recuay, Huaraz, Carhuaz, Yungay, Huaylas, Corongo, Pallasca and Santa provinces in the department of Ancash and Santiago de Chuco, Huamachuco in the department of La Libertad. Geographically, the basin is located between 10°08 'and 8°04' South Latitude and 78º38'and 77°12' West Longitude. In terms of altitudes it extends from sea level up to the line of summits of the Western Cordillera of the Andes, whose highest points are above 4,000 meters, the highest being the Nevado de Huascaran. From a social point of view a considerable number of the area population are organized in Peasant Communities of which there 160 of them. Environmental considerations: Recent studies by CAN, SERNANP and IUCN on the lower, medium and higher levels of the basin have identified 41 ecosystems representing 64% *pajonales* 19% forests including natural and introduced species 15.4 % shrubs and 1.6 % bogs. These ecosystems fulfill essential functions for the populations inhabiting the basin providing vital environmental services including carbon capture and storage, biodiversity, hydrological services and landscape beauty. Hydrological services are a central element of these services as these can be prioritized based on community needs. This seasonal variability in the amount and quality of water derived from the hydrological ecosystem services may include:(Quintero, 2010): (i) Regulation of the hydrological cycle,(ii) Maintenance of water quality, (iii) Aquifer recharge and (iv) Regulation of microclimate.

The mountaintops and glaciers of the Cordillera Blanca, perform functions for capture and storage of water in glaciers, lakes and groundwater bodies. Since the Cordillera Blanca is the highest and vast chain of high tropical glaciers worldwide, the hydrological regime of the Santa River basin has a marked influence on everything under the current process of global warming.

strategy and obtaining formal ratification of actors regarding their participation in PES schemes.

94. **Communications strategy.** The strategy will aim at disseminating Project objectives, plan of activities and ultimate goal of the Project. This strategy will be implemented throughout the life of the Project in order to communicate results and receive constant feedback from stakeholders in order to facilitate project adjustment when required. The strategy should allow feedback from local stakeholders that participate in and/or who will benefit from Project activities. Preparation of the strategy will go hand in hand with the mapping of main stakeholders to inform, refine and adjust Project activities and outputs as well as to discuss with them, Project achievements and lessons learned. Messages will be defined and materials prepared and disseminated.

95. **Stakeholder's commitment to PES implementation.** During this activity the Project will work towards achieving formal agreements with beneficiaries and providers as a prior step to constitute an institutional basis for PES establishment and decision-making in the long run. At this stage, formal agreements ratifying the stakeholder's intention to participate in subsequent activities for PES design and establishment, and provide formal evidence that they are aware of the Project and PES objectives will be pursued. This activity would not need to be undertaken in case formal agreements are achieved prior to Project start-up.[26] The latter could be a Letter of Intent (LOI) duly signed between stakeholders and MINAM. In these LOI's monetary contributions to the PES will not be included, as this may be agreed upon during the actual negotiation process. In addition, during this preparatory phase the Project will determine the land tenure status properly verified in the field and in the respective land titles offices of the Organization Responsible for Formalizing Informal Property (COFOPRI).

96. The expected output of this activity will be formal ratification by actors regarding their intent to participate in PES design and implementation processes. Notwithstanding, the agreements to be signed for implementation of sub-projects will clearly state that funding for those sub projects was being provided based on PES concepts.

97. **2.2 Creation of PES schemes.** This activity includes: Setting up institutional platforms for PES negotiation and scheme operation

98. **Setting up institutional platforms for PES negotiation and operation.** The establishment of PES schemes requires an institutional platform with the following functions: a) bringing together representatives of ES providers and beneficiaries, MINAM, National and Local Water Authorities, and Project representatives to discuss and agree on PES objectives, justification and conservation targets; b) negotiating monetary contributions from ES beneficiaries; c) agreeing on operational design of PES and subscribing such agreements; d) making decisions on PES operations and investment; e) monitoring and evaluation of PES performance In order to further the establishment of these platforms the Project will facilitate and support the creation of **Watershed A*d hoc* committees** as the main institutional platform in each Project site as described in the organizational framework section. The Project will build on existing initiatives if in place to constitute Watershed Water Resources Council (CRHC in Spanish) whose creation is contained in the Water Resources

[26] This is a step forward already recognized as needed by MINAM in the Cañete watershed, so might be probable that is implemented before Project's start up.

Law. In the event that no progress has been made in establishing these Councils at Project start-up these *ad hoc* watershed committees could be considered as pioneering efforts.

99. **Design and operation of PES schemes[27].** The Project will design a PES operational structure, procedures and governance rules. To this end the Project will take into account the results of the analysis of the legal framework and legal recommendations for PES implementation conducted by the Peruvian Society of Environmental Law (*Sociedad Peruana de Derecho Ambiental* SPDA) and commissioned by MINAM. The Project will carry out a specific legal study if required. The watershed *ad hoc* committees will act as decision-making body especially regarding: approval of PES investment, agreements regarding contribution from ES beneficiaries, and M&E of PES schemes. For this, the Project jointly with the Assessing, Valuing and Funding of Natural Heritage Directorate of the MINAM will propose specific procedures and operational manuals for the PES schemes to be shared with the watershed A*d hoc* committees for their endorsement. These manuals will include procedures for the acceptance of new participants in the committees considering the relevance of their participation in the implementation of the PES schemes. They would also include procedures to elect and clarify the roles of committee representatives and authorities. The manuals will clearly designate the conservation priorities in the watershed and the type and combination of conservation and management activities to be financed with PES investment and DELOSI project incentives.

100. Project design includes establishment of Trust Funds for each of the selected basins. These Trust Funds will be financially managed by PROFONANPE. Initial financial contributions will be deposited in a commercial bank that will invest them in moderate-risk market options. The bank will be selected based on a competitive basis, where the most profitable and convenient proposal in agreement with MINAM. Project design has considered combining two modalities: 1) an Endowment Fund and 2) a Sinking Fund. The Endowment Fund portion will be capitalized with GEF contributions of US$1M per Trust Fund. Revenues from the Fund will be used to cover recurrent costs associated to PES M&E and biodiversity conservation, in order to guarantee the sustainability of these two fundamental aspects and for which it is more difficult to leverage funding from local ES beneficiaries.

101. This contribution will also be used to leverage additional funding from other ES buyers such as hydropower and mining companies, farmers, urban water users, other industries, philanthropic organizations, other donors and local and regional governments. Funds from other ES buyers would be used to constitute the sinking fund portion –unless the ES buyer prefers its contribution to be allocated to the endowment portion. The sinking fund would be created with the purpose of implementing conservation actions in priority areas for the provision of ES. It is expected that agreements with ES buyers, especially with those who permanently benefit would be in a long-term or even perpetual basis. In this regard the sinking fund would be sustainable over time. This mixed design, -endowment and sinking, of the Trust Funds is expected to allow sustainability to the PES scheme by proving a permanent sustainable financial platform (via the capital for the endowment fund) and recurrent permanent payments via contributions to the sinking fund portion. On the other hand, this design would provide the Fund with the capacity to cover required immediate investment for conservation priorities through the sinking fund that cannot wait until the endowment fund growth is enough to cover it.

[27] MINAM will ensure that these activities are complementary and fully integrated to on-going dialogues with stakeholders for the creation of PES/CES schemes in the selected watersheds.

102. **2.3 PES Monitoring and Evaluation.** The Project will fund a number of M&E activities including the design of the system and its operations.

103. **Design of PES M&E system.** Considering that most of the current PES schemes in watersheds in the Andean region lack a proper M&E system that is able to measure and evaluate the impacts and progress on ecosystem services provision and biodiversity conservation and that there are no initiatives to measure the effects of PES schemes on poverty conditions, the Project will attempt to fill this gap and contribute with experiences towards the implementation of "PES best practices" including proper M&E systems. Project staff and personnel of the Assessing, Valuing and Funding of Natural Heritage Directorate of the MINAM will develop a monitoring and evaluation system for the PES schemes.

104. **System operational parameters**. The PES M&E system will address three aspects: Financial and operational PES performance, quality of PES investment and poverty targeting. Regarding financial performance procedures these will be part of the agreement to be signed with PROFONANPE and its Asset manager and will state that after Project completion, PROFONANPE would continue to report the financial status of the PES schemes. Financial reporting will include the financial status and market performance for both, endowment and sinking funds. The operation status of PES schemes will also be monitored by tracking the status of formal agreements between PES contributors (ES beneficiaries besides GEF) and the PES fund, and by the performance of the watershed A*d hoc* committees.

105. A set of indicators will be developed to assess the quality and degree of investment with PES. Indicators to assess the degree of investment will include coverage (ha) of implemented activities (conservation and management activities, including those funded by the Project with respective geographical coordinates. To assess the quality of investment, the Project will develop short and long-term indicators. Short-term indicators will allow future PES managers to evaluate with proxy indicators the impacts of PES activities on biodiversity conservation and ecosystem services provision (e.g. indicators to measure compliance of technical recommendations for effective conservation and sustainable management of ecosystems and species). Long-term indicators will be expected to aim at evaluating the actual impacts on ecosystem services delivery. In order to measure some of the most important long-term indicators relevant for these PES schemes, a hydrological monitoring system will be designed and implemented to measure the impact of land use/management practices in the watershed as detailed earlier term. Bearing in mind poverty conditions of the rural population in the selected watersheds the Project will monitor who is receiving PES benefits and will closely collaborate with the monitoring activities of the IFAD funded DELOSI project using IFAD developed instruments for assessing changes in poverty conditions.

106. **2.4 Development of Rules and Regulations for the Law on Ecosystem Services.** The Project will support and fund developing the institutional framework for environmental services in the country helping to implement the Law, once approved, and allow MINAM to lead the preparation of rules and major guidelines for its application. In order to achieve these objectives the Project will assist in carrying out activities as part of the prior consultation and informed consent process for enactment of the legislation and disseminating information regarding the contents of the ES Law, including proposed Rules and Regulations. Throughout the process the Project will provide feedback to MINAM from civil society including local communities, indigenous people and productive sectors.

107. **Outputs and outcomes.** The Project will achieve the following environmental benefits: (i) legally-viable PES schemes designed and agreed by watershed ad hoc committee, ii) Rules and regulations of the Peruvian ES legislation drafted.

108. **Expected environmental benefits** These achievements will contribute to the following global environmental benefits: (a) regulation and provision of ecological services, mainly water for different but critical uses and b) conservation of natural ecosystems currently under represented in the national system of protected areas.

Table 8: Summary of Component 2
Improvement of the institutional framework for Environmental Services

Objective: to further the "economic retribution" concept at the national and selected watershed levels. This component will assist in setting the institutional framework and supporting implementation of the concept in the two watersheds selected.

Intervention approach:

- Setting the institutional framework and supporting implementation for environmental services in the two watersheds selected
- Execute a communication strategy that address the need of different actors

Expected environmental benefits:

- regulation and provision of ecological services, mainly water for different but critical uses and
- conservation of natural ecosystems currently under represented in the national system of protected areas.

Main Activities	Key Target indicators
• Preparatory activities for setting up the PES schemes • 2.2 Creation of PES schemes • 2.3 PES monitoring and evaluation and • 2.4 Development of Rules and Regulations for the Law on Ecosystem Services	• Communication strategy designed and implemented • Two watershed ad committees established and operational • Two trust funds created and operating • Working group on PES law rules and regulations established and recognised by the MINAM

D. Lessons learned and compliance with IFAD Policies[28]

109. **Lessons Learned by IFAD.** IFADs experience and lessons learned regarding managing of natural resources covers more than 15 years working mainly in the highlands region of Peru starting with implementation of the IFAD funded Management of Natural Resources in the Southern Highlands project (MARENASS), experience which has been scaled up through other projects in similar geographic localities including areas in the northern highlands of the country. As a result of past and on-going experience it is possible to conclude that interventions in this particular area should: a) make families and communities the centre of activities, with due respect for their own proposals, potential and abilities, b) pay due consideration to the spatial dimension of development as community

[28] See Annex 3: Country performance and lessons learned.

members consider that natural resources begins with their own dwellings and extends outward from there to encompass the garden, animal corrals, farmland, irrigation systems, organic production and pastures, c) combine a number of proven participatory tools in a comprehensive manner to ensure success of interventions including: (i) farmer-to-farmer training in the use of technological alternatives for natural resource conservation and recovery; (ii) transfer of financial resources to communities to enable them to contract for technical assistance services and thus develop a market for such services and; (iii) use methodologies, which entail the organization of competitions for the dissemination and extension of technological alternatives.

110. A Project Completion Reports (PCR) of recent IFAD funded projects have further indicated the need to strengthen territorial planning and management by citizens while strengthening their skills and capabilities to manage their demands for solutions before regional public bodies.

111. **Lessons from GEF funded projects.** A GEF review[29] based on an analysis of 42 GEF funded projects in which PES was the core objective of these projects or there was an explicit PES component in the project's design has underlined than there is a need to build capacity at the local and national level to properly design and implement PES schemes and determine how to deliver the required training to stakeholders. The review further noted that it is advisable to select pilot sites that maximize the number of services provided and involve the private sector including agribusiness and public utilities and central and regional governments and government-financed PES systems that operate at large scales, are more efficient due to economies of scale and can provide benefits across the landscape and allow for the internalization of ecosystem services into national economies. Additionally projects that further development of public-private partnerships allow for the inclusion of market forces into the development of PES schemes.

112. **Comprehensive regional lessons learned.**[30] A recent comprehensive report prepared by the World Bank on lessons learned from PES schemes for REDD+ efforts provides important insights on a number of implementation issues. The report covers *inter alia* legal aspects, poverty reduction, livelihoods, and other equity issues, monitoring, reporting, and verification of activities and outcomes and financial mechanisms.

113. Concerning legal aspects the report concludes that the political and institutional context for participatory agreements is incredibly important and that access to technical support and training are essential to increasing any program's reach and efficacy and the issue of land tenure is a significant challenge. On poverty reduction it is necessary to conduct rigorous *ex-ante* assessments of the likely social outcomes both positive and negative and that credible monitoring systems which factor in attribution are also essential for adaptive management and to improve program design. The report highlights the fact that PES schemes exist in a complex, potentially conflicting framework of social, environmental, and economic programs and goals and that in determining where, when, and how incentives should be used, policymakers must understand, evaluate, and manage trade-offs and synergies within this framework. In terms of monitoring, reporting and verification (MRV) the report underlines that building an effective MRV system that can form the basis for payment disbursement requires expertise across disciplines, including technical

[29] Payment for Eco System Services ,GEF, September 2010
[30] World Bank Lessons Learned for REDD+ from PES and Conservation Incentive Programs. Examples from Costa Rica, Mexico, and Ecuador

analysts with experience in collecting, manipulating, and analysing remotely-sensed data; ecologists who are able to assess conditions on the ground and to identify appropriate classification systems used in the analysis of remotely-sensed data; and economists with an eye for research design. Additionally, resources must be set aside for the costs of the monitoring technologies themselves, which may vary widely depending on the quality needed. Finally, on financial mechanisms the report highlights the fact that financial success is hinged upon integrating different sources of public and private finance. A key challenge for PES is financial sustainability, that is, creation of a stable long-term funding path to achieve the desired outcomes. The financial success hinges on integration at various levels: of different sources of finance; of funding commitments of varied duration; of private sector participants; of clearly defined objectives and adaptive management approaches; and of administrative processes for fund disbursement, MRV, and registration. Lessons learned from other development partners with experience in PES development (World Wildlife Fund (WWF), the International Union for Conservation of Nature (IUCN), the United Nations Development Program (UNDP), the United Nations Food and Agriculture Organization (FAO), *Consorcio para el Desarrollo Sostenible de la Ecorregión Andina* (CONDESAN)and others) have been considered during the design phase of the Project. CIAT is currently reviewing key bottlenecks in the development of 12 emerging PES initiatives in Peru; their findings will be also taken into consideration.

114. **Compliance with IFAD Polices.** The Project complies with IFAD policies related to targeting, gender, natural resource management and it's Climate Changer Strategy. Furthermore it follows Procedures for Environmental and Social Assessment. Annex 12 provides a summary of these policies and a full Environmental and Social Review Note (ESRN). Based on the characteristics and specificities of this Project, the Project has been classified as Category C as it does not require additional environmental analysis because it is a Grant aimed at generating global environmental impacts funded by the GEF.

Table 9:. Compliance with IFAD Policies

Policy/Strategy	Project measures
Targeting	Concentrating activities in favour of rural populations living in poverty conditions and food insecurity in the highlands based on criteria under IFADs geographic and direct targeting
Gender	Promoting empowerment to further participation of rural women heads of household to increase their decision making power in rural organizations and improving their natural resources
Environment and Natural Resource Management Policy	Recognizing and deepening greater awareness of the economic, social and cultural value of natural assets and attaching greater attention to risk and resilience in order to manage environment and natural-resource-related shocks
Climate Change Strategy	Increasing access by poor and rural communities to environment and climate finance support while furthering innovative approaches to help smallholder producers build their resilience to climate change.
Procedures for environmental and social assessments	Promoting the sustainable use of natural resources and protection of key ecosystems focusing on partnership-oriented initiatives for improved social and environmental quality

E. Consistency with GEF strategies and focal areas

115. As noted earlier the Project is consistent with Objective 2 of the GEF-5 **Biodiversity Focal Area**, "Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes, Seascapes and Sectors" and will contribute to Objective 1 of the GEF-5 **Land Degradation Focal Area**, "Maintain or improve flow of agro-ecosystem services to sustaining the livelihoods of local communities" and have an impact on Objective 1 of the GEF-5 Sustainable Forest Management/REDD+ and the Land Use, Land-Use Change and Forestry (LULUCF Strategy) aimed at reducing pressures on forest resources and generating sustainable flows of forest ecosystem services through the reforestation of relict forests and the application of sound management practices for existing forests via mechanisms for environmental services.

F. Key stakeholders involved in the Project, and their respective roles

116. Key stakeholders include government agencies, regional and local governments, potential beneficiary organizations, water user groups and private sector entities represented by hydroelectric and mining companies. Main government agencies include the MINAM and the MINAG and several institutions within them. A full description of government agencies is provided in Annex 5.

117. MINAM stakeholders include the **Strategic Development of Natural Resources Vice-Ministry** responsible for *inter alia* designing the national policy and strategy for integrated management of natural resources and monitoring its implementation and inventorying and establishing mechanisms to enhance, compensate and maintain the provision of environmental services while promoting their financing, payment and monitoring thereof. The Vice-ministry includes four Directorates: i) the Biological Diversity Directorate, ii) the Climate Change Desertification and Water Resources Directorate, iii) the Land Management Directorate and, iv) the Assessing, Valuing and Funding of Natural Heritage Directorate. The **Assessing, Valuing and Funding of Natural Heritage Directorate** is responsible for: a) formulating and promoting policies, plans, strategies, tools, standards and national directives for the evaluation and value-assessment of natural resources, biodiversity, environmental services and their degradation while promoting the design of economic instruments for the strategic development of natural resources and preventing their degradation and formulating and proposing a national policy related to environmental services and compensation.

118. The Project will be under the *aegis* of the Vice ministry and more specifically under the Assessing, Valuing and Funding of Natural Heritage Directorate. Its Director General will chair the Project's Advisory Committee (PAC) and will be responsible for providing overall management through the Project Implementation Unit (PIU) of all Project activities including selection of consultants and preparation of Annual Work Plans and Budgets (AWP&B) and reporting to IFAD.

119. Other stakeholders under the MINAM include: a) the National Services of National Protected Areas, b) the National Meteorological and Hydrology Service and c) the Environmental Assessment and Oversight Agency. The **National Service of National Protected Areas** (SERNANP) whose main function is to oversee the National System of Protected Areas (SINANPE) and the **National Meteorology and Hydrology Service** (SENAMHI) responsible for among other tasks organizing and managing national meteorological, hydrological and environmental databases and the **Environmental**

Assessment and Oversight Agency (OEFA) in charge of the oversight, supervision, control and penalties in environmental matters and directing and supervising the control observance of the activities included within the scope of its jurisdiction and performance of authorities with environmental responsibilities.

120. The Project will closely collaborate with SERNANP in terms of implementation of activities within the Nor Yauyos Cochas Landscape Reserve and the Sunchubamba Hunting Reserve located in the Project's area of intervention. Coordination on hydrological monitoring will be ensured with SENAHMI in hydrological monitoring in the selected water basins and with OEFA regarding environmental issues related to mining exploration and exploitation in the selected watersheds.

121. Within the MINAG, stakeholders include the General Directorate for Forest and Fauna, the National Water Authority and the Directorate of Agricultural Environmental Affairs and above all Agro Rural responsible for implementation of the IFAD funded DELOSI project. The **Directorate of Forests and Fauna** is responsible for proposing policies, strategies, plans, programs and projects related to sustainable use of forest resources and wildlife associated genetic resources in agreement with the National Environmental Policy and environmental regulations and providing advice and training to public and private sector entities on conservation and sustainable use of forest resources and wildlife The Directorate is also responsible for the conservation and sustainable utilization of non-domesticated South American camelids, and providing assistance in forest management and wildlife to regional governments and forest management committees.

122. A significant stakeholder is the **National Water Authority (ANA)** as the governing body and highest technical authority responsible for the National Water Resources Management System. ANA responsibilities include among others issuing rules and establishing procedures to ensure integrated and sustainable management of water resources and establishing guidelines for the development and updating of Basin Water Resources Management Plans and approving and monitoring their implementation as well as developing methods and determining the value of economic rewards for the right to use water as well as leading, organizing and administering the National Water Resources Information System, the Administrative Register of Water Use Rights, the National Register of Water Users Organizations. ANA exercises exclusive administrative jurisdiction on water, developing management actions, monitoring, control and surveillance to ensure the conservation and protection of water in respect of quantity and quality of natural assets associated with water infrastructure across sectors; exercising for this purpose, the power to impose sanctions and coercive measures approving the territorial demarcation of watersheds, the classification of water bodies, the definition of marginal strips and volumes of environmental flows, the latter in coordination with the MINAM.

123. An additional stakeholder within the MINAG is the **Directorate of Agricultural Environmental Affairs** responsible for implementing in coordination with the MINAM the objectives and provisions of the National Environmental Management System to ensure the sustainable use of renewable natural resources and proposing plans, programs, projects and standards for reducing vulnerability and adaptation to climate change in agriculture under the National Strategy to Combat Climate Change. The Directorate is also charged with the responsibility to assess the status of degraded environments and propose measures aimed at recovery and sustainable use as well as developing plans, programs, projects and policies on sustainable use and exploitation of soil resources for agricultural use.

124. Within the MINAG, **Agro Rural** is a key stakeholder as implementing agency for the DELOSI project**.** Its mandate includes promoting and managing successful models of rural development to facilitate the articulation of public-private investment and contribute to the inclusion of rural families while promoting knowledge management to highlight successful experiences in rural development. All IFAD-funded projects area managed by Agro Rural under the Central Implementing Nucleus modality.

125. The Project will above all involve Agro Rural, as activities will be closely linked in order to ensure that best agricultural practices, pursued within the context of the DELOSI project, are consistent with environmental considerations. Basin Coordinators to be part of the PIU will be located in Agro Rural premises in the selected watershed basins and staffs will be involved in the deliberations and actions of the *Ad hoc* Basin Committees. Close collaboration will be sought with the Directorate of Flora and Fauna related to Project activities aimed at conservation of relict forest and support provided by the Project and Agro Rural in the field of South American camelids that are a source of income in the upper parts of the selected watershed basins. Recognizing the central role of the ANA and SERNANP, the Project will include a representative of these agencies in the PAC and a representative of their local team in each of the selected watershed basins in the *Ad hoc* Basin Committees.

126. Other stakeholders in the national government sphere include: (a) the **Agency for Formalization of Informal Property (COFOPRI**) responsible for implementing a process of formalization of land properties at the national level, in order to generate legally secure property rights that are sustainable over time including implementing and controlling actions aimed at formalization of fallow land titling and those of peasant communities with the MINAG and, (b) the **National Institute of Statistics and Informatics (INEI)** responsible for regulating, planning, directing, coordinating, evaluating and monitoring the country's official statistical activities including carrying out studies on the characteristics and determinants of poverty, quantifying each of the variables describing poverty in Peru based on a National Household Survey (ENAHO). The Project will approach COFOPRI especially regarding land tenure issues as they relate to PES schemes and INEI in determining poverty conditions in the Project area.

127. Other stakeholders include **regional and local governments**. The Project area includes the Lima, Cajamarca and La Libertad Regional Governments and 8 provincial local governments. Since adoption of a decentralized policy by the government of Peru, Regional governments have under their *aegis* a multitude of tasks previously under the responsibility of central government ministries including management of natural resources and regional natural protected areas under the jurisdiction of Natural Resources Directorate. The Cajamarca Regional Government has adopted a biodiversity conservation strategy and has contributed to activities under the CESAH project implemented by CARE in the Jequetepeque basin. Local governments or municipalities in each province and district are important stakeholders as they have under their mandate to promote development and the local economy among other responsibilities. In larger provincial municipalities economic development offices have been established and are relevant entities in pursuing local development. Both regional and local governments benefit from royalties from extractive industries located in their territories.

128. The Project will closely collaborate with regional governments in the selected watershed basins and build on the experience gained in ensuring their participation in PES schemes, Representatives of Regional Governments will participate in the deliberations of the *Ad hoc* Basin Committees to be established. Involvement of local governments will be

pursued especially in conjunction with economic activities being funded under the DELOSI project. A representative of the provincial municipalities include in the Project area will participate as a member of the *Ad hoc* Basin Committees.

129. Private sector stakeholders include above all hydroelectric companies in both watersheds. These include SN Power in the Jequetepeque watershed basin, owned by Statkraft and Norfund**,** a Norwegian risk capital investor in emerging markets, funded by the Norwegian Government. SN Power operates the Gallito Ciego hydropower plant located in La Libertad region. It was purchased by SN Power in November 2003. The plant is located downstream of the Gallito Ciego Dam, which is primarily used for irrigation purposes. The dam is not part of the Gallito Ciego assets and is operated by the water authorities. Hydroelectric companies are also present in the Cañete river basin where CELEPSA, a subsidiary of Peruvian cement maker *Cementos Lima SA*, operates a 220 MW El Platanal hydroelectric power plant, generating 1 million MW on average per year.

130. The Project will seek to involve these companies in contributing to the PES schemes through the establishment of sinking funds. Representatives of the companies would be members of the *Ad hoc* Basin Committees even prior to their financial contributions and in the event a contribution is made they would sit in specials Fund Boards which, would be created for making decisions on the utilization of the proceeds from the Funds.

131. Other relevant and significant private sector entities are **Water User Boards or Associations (WUB)** which are private, nonprofit, and collectively owned organizations responsible for the operation and maintenance of collective irrigation infrastructure and the administration of water tariffs in one particular irrigation district. WUBs consist of representatives of Irrigation Commissions (*Comisiones de Regantes*) and non-agricultural water users groups which are responsible for water distribution in their irrigation subsectors and must participate financially in the planning and maintenance of the collective irrigation infrastructure. WUBs elect a Board of Directors to administer financial resources and implement WUB agreements and dispositions. These organizations are more prevalent in the coastal regions of the Project area. The Project will involve WUBs in the two selected areas and a representatives of the existing Boards will be members of the *Ad hoc* Basin Committees

132. Other stakeholders include farmer associations and **Peasant Communities** in the Project area understood as an institution conformed by organized peasant families whose main economic activities are carried out based on existing resources within their communal territory (Gonzales 1994:175). These communities will benefit from participation in the implementation of natural resources conservation sub-projects and will participate in deliberations of the *Ad hoc* Basin Committees with the exemption of Committee meetings which would consider sub project proposals originated by them.

G. Coordination with other GEF and non-GEF initiatives

133. GEF funded activities in Peru include a number of projects in addition to the Sustainable Management of Protected Areas and Forests in the Northern Highlands of Peru and the Strengthening Biodiversity Conservation through the National Protected Areas Program (PRONANP).

- **Strengthening Biodiversity Conservation through the National Protected Areas Program (PRONANP).** This program seeks to integrate the efforts of governmental agencies, multilateral and bilateral donors, civil society, and the private sector to lay the foundations for a broader future National Program for Protected Areas under the country's decentralized framework.

- **Conservation of Biodiversity of the *Páramo* in the Northern and Central Andes.** The project assists participating countries (Colombia, Ecuador, Peru and Venezuela) to overcome the major barriers for conserving the biodiversity of the ecosystem and safeguarding the hydrological and other environmental services and functions. The project objective is to support the conservation and sustainable use of the biodiversity of the ecosystem.

- **Design and Implementation of Pilot Climate Change Adaptation Measures in the Andean Region project**. The broad development objective of the project is to contribute to strengthening the resilience of local ecosystems and economies to the impacts of glacier retreat in the Tropical Andes, through the implementation of specific pilot adaptation activities that illustrate the costs and benefits of adaptation.

- **Facilitation of Financing for Biodiversity-based Businesses and Support of Market Development Activities in the Andean Region.** The objective of this project is to strengthen trade with and utilization of biological resources at local, national and regional levels as a strategy for the conservation and sustainable use of biodiversity with global significance. The project supports participating countries (Colombia, Ecuador and Peru) to overcome the main barriers to bio trade, attaining environmental externalities on a par with trade benefits.

134. In addition, other projects are being developed in the same area of the IFAD-funded Project. The main projects in the Cañete Basin are: ***Federal Ministry* for the *Environment*, *Nature Conservation and Nuclear*** Safety (BMU), "**Ecosystem Based Adaptation in Mountain Ecosystems"; Challenge Program of Water and Food** (CPWF-CGIAR) – *Centro Internacional de Agricultura Tropical* (CIAT) "**Assessing and anticipating the consequences of introducing Benefit Sharing Mechanisms**". In the Jequetepeque Basin one of the most representative projects is **Equitable Compensation for Hydrological Environmental Services**, funded by CARE and the World Wildlife Fund (WWF).

- **Ecosystem Based Adaptation in Mountain Ecosystems:** This project is located in the Landscape Reserve Nor Yauyos-Cochas of Perú and its buffer area, covering part of the Cañete and Pachacayo Watersheds. The project's main objective is to strengthen Peru's ability to identify and implement adaptation measures based on ecosystems to reduce the climate change vulnerability of local communities in high mountain ecosystems, through a pilot project in Nor Yauyos-Cochas. In order to meet the primary objective, the project's goals are: (i) the development of the methodologies and tools for the Ecosystem Based Adaptation (EbA) in high mountains ecosystems; (ii) the application of tools and methodologies EbA and their integration into the Management Plan for the National Landscape Reserve Nor Yauyos Cochas; (iii) implementation of priority actions of EbA in Nor Yauyos-Cochas; (iv) build and strengthen capacities of local stakeholders to plan and implement profitable EbA actions; (v) promote the integration of the EbA in the strategies and national and local

programs. This project began in 2011 and will be completed in 2014.

- **Assessing and anticipating the consequences of introducing benefit-sharing mechanisms:** This project is part of the CPWF, which is working in 10 small basins of the Andes region, being the Cañete Basin one of the watersheds selected. In Peru, the project is being developed together with the MINAM , which is promoting this type of conservation schemes in priority watersheds like Cañete. This project aims to demonstrate whether a Benefit Sharing Mechanism (BSM) is effective or not. It seeks to quantify the consequences of BSM-driven changes in land and water management for livelihoods in upstream rural communities, and for water supplies in downstream water consumers. In addition to this broad objective, the specific objectives of the project are: (i) to develop methods that anticipate *ex ante* the likely consequences of introducing BSM; (ii) to monitor and measure these consequences ex post; (iii) introduce methods for adaptive management in BSM design and planning, so that new instances of BSM can benefit from lessons learned. The main results obtained are: economic valuation of hydrological services differentiated by users, analysis of poverty and inequality and the implementation of the hydrological SWAT model in the Cañete Basin. This project began in 2009 and will be completed in 2013.

- **Equitable Compensation for Hydrological Environmental Services:** This project seeks to establish compensation mechanisms for environmental hydrological services that lead to sustainable management of natural resources and better living conditions for families settled in the upper basin of the Jequetepeque River. There, has already developed a pilot project in the small watersheds Ayambla, Ahijadero y La Succha. Main results are: installation of agroforestry and silvopastoral systems; promotion of guinea pig breeding; installation of pressurized irrigation systems; implementation of a hydro-meteorological monitoring system; increased awareness by byers and environmental service providers.

II. PROJECT IMPLEMENTATION

A. Approach

135. PES is the pivot element of the Project and constitutes one of the innovative approaches that have become popular including in the context of GEF funded initiatives, as a new paradigm to procure "conditional conservation". PES constitutes a new alternative to attract new funding sources for conservation of ecosystems and biodiversity.

136. In the context of this Project, the GEF will invest in pilot watershed PES schemes in Peru with already some degree of advance towards their design. These cases are relevant for the MINAM since they are meant to provide guidelines for designing a scaling up strategy especially in aspects such as: contract negotiation, investment targeting, definition of "PES best practices" and legal and institutional required frameworks. The existing advances in the selected Project sites include characterization of the environmental services, identification of their beneficiaries and suppliers, determination of current land uses and management practices, ecosystems status, economic importance of the ES, willingness to pay, land use alternatives for delivering ES, among other aspects[31]. These advances provide the basis for an evidence-based PES implementation, where payments would be able to be differentiated and targeted spatially according to the opportunity costs of distinct watershed areas and their relative importance in the provision of the ES and the conservation of biological diversity.

137. The main focus of the Project will be to support the design of the PES schemes and their respective operational procedures in a way that would not become one more PES project constrained by a small finite donor budget, short planning horizons, and temporal institutional and legal arrangements for management of funds. In this respect, the focus is to invest GEF funds in a long-term PES strategy (financial and institutional) instead of using these funds only for finite payments. Also, GEF is expected not to be the only ES buyer since private sector participation in the PES scheme may be also enhanced. Concretely ANA and CELEPSA and its foundation have already confirmed their willingness to contribute: the first with a share of the water resource fees and the second by co-financing community sub-projects located in areas of specific interest to their hydrological needs.

138. The proposed PES scheme for this Project consists in a layered user-financed PES scheme[32]. This design permits to use GEF funding as a sustainable financial platform by the creation of Trust funds. The revenues from the Trust funds will be oriented to cover biodiversity conservation and recurrent costs of M&E activities. Permanent contributions from others ES "buyers" may be used to cover the cost of direct interventions for promoting adequate land use, management practices and conservation actions in areas on which the delivery of hydrological ES depend on. This design is feasible in the selected

[31] These advances were obtained in the context of the following development and research initiatives: In Jequetepeque watershed: Project title: "Equitable compensation for hydrological environmental services" implemented by CARE and the World Wildlife Fund (WWF), funded by the Danish International Development Agency (DANIDA) and the Netherlands Government. In the Cañete watershed: Project title: "Participatory design of a Payment for Hydrological Environmental Services Scheme" implemented by MINAM, CIAT and CARE with the financial support of WWF and the CGIAR Challenge Program on Water and Food.

[32] Layered PES schemes: Multiple buyers of separate ES jointly finance start-up costs and/or recurrent costs of ES provision from the same plot (GEF, 2010. Payments for Environmental Services and the Global Environmental Facility. Scientific and Technical Advisory Panel document.)

Project sites since there is an important overlap of areas that are relevant for both, water provision and biodiversity conservation. Another part of the GEF grant will be used to invest in early implementation of conservation measures (Component 1) in order to test their effectiveness and demonstrate this to other potential ES buyers, as a persuasive strategy.

139. Project design includes a Monitoring and Evaluation System (see Annex 6) in order to study the impacts of this approach. According to the GEF STAP, few existing PES consider undertaking impact studies. Thus, the PES schemes to be implemented by the Project would have an inherent intention and commitment to evaluate environmental and socioeconomic impacts. The Project will also contribute to Learning Objective 3 of the Biodiversity Focal Area ("Enhancing Impacts through Improved Understanding of the Causal Relationships between Popular Mainstreaming Approaches and Conservation Outcomes).

140. The main challenges that the Project will face and address are contract negotiation, legal issues for multi-stakeholders PES involvement watershed-based institutional settings for managing PES, and financial operation of PES with scaling-up and scaling-out potential. Achievements on these aspects are highly relevant for the MINAM who is concerned about the design of national guidelines for setting up PES schemes. Contributions to the Ecosystem Services legislation are especially important considering that there is a proposal for passage of a Law for ES rewards that once enacted, would require drafting and approving related rules and regulations. In this regard lessons to be learned from the implementation of the two PES schemes considered by the Project and the activities to facilitate discussion and consultation of ES rules and regulations would be extremely useful for the MINAM.

B. Organizational framework

141. The Project will be implemented by a small **Project Implementation Unit (PIU**) to be located with the organizational structure of the Assessing, Valuing and Financing Natural Resources General Directorate of the Ministry of the Environment as the **Lead Project Agency (LPA).** Notwithstanding, the LPA will, by virtue of a Grant Agreement between IFAD and the MINAM**,** entrust PROFONANPE as the financial administration of the Grant as described further below (see annex 5 for further details).

142. The PIU will be staffed by a **Project Coordinator**, a **Monitoring and Evaluation specialist** and an **M&E assistant** to be based in Lima and two **Basin Coordinators** one based in the city of Yauyos in the department of Lima and the second one in the city of San Miguel in Cajamarca department in Agro Rural premises.

143. The **Project Coordinator** will report to the Director General of the Assessing, Valuing and Funding of Natural Heritage of the Vice Ministry of Strategic Development of the Ministry of Environment as his/her immediate supervisor. The **Monitoring and Evaluation Officer** and the **Basin Coordinators** would report to the Project Coordinator.

144. **Project guidance.** Overall Project guidance will be provided by a **Project Advisory Committee (PAC)** at the central level and by ***Ad hoc*** **Basin Committees** at the watershed level.

145. The **Advisory Committee** will ensure compliance with the strategic directions set out in the Grant Agreement and GEF and IFAD strategies and policies. The PAC will be

composed by central authorities involved in implementing the Project, namely MINAM, SERNANP, ANA and PROFONANPE.

146. ***Ad Hoc* Watershed Committees**. These Committees will be responsible for providing support to the monitoring of sub-projects to be implemented and further participatory approaches at the watershed level.

C. Planning, monitoring and evaluation, learning and knowledge management

147. **Planning.** Planning of Project activities will be undertaken by the PIU in coordination with the LPA and PROFONANPE using standard procedures including the preparation of **Annual Work Plans and Budgets (AWP&B)** starting with a first AWP&B to be based on the Project Design Document and its Annexes. Subsequent plans should include a brief description of the implementation of the Project during the period and the possible challenges and opportunities during the year, including a strategic analysis of the approach and rationale of the Project.

148. During implementation the PIU will submit semi-annual **Progress Reports** which shall contain a brief summary of Project objectives and description of planned activities and performance issues. The progress reports should present the main achievements, issues and constraints of the previous period, including the main recommendations of supervision missions and the state of related follow-ups, as well as an appreciation of the impact of the Project on the poverty and gender situation.

149. **Monitoring and evaluation.** The Project will have a M&E system to be implemented according to IFAD and GEF procedures and guidelines[33]. The M&S system will be designed based on the activities, indicators and means of verification specified in the Logical Framework. M&E activities will follow the principles of adaptive management to update information needs and indicators overtime and participatory evaluation.

150. M&E system operations will be under the direct responsibility of the Project Coordinator and an M&E Project Officer to be contracted on a half- time basis with Grant funds for the duration of the Project. The M&E Officer will be responsible for tracking project progress and achievement of results for which he/she will ensure that the necessary information is timely gathered and processed in order to verify Project progress and compliance with Project objectives and planned activities. The M&E Officer will be supported by a Technical Assistant during three years of Project implementation. Detailed Terms of Reference are provided in Appendix 3 of Annex 5 Institutional aspects and implementation arrangements. Field staff of Agro Rural and SERNANP who will be involved in the identification with community participation of conservation and sustainable management of High Andean ecosystems will ensure that information on implementation is provided in a timely manner.

151. The Project's M&E Team will ensure that the Biodiversity Tracking Tool will serve to measure progress in achieving the impacts and outcomes established at the Project level under the biodiversity focal area. Additionally reporting will include reference to the Aichi targets and staff will jointly report on progress under the IFAD Results and Impact Measurement Indicators (RIMS).

[33] IFAD's Project M&E Guide: http://www.ifad.org/evaluation/guide/index.htm

152. Appropriate participatory methods will be used in order to gather information on aspects that may be preventing the Project from achieving planned outputs, any emerging risks and opportunities for success, unintended and intended outcomes, lessons learned, and immediate required actions to ensure the satisfactory progress of the Project. Methods to be selected will consider IFAD guidelines[34] for this purpose.

153. **Learning and knowledge management.** Knowledge management activities of the Project will contribute towards meeting the Learning Objectives of the GEF 5 Biodiversity Focal Area[35] which underline the fact that despite the increasing popularity of the PES approach, the evidence base for their effectiveness and the understanding of the conditions under which they have the greatest potential to be effective is largely undeveloped.

154. The Project will deepen knowledge management, critical reflection[36], communication and information to be implemented in tandem so as to ensure their effectiveness as suggested by the IFAD strategy for Learning and Knowledge Management[37].

155. A number of studies will be prepared to provide insights into the cost-effectiveness of investments on the conservation and sustainable management of High Andean ecosystems; the socioeconomic impacts of Project components on poverty alleviation and equity at the watershed level, the success and failure factors of PES implementation in Peru; the actual potential of scaling out and up of water-related PES schemes in Peru among others.

156. A detailed communications strategy will be prepared aimed at disseminating Project achievements and lessons learnt. The strategy will be prepared bearing in mind the need to share information on the value of High Andean ecosystems which are not widely acknowledged and to reinforce the need for establishing mechanism for PES schemes. Communicating Project approaches from the start and during implementation will enable better achievement of goals through effective and efficient sharing of information and knowledge.

D. Financial management, procurement and governance

157. **Flow of funds.** IFAD, as an Implementing Agency of the GEF will sign a Grant Agreement with MINAM. PROFONANPE who will act as Grant financial administrator. IFAD will open a Gran Account from which it will transfer an initial amount of US$ 2.8 million to a Designated Account opened by PROFONANPE in a commercial bank in Peru in United States Dollars satisfactory to IFAD. PROFONANPE will through an Asset Manager establish the Trust Funds for an amount of US$ 2 million and open a designated Grant account with two sub accounts (one to manage funds to be transferred to local communities who will implement conservation sub projects in accordance with the Sub project Implementation Manual, and a second account for payment of consulting services and a limited number of purchases of goods, based on approved Procurement Plans.

158. **Financial management and accounting.** PROFONANPE will be responsible for fiduciary aspects (financial management and procurement) of the Project coordinating

[34] http://www.ifad.org/evaluation/guide/annexd/index.htm
[35] GEF/R.5/Inf.14 September 18, 2009. Third Meeting for the Fifth Replenishment of the GEF Trust Fund. October 14-15, 2009, Paris, France
[36] As part of the M&E System as required by the IFAD M&E guidelines
[37] http://www.ifad.org/pub/policy/km/e.pdf

Project implementation activities with the MINAM, SERNANP MINAG, Agro Rural and with regional and local governments.

159. Accounting policies and procedures will be described in detail in the administrative and financial section of the final Operational Manual including PROFONANPE's responsibility to manage revenue from the endowment funds. PROFONANPE has in place a tailored made financial information system (SIGA) which includes the basic standard modules: budget, accounting, and treasury.

160. **Financial Reports,** PROFONANPE has put in place the required internal control mechanisms to ensure the quality and reliability of those reports. Since enhancement of SIGA, financial reports are prepared automatically from the information system. PROFONANPE will prepare on an annual basis, the Project's financial statements including cumulative figures for the year. Project financial statements will also include explanatory notes in accordance with the Cash Basis of Accounting, and its assertion that Grant funds were used in accordance with the intended purposes as specified in the Grant Agreement and in accordance with eligible categories established in the Grant Agreement. Working papers for the preparation of the annual financial statements will be maintained and be made easily accessible to IFAD supervision missions and to external auditors.

161. **Trust Fund management.** Management of Trust Funds will be undertaken in accordance with procedures already established by PROFONANPE including hiring of an Asset Manager. The Asset Manager services will be hired by PROFONANPE to manage the trust fund portfolio, among the three top ranking banks as established by the National Banking Superintendency. After the Asset Manager is selected, a "Trusteeship Contract" *(Contrato de Comisión de Confianza)* will be signed, whereby the Asset Manager would make the Project's endowment investment decisions on behalf of PROFONANPE. The Asset Manager will record and keep separate accounts for portfolio transactions and yields.

162. **Disbursements.** IFAD will make an initial disbursement as described above. Further disbursement from the Grant Account will be made based on submission of detailed financial reports and Statements of Expenditures (SOE).Disbursements will be made under the advance reimbursement method. Bearing in mind that the amounts set aside for procuring services and equipment and the fact that implementation of sub projects will be implemented gradually it is possible to determine that the initial amount of US$ 800 000 will cover expenditures for the initial year and requests for reimbursements could be made on an annual basis together with submission of annual financial statements.

163. **Procurement**[38]**.** Procurement will be undertaken under IFAD guidelines. Considering that most of Grant funding will be destined to establishing two Trust Funds and that implementation of sub projects for conservation in the selected watersheds will be carried out by communities themselves. The main procurement method will be national shopping for purchasing limited office equipment and other equipment for hydrological monitoring based on three quotations. Selection and contracting of consultant services will be undertaken based on Fixed Budget Selection process and qualifications among at least three personal history forms.

[38] IFAD EB 2010/100/R.27/Add.1

164. **Auditing.** As noted, PROFONANPE will prepare the annual financial statements of the Project and the financial statements of the Endowment Fund, which will be audited following International Standards on Auditing (ISA) by an independent firm, in accordance with terms of reference (TORs), both acceptable to IFAD and in accordance with IFAD guidelines[39].

E. Supervision

165. Supervision will be carried out directly by IFAD as part of supervision of the DELOSI project albeit once a year. IFAD will ensure that staff of the Environment and Climate Change Division will join an annual supervision mission that will ascertain physical and financial progress, implementation management's efficiency and performance of implementing agencies. The supervision exercise should provide guidance on fiduciary aspects and address progress in achieving sustainability in the long run of the PES approach and comment on risks and mitigation measures identified during formulation. As part of the Project's monitoring and evaluation activities IFAD will conduct a Mid-term review to further ascertain progress in ensuring sustainability of the PES scheme and operations of the Trust Funds. Supervision activities are to be supported by an IFAD country office.

F. Risk identification and mitigation

166. Risks earlier identified during formulation of the PIF were further refined in consultation with national authorities. Risks identified are considered low or medium being lack of interest from the private sector a medium level risk which would be mitigated by strengthening efforts already initiated by the MINAM and others in involving mainly hydropower enterprises in both selected watersheds to contribute to the proposed PES schemes.

Table 10: Risks and mitigation measures

Risk	Level	Mitigation measures
Lack of coordination between institutions	Medium	The Project will encourage coordination and participation through two main mechanisms: a Project Advisory Committee to facilitate coordination, communication, interaction and learning among ministries and regional governments. Additionally in each watershed A*d hoc* committees would be established to ensure participation at local and regional levels. MINAM will ensure that the Project is fully integrated in on-going initiatives focused on the development of supporting studies and activities towards the design of PES schemes in the Cañete and Jequetepeque watersheds
Lack of interest from the private sector	Medium	The Project will make concerted efforts to disseminate the important benefits to be gained by PES participants. MINAM has already started consultations with private sector actors in the selected watersheds where willingness to cooperate in PES schemes has been expressed

[39] http://www.ifad.org/pub/basic/audit/borrower_e.pdf

Low participation rate from the communities in the High Andes	Low	Together with the IFAD' funded DELOSI project, the Project will involve communities through the provision of incentives for conservation of High Andes ecosystems based on their economic needs and agreed upon criteria
Opposition from social groups	Low	The Project will implement participatory inception and annual workshops in each watershed for involvement and engagement of local groups
Environmental performance	Low	With joint design by MINAM, SERNANP, ANA and incentives from Agro rural, design and follow up assistance to the environmental activities developed by the Project will aim to increase project effectiveness. Concretely, low survival of trees in reforested areas will be minimized by careful targeting of species and location of reforestation activities to areas naturally suitable to tree-based vegetation succession; adequate follow up care by the host communities will also be inbuilt in the sub-project design and related incentives
Challenges from climate change	Medium	Climate change is a main cause for accelerated melting of High Andes glaciers. The Project would have a positive role as most activities proposed would help communities and ecosystems increase their resilience and adapt to climate changes
Environmental risks	Very Low	The Project will implement direct interventions focused on the conservation and sustainable management of ecosystems. No environmental risks are envisaged. The Project will receive insights from conservation experts in order to ensure that actions and promoted practices deliver the expected conservation outcomes. The Project is consistent with GEF, IFAD and Peru's environmental standards

167. Initial design also identified additional potential threats or risks associated with the implementation of PES schemes which are summarized in table below. A number of mitigation measures have also been identified including making an adequate selection of partner organizations, simplifying contracts, and requiring quality assurance from ES suppliers.

Table 11: Potential threats to PES effectiveness

PES-related risks	**Possible mitigation measures**.
(i) Non-compliance with contractual conditions	The Project will work with established community organizations; develop clear guidelines; require previous training and involvement with the Project before payments are made. Implementation of conservation measures would require in-kind co-financing from participants
(ii) Poor administrative selection	Significant experience has been systematized in the region and the world on PES. The Project will capitalize on these experiences to ensure quality of administration, including work done by STAP, GEF, the Katoomba Group, Forest Trends, the International Institute for Environment and Development and others
(iii) Spatial demand spill overs and "crowding in"	The Project will make additional efforts in selecting sites, participating organizations, conservation and productive activities that minimize the risk of pushing pressure onto resources elsewhere. However, given the subsistence nature of many economic activities in the High Andes this risk is unlikely. It is unlikely that migrants would take possession of land in the upper basin as a result of PES schemes
(iv) Adverse self-selection	Since the Project's strategy is to work with local organizations it is unlikely that a tendency to demand lower-price but low-quality ES products can occur. However, in order to prevent a "race to the bottom", the Project will promote specific actions to avoid them such as good selection of partner organizations, simple contracts, and quality assurances from ES suppliers

III. PROJECT COSTS, FINANCING, BENEFITS

A. Grant costs

168. Total Grant costs amount to US$ 5.3 million for implementation of three components and reflect the amounts contained in the approved PIF. Costs by components are as follows: i) Conservation and Sustainable Management of High Andes Ecosystems Component US$ 2.3 million equivalent to 44.1% of total costs., ii) Improvement of the Institutional Framework for ES for Implementation of PES/CES Schemes Component US$ 2.7 million, representing 51.1% of total costs, iii) Project Management US$ 254 thousand or 4.8% of total costs.

Table 12: Grant costs by Component

	GEF	
	Amount	**%**
Conservation and Sustainable Management of High Andes Ecosystems	2,364,000	44.1
Improvement of the Institutional Framework for Environmental Services for Implementation of PES/CES schemes	2,735,625	51.1
Grant Management	254,920	4.8
Total PROJECT/GRANT COSTS	5,354,545	100.0

169. Grant resources will cover expenditures under five categories four of them are investment costs as follows: I Biodiversity Incentive Subprojects, US$ 2.364.000 or 44.1% of Grant costs, II Endowment Trust Fund US$ 2 million or 37.4% of Grant costs, III Environmental Training and Consultancy Services US$ 686,488 equivalent to 12.8%, IV Equipment and Vehicles US$ 49,137 or 0.9%, V. Recurrent costs which amount to US$ 254.920 or 4.8% of total Grant costs.

Table 13: Grant Costs by Categories of Expenditure

	GEF	
	Amount	**%**
Equipment and vehicles	49,137	0.9
Biodiversity Incentive Subprojects	2,364,000	44.1
Environmental Training and Consultancy Services	686,488	12.8
Endowment Trust Funds	2,000,000	37.4
Grant Management Costs	254,920	4.8
Total GRANT COSTS	5,354,545	100.0

B. Grant/Project financing

170. The Project is linked to the DELOSI IFAD–funded project for a total of US$ 42.2 million based on Loan negotiations as described in working document 4: Costs and Financing. Contribution by the Government of Peru has been estimated in US$ 16.4 million Table 8 below provides information by component.

171. **Overall costs and financing of the DELOSI project.** Total project costs have been estimated at US$42.2 million. Implementation costs by component are as follow: Valuing assets of small-scale farmers, US$7.3 million,(17.3 per cent of total costs); Providing access to financial and non-financial services, US$22.8 million (54.1 per cent); Strengthening capacity for local development through a territorial approach, US$3.2 million (7.6 per cent); and project management US$2.9 million (7 per cent). IFAD will contribute approximately with US$20.0 million, the Government of Peru with US$16.4 million, and MINAM contributes in kind with USD 447,770.

172. Combined financing with the DELOSI project shows that the total financing including IFAD and Government of Peru contributions would amount to US$ 25.245.709 for component 1, US$ 13.270.730 for component 2 and US$ 3.754.031 for Project management.

Table 14: Grant financing by components

	IFAD		GOP		GEF		MINAM		Total	
	Amount	**%**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**
Conservation and Sustainable Management of High Andes Ecosystems	15,411,670	77.1	7,470,039	45.4	2,364,000	44.1	-	-	25,245,709	59.7
Improvement of the Institutional Framework for Environmental Services for Implementation of PES/CES schemes	4,588,330	22.9	5,946,775	36.1	2,735,625	51.1	-	-	13,270,730	31.4
Grant Management	-	0.0	3,051,341	18.5	254,920	4.8	447,770	100.0	3,754,031	8.9
Total Project Costs	**20,000,000**	**47.3**	**16,468,156**	**39.0**	**5,354,545**	**12.7**	**447,770**	**1.1**	**42,270,471**	**100.0**

C. Summary benefit and economic analysis

173. **Benefits.** The Project will deliver different natural, social and economic benefits by ensuring the provision of environmental services mainly water and others not directly considered in Project design such as carbon and scenic beauty as well as provide financial incentives to communities and families in the Project area for them to engage in the conservation and sustainable use of the landscapes. Table 9 below provides a summary of the present situation, expected results and means of verification. This Table should be read in conjunction with the Project's Logical Framework.

174. **Social benefits**. Funding of local initiatives by communities and associations in the context of this Project and the DELOSI project will strengthen the capacity of local organizations and associations in poor rural areas to adopt best agricultural practices while implementing profitable business ventures and conserving natural resources in their localities. The establishment of *Ad hoc* Basin Committees will further democratic decision-making process at the local level. These committees would operate on a wider scale than the Local Resource Allocation Committees to be established in the context of the DELOSI project as the Basin Committees will include the participation of a wider range of stakeholders and would serve as the basis for the creation of watershed Councils as foreseen in hydric resources legislation.

175. The Project will directly benefit 2164 families in both selected basins. These and additional families in the Project area will also access funding from the DELOSI project on a demand-driven basis. It is expected that, through a comprehensive communications initiative it will be possible to deepen understanding of the merit of PES schemes among water users in the medium and lower parts of the basins including rural and urban inhabitants, agricultural firms, mining companies and others that receive water from the selected watersheds. The Project will contribute to the objective of the DELOSI project in reducing poverty conditions in areas of intervention by increasing incomes by 30 % while reducing malnutrition by 10 percentage points and ensuring food security of 50 % of all rural families in the Project area.

176. **Economic benefits**. The Project, under component 1, will provide direct economic benefits to groups and communities who would receive funds for implementing conservation sub projects in the understanding that these resources were the result of PES mechanism provided by the GEF grant and private sector partners and in the future, other users of ES in the lower parts of the basin. On its part the DELOSI project will further diversification of rural activities, employment, income security thus contributing to beneficiary communities. Rural communities living in the Project area make direct use of biodiversity for their daily subsistence, and it is expected that the sustainable management practices being promoted will result in improved livelihoods. The Project will also generate national economic benefits ensuring water provision and energy generation, offsetting the negative externalities of economic activities, including agriculture and mining, and by promoting a more sustainable use of biodiversity resources.

177. **Cost-effectiveness**. The Project will invest US$ 5 million to ensure conservation and sustainable use of approximately 24,000 hectares of valuable ecosystems (without Project management costs), including the establishment and implementation of PES mechanisms with relatively high start-up and transaction costs, and the direct and indirect support to the Peruvian national system for environmental valuation. Costs per hectare are US$ 78/ha for peat lands, US$ 102/ha for relict forests, and US$ 129/ha for grasslands which are within accepted standards for conservation, especially when considering the direct and indirect environmental, economic and social benefits. PES

transaction costs (particularly initial steps, negotiation and start up) are high, and typically range from 6% to 45% of total PES costs. Schemes for watershed services tend to be initially more costly because of the geographical difficulties (long distances, isolated populations, but initial investments can be partially recovered over time.

D. Sustainability

178. **Environmental sustainability.** It is possible to ascertain that the initial conservation measures can be sustainable by ensuring that the use of natural resources and biodiversity by highland communities and associations continues after Project completion. Conservation practices introduced under Component 1 of the Project will be accompanied by training and awareness raising that will reinforce the need to ensure conservation measures over time. Environmental sustainability can also be achieved through the replication of successful experiences in natural resources management and in biodiversity conservation through proven capacity-building methods developed elsewhere through the use of *in situ* training and learning routes methodologies.

179. **Financial sustainability** can be achieved in the long term by leveraging additional resources for continued implementation of the PES schemes introduced in the two selected watersheds. The resources provided under the GEF Grant will allow, under present market conditions, to fund operations of *Ah hoc* Basin Committees and some monitoring and evaluation activities. Notwithstanding, expanding the areas covered and the number of potential beneficiary families through the provision of incentives for conservation, does require diligent mobilization of additional resources to be placed in endowment and sinking funds to ensure continued involvement of producers of environmental services in the upper parts of the basins.

180. The Project will contribute to strengthening the operations of PROFONANPE that are being supported by other GEF initiatives in Peru, including developing new financial mechanisms to fund implementation of PES schemes. The Project will also help to operationalize MINAM's financial strategy for PES implementation by facilitating the identification of organizations from the private sector with potential to participate in PES schemes. The long-term operation of the PES schemes supported by the Project will be a joint effort by MINAM, regional governments and the private sector.

181. **Social sustainability.** It is also possible to determine that social organizations in the proposed watersheds have a long standing tradition in managing natural resources in a democratic manner and have experience in managing natural resources under common property regimes. Organizational sustainability of Peasant Communities is guaranteed by their legal recognition and capacity to enter into agreements with private and public sector agents. Farmer associations in existence or to be formed would be legal entities thus ensuring their sustainability during and after Project interventions.

182. **Institutional sustainability** will be achieved through the full institutionalization of PES schemes. This institutional sustainability will depend however, on passage of the Environmental Services Law and it rules and regulations which will determine a definite institutional framework for implementation of said schemes. It will be necessary to ensure that an appropriate legal framework is established with clear responsibilities among various government agencies including ANA and MINAM. Institutional sustainability is also conditioned by addressing the need to build strong management capacity at the regional and local levels and partnerships with civil society and the private sector.

183. **Replication.** The Project will pilot the establishment and operation of two PES schemes in selected watershed regions including an incentive package to get local

beneficiaries involved in improved conservation and land use practices. If successful this approach could be replicated in other watershed in Peru where other donors and national authorities are establishing Watershed Councils. Links with other farmer-based agricultural and livestock initiatives funded primarily by the MINAG can provide the basis for replication in other watershed together with a full-fledged monitoring, evaluation and knowledge management program.

Republic of Peru

Conservation and Sustainable use of High-Andean Ecosystems of Peru through Compensation of Environmental Services for Rural Poverty Alleviation and Social Inclusion

GEF Financing

Detailed design report - Annexes

PERU

CONSERVATION AND SUSTAINABLE USE OF HIGH-ANDEAN ECOSYSTEMS OF PERU THROUGH COMPENSATION OF ENVIRONMENTAL SERVICES FOR RURAL POVERTY ALLEVIATION AND SOCIAL INCLUSION

PROJECT DESIGN REPORT

ANNEXES

TABLE OF CONTENTS

ANNEX 1. COUNTRY RURAL AND ENVIRONMENTAL CONTEXT BACKGROUND……1

1.1 Appendix 1: Country data……10

ANNEX 2. POVERTY, TARGETING AND GENDER……11

ANNEX 3. COUNTRY PERFORMANCE AND LESSONS LEARNED……20

ANNEX 4. DETAILED PROJECT DESCRIPTION……30

ANNEX 5. INSTITUTIONAL ASPECTS, LEGAL FRAMEWORK AND IMPLEMENTATION ARRANGEMENTS……45

5.1 Appendix 1: Organizational Chart……61

5.2 Appendix 2:Terms of Reference of Key Project Personnel……62

ANNEX 6. PLANNING, MONITORING AND EVALUATION, AND LEARNING AND KNOWLEDGE MANAGEMENT……67

6.1 Appendix 1: Results and Impact Measurement System Indicators……74

ANNEX 7. FINANCIAL MANAGEMENT AND DISBURSEMENT ARRANGEMENTS……76

7.1 Appendix 1: Flow of Funds……79

7.2 Appendix 2: Auditors Terms of Reference……80

ANNEX 8. PROCUREMENT……81

ANNEX 9. DETAILED COST CALCULATIONS……82

ANNEX 10. ECONOMIC AND FINANCIAL ANALYSIS……84

ANNEX 11. DRAFT PROJECT IMPLEMENTATION MANUAL

……89

ANNEX 12. COMPLIANCE WITH IFAD POLICIES……91

ANNEX 13. DOCUMENTS IN THE PROJECT LIFE FILE AND REFERENCES……100

ANNEX 1. COUNTRY RURAL AND ENVIRONMENTAL CONTEXT BACKGROUND

I. INTRODUCTION

1. This annex provides information on IFAD and national rural development and environmental strategies as well as those of other multilateral agencies. It includes an Appendix on Country Data to supplement economic and social information provided in the Main Report.

2. A distinct section addresses consistency of the proposed project with GEF 5 strategic objectives with specific reference to strategies for payment or compensation for environmental services as outlined by the Scientific and Technical Advisory Panel (STAP).

II. IFAD STRATEGIES

3. The proposed project is consistent with the IFAD Strategic Framework 2011-2015, the Peru RB-COSOP, the Environment and Natural Resource Policy, the IFAD climate strategy and procedures for environmental and social assessments.

4. The goal of the **Strategic Framework 2011-2015**[1] is to enable poor rural people to improve their food security, raise their incomes and strengthen their resilience. This goal is underpinned by five Strategic Objectives, among them the following: (a) a natural resource and economic asset base for poor rural women and men that is more resilient to climate change, environmental degradation and market transformation; (b) poor rural women and men and their organizations able to manage profitable, sustainable and resilient farm and non-farm enterprises or take advantage of decent work opportunities; and (c) enabling institutional and policy environments to support agricultural production and the full range of related non-farm activities.

5. The strategy for Peru is contained in the **Results Based Country Strategy Opportunities Programme (RB-COSOP**) considered by the Executive Board in September 2009[2] whose objectives include: (a) improved management knowledge and technical capacities of rural communities to further sustainable use and control of natural resources and physical assets; (b) increased access to quality, public and private, financial and non-financial services, and improved competitiveness and enhanced market linkages; and (c) increased community involvement in decentralized policy and decision-making processes by regional and local governments.

6. Of direct relevance to implementation of this project is the approval by the Executive Board in 2011[3] of an **Environment and Natural Resource Management Policy**: Resilient livelihoods through the sustainable use of natural assets. For the purposes of this policy, the term 'environment and natural resource management' (ENRM) focuses on the use and management of the natural environment, including natural resources defined as raw materials used for socio-economic and cultural purposes, and ecosystems and biodiversity with the goods and services they provide.

7. The goal of the policy is to enable poor rural people to escape from and remain out of poverty through more-productive and resilient livelihoods and ecosystems. Its main purpose is to integrate the sustainable management of natural assets across the activities of IFAD

[1] EB 2010/101/R.12
[2] EB 2009/97/R.11
[3] EB 2011/102/R.9

and its partners. The policy sets out 9 core principles to guide IFAD's operations including: (1) Scaling-up investment in multiple-benefit approaches for sustainable agricultural intensification; (2) Recognizing and deepening greater awareness of the economic, social and cultural value of natural assets; (3) Furthering 'climate-smart' approaches to rural development; (4) Attaching greater attention to risk and resilience in order to manage environment and natural-resource-related shocks; (5) Engaging in value chains to drive green growth; (6) Improving governance of natural assets for poor rural people by strengthening land tenure and community-led empowerment; (7) Pursuing livelihood diversification to reduce vulnerability and build resilience for sustainable natural resource management; (8) Ensuring equality and empowerment for women and indigenous peoples in managing natural resources and; (9) Increasing access by poor rural communities to environment and climate finance.

8. Additionally IFAD has approved a **Climate Change Strategy**[4] to ensure a systematic focus on the implications of climate change for its activities at the country level. The strategy aims to maximize IFAD's impact on rural poverty in a changing climate. It has three purposes: (a) to support innovative approaches to helping smallholder producers build their resilience to climate change, (b) to enable smallholder farmers to take advantage of available mitigation incentives and funding and,(c) to inform a more cogent dialogue on climate change, rural development, agriculture and food security.

9. Furthermore, IFAD has adopted **procedures for environmental and social assessments** as reviewed by the Executive Board in April 2009[5] setting out key environmental and social principles. Adopted principles commit IFAD to a) address the vulnerability and adaptation needs for the rural poor, b) promote the sustainable use of natural resources and protection of key ecosystems, c) focus on partnership-oriented initiatives for improved social and environmental quality, d) address environmental and social impact assessments of agricultural and non-agricultural activities in an integrated manner, e). incorporate externalities and minimize social costs, f) implement participatory approaches, with special emphasis on the role of women, g) promote the development of indigenous peoples and other marginalised groups (pastoralists, hunters and gatherers) while enhancing their livelihoods: securing ownership /access to ancestral land and territories; strengthening their institutions, promoting Free Prior Informed Consent (FPIC), and valuing indigenous knowledge systems, h) promote environmentally sound agricultural and manufacturing processes, i) ensure systematic environmental and social monitoring and, j) undertake Strategic Environmental Assessments; where appropriate.

III. NATIONAL STRATEGIES

10. The following section provides summary information on national development and related rural development policies followed by national environmental policies and those adopted by Peru as a result of being signatory to international environmental conventions. Development strategies include a National Strategic Development Plan**,** a National Rural Development Strategy, a National Water Resources Policy and Strategy, an Agenda for Comprehensive Development of Rural Communities and the Fight Against Poverty Conditions and, a National Plan for Decentralization and Regionalization

[4] EB 2010/99/R.2/Rev.1

[5] EB 2009/96/R.7

A. Development strategies

11. **The National Strategic Development Plan 2021.** This Plan provides a route map for Peru's development in the next 10 years. It includes aspects related to the fundamental rights and dignity of its people within a competitive economy that generates jobs and sustainable use of natural resources. It recognizes that Peru is subject to international trends and some of these include globalization, democracy, information technologies, a new economic order in the Pacific Basin, awareness about the environment and a preference for the protection of nature. The Plan was originally prepared during the Garcia Administration and is currently being revised to include main strategies of the Humala Administration.

12. The **National Strategy for Rural Development (ENDR)** published in 2004[6] remains valid. The main elements of the strategy include: (a) pursuing a rural economy which is competitive, diversified and sustainable; (b) promoting access to productive assets for rural groups; (c) providing adequate infrastructure in support of rural production; (d) providing services aimed at improving the wellbeing of rural inhabitants and employment alternatives; (e) promoting and encouraging sustainable management and conservation of natural resources; (f) supporting development of capacities of rural inhabitants and building social capital; (g) furthering social inclusion; and (h) encouraging institutional changes that create conditions for sustained rural development.

13. The **National Water Resources Policy and Strategy.**[7] The purpose of this policy and strategy is to guarantee access to water availability in quantities, quality and timeliness required for use in various economic activities and satisfaction of basic needs of current and future generations. The policy is designed to meet the following objectives: 1) ensuring, for present and future generations, the adequate availability of water, with appropriate quality standards, 2) promoting private sector participation in financing water infrastructure to improve the spatial and temporal distribution of water resources, 3) preserving the quality of water resources for the protection of population health and natural ecosystems, expanding the coverage of wastewater treatment, 4) using water resources rationally to achieve sustainable development, 5) protecting the most vulnerable areas against extreme hydrological events of natural origin or resulting from improper use. The policy and strategy contains detailed elements for 12 distinct area including 1) Legal and Institutional Frameworks, 2) Water Rights, 3) Water Quality, 4) Human Resources, Capacity Building and Water Culture, 5) Hydro meteorological Information, 6) Water Infrastructure, 7) Water Resources Planning, 8(Investment and Financing, 9) Sector Activities including agriculture and mining, 10) Ecosystem Conservation, 11) Cross border Basins and, 12) Risk Prevention, Mitigation of Impacts and Adaptation to Climate Change.

14. The **Agenda for Comprehensive Development of Rural Communities and the Fight Against Poverty Conditions**. The Agenda aims to reduce the incidence of monetary poverty in the rural population to 30% being the difference between monetary poverty in urban and rural areas not more than 20 percentage points. The agenda includes sustainable social, economic, environmental and institutional dimensions. It includes elements to promote the social, economic and institutional dimensions within a framework that takes into account the environmental dimension including passage of a Land Act and ecological and economic zoning.

[6] D.S. Nº 065-2004-PCM

[7] http://www.ana.gob.pe/media/290336/politicas_estrategias_rh.pdf

15. The **National Plan for Decentralization and Regionalization.** The Plan is now being submitted for consultation among the 25 regional governments and the Metropolitan Municipality of Lima and national stakeholders. National authorities will promote the adoption of the Land Act to provide for measures such as policies on equality between regions establishing a regional compensation fund, adopting rules for fiscal decentralization, promotion of regional markets through public-private partnerships and reorganization of the territory in macro-regions. With regard to the territorial reorganization the Plan suggests the creation of five major land areas that willl shape the country: the macro north, the Amazon, the macro south, the south and centre including Lima-Callao.

B. Environmental strategies and international conventions

16. Since creation of the **Ministry of the Environment** (MINAM) in 2008, Peru continues to make progress in term of the legal and institutional framework although recent conflicts regarding extractive industries and the use of water resources have highlighted the need to further develop new rules and regulations to ensure sustainable use of natural resources and reduce conflictive situations which may involve drafting of new norms and regulations for Environmental Impact Assessments and enforcement of environmental rules and regulations.

17. Environmental policies and strategies include the National Environmental Policy, the National Environmental Action Plan and the National Strategy for Biological Diversity.

18. The **National Environmental Policy**[8] (PAN) for its Spanish acronym approved by Supreme Decree in May 2009 has as its main objective enhancing the quality of human life, guaranteeing the long term existence of healthy, viable and functional ecosystems, and assuring the sustainable development of Peru through the prevention of adverse effects and protection and restoration of the environment and its components, and conservation and sustainable use of its natural resources in accordance with fundamental human rights. Specific objectives aim at: a) achieving the conservation and sustainable use of Peru's national heritage with efficiency, equity and social welfare prioritizing the integral management of its natural resources, b) assuring an adequate environmental quality for human health and integral human development by preventing impact on ecosystems, restoring degraded environments, and promoting an integrated management of environmental risks as well as clean and eco-efficient production, c) consolidating environmental governance and the National Environmental Administration System under the Ministry of the Environment, linking and integrating environmental cross-sector actions, d) attaining a high level of public awareness and environmental culture , with active citizen participation, which is both informed and aware of decision-making processes with regard to sustainable development and, e) achieving a competitive and eco-efficient development of the public and private sectors, promoting national and international economic opportunities and potentials.

19. The **National Environmental Action Plan 2011-2021** (PLANAA)[9] for the Spanish acronym establishes a number of priorities including integrated and sustainable water management and the generation of benefits for local communities through the conservation and use of environmental services. The Plan proposes specific goals related to water, biodiversity, and mining. For the water sector it calls for the integrated management of watersheds, with an ecosystem approach that gives priority to ground-water recharge. It

[8] http://dgffs.minag.gob.pe/pdf/normatividad/politicaambiental.PDF

[9] www.minam.gob.pe/index.php?option

also calls for integrating biodiversity into productive landscapes, promoting the participation and commitment of Peruvian society and to improve instruments for managing it. The Action Plan specifically recommends increasing the visibility of environmental services' value for the Peruvian economy and the implementation of payment for environmental services schemes in 10 strategic watersheds by 2021.

20. The overall objective of the **National Strategy for Biological Diversity (ENDB**)[10] is the conservation of biodiversity, sustainable use of its components, fair and equitable sharing of the benefits arising from their use, adequate access to those resources, appropriate transfer of pertinent technologies, taking into account the rights to those resources and technologies, as well as appropriate financing. There are a number of specific strategy lines with identifiable objectives and actions. These are: i) the conservation of biodiversity in Peru; ii) integrating sustainable use of biodiversity into the management of natural resources; iii) establishing special measures for the conservation and restoration of biodiversity faced with external processes; iv) promoting participation and engagement of Peruvian society in the conservation of biodiversity; v) improving knowledge of biodiversity; perfecting the instruments needed for management of biodiversity; vi) enhancing Peru's image at the international level.

21. **International conventions**. Peru is a signatory to a number of international conventions including the Convention on Biological Diversity; the United Nations Framework Convention on Climate Change; the Vienna Convention for the Protection of the Ozone Layer and Montreal Protocol; the Convention for the Protection of Flora, Fauna and Natural Scenic Beauty in the American Countries; the Convention on International Trade in Endangered Species of Wild Fauna and Flora; the Ramsar Convention on Wetlands; the Antarctic Treaty; the UNESCO Paris Convention; the Basel Convention on the control of trans border movements of hazardous wastes and their deposits, among others.

22. Of particular relevance is the **Regional Strategy for the Conservation and Sustainable Use of High Andean Wetlands**[11] as part of the Ramsar Convention, aimed at promoting sustainable use and conservation of the High Andean wetlands through the implementation of a long-term regional management process among the involved countries, in order to maintain the goods and services provided by the wetlands and reduce existing impacts and threats. The strategy includes six specific objectives including: 1) developing a shared vision of the High Andean wetlands through coordination mechanisms and strengthening of regional capacities, 2) completing and improving the scientific and technical knowledge on High Andean wetlands and other functionally related ecosystems, in order to support their sustainable use and conservation, 3) promoting conservation, management and sustainable use of natural and cultural resources of High Andean wetlands, and the goods and services related to them, through appropriate management,4) strengthen education and communication processes to increase public awareness on the importance and value of High Andean wetlands, 5) achieving articulation of wetland conservation policies among the countries in the region, and 6) designing and implementing a follow-up and assessment system for the strategy, in order to guarantee sustainability in the mid and long terms, at a regional, national and local level.

[10] http://www.sernanp.gob.pe/sernanp/archivos/biblioteca/publicaciones/DOC_VARIOS/ENDB.pdf
[11] http://www.ramsar.org/pdf/cop9/cop9_doc26_e.pdf

IV. GEF 5 STRATEGY

23. The proposed project addresses Objective 2 of GEF-5 **Biodiversity Focal Area**, Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes, Seascapes and Sectors[12]. The goal of the biodiversity focal area is the conservation and sustainable use of biodiversity and the maintenance of ecosystem goods and services. To achieve this goal, the strategy encompasses five objectives: 1) improve the sustainability of protected area systems; 2). mainstream biodiversity conservation and sustainable use into production landscapes/seascapes and sectors; 3). build capacity to implement the Cartagena Protocol on Biosafety; 4). build capacity on access to genetic resources and benefit-sharing; and 5) integrate Convention on Biological Diversity (CBD) obligations into national planning processes through enabling activities.

24. Recognizing that the persistence of biodiversity requires the sustainable management of landscape and seascape mosaics that include protected areas and a variety of other land and resource uses outside of these protected areas. GEF, in order to complement its investments to strengthen the sustainability of protected area systems, will promote sustainability measures to help reduce the negative impacts that productive sectors exert on biodiversity, particularly outside of protected areas, and highlight the contribution of biodiversity to economic development and human wellbeing. In this regard the strategy document recognizes that in some cases, public and private actors may not have the incentive to act even if they have the capacity to do so. Incentives can often be created by changing policies and programs that encourage economically inefficient uses of ecosystems and species such as strengthening property rights systems or removing "perverse" subsidies. The strategy specifically notes that in other cases, incentives can be created through the evolving mainstreaming tool of Payment for Ecosystem Services (PES).

25. **Learning objectives**. The Biodiversity Focal Area Strategy for GEF-5 states that the GEF has an opportunity to contribute to the evidence base of incentive approaches by supporting work to answer the following question, How do certification, PES and transfers of information about the distribution and values of ecosystem services affect conservation and sustainable use outcomes, and in what circumstances are they likely to be most effective? The strategy states that this learning objective will be accomplished primarily through support of prospective experimental and quasi experimental project designs.

26. **STAP guidance**. The STAP has suggested that GEF should support PES projects in three different ways: a) by funding direct payments of environmental services, especially when these short-term payments are likely to shift land use or persuade interested long term buyers of environmental services, or when payments through associated trust funds look more promising to secure biodiversity conservation; b) by supporting government-financed multiple service payments for ecosystem services schemes. Leveraging biodiversity considerations in REDD design willl be particularly important in such cases; and c) by paying for the start-up costs of PES projects, but carefully considering if such investment is the only binding constraint in the project implementation.

27. While the STAP recommends that GEF invest in PES, it also recognizes potential threats to the effectiveness of PES schemes, including noncompliance with the contractual conditions, poor selection of areas or individuals who may not be in a position to supply the environmental services, "leakage" whereby protecting a certain place pushes pressure

[12] GEF/R.5/Inf.21, November 02, 2009. URL: http://www.thegef.org/gef/fifth_replenishment

elsewhere, and paying for services that willl have been provided even in the absence of payment.

V. STRATEGIES OF OTHER MULTILATERAL AGENCIES

A. World Bank Group Strategy

28. A World Bank Group (WBG) **Environmental Strategy 2012-2022** was released in June 2012 aimed at supporting countries to pursue sustainable development pathways that are green, inclusive, efficient, and affordable. In Latin America where pressure continues on coastlines, wetlands, and the world's largest forest cover, the Bank Group will continue to support the management of protected areas, the integration of biodiversity conservation into productive landscapes and in some countries, the use of payments for environmental services. It will also provide policy advice on cleaner development paths, supporting industrial pollution abatement, and promoting "green cities.

29. Under the green agenda the WBG will undertake analytical work to underpin the economic value of functioning ecosystems, investing in biodiversity protection, and mobilizing innovative sources of financing, including through the linkage between biodiversity and climate change. Through participation in the WAVES partnership, this work includes shifting toward greater recognition of the economic value of ecosystems and biodiversity services and of the high economic costs of their loss. It will also support the management of protected areas (Brazil, Peru, Bolivia, and the Organisation of Eastern Caribbean States), the integration of biodiversity conservation into productive landscapes (Uruguay, Mexico, Brazil, and Panama), and the use of payments for environmental services (Costa Rica, Mexico, and Brazil). Work will also be stepped up to meet the growing interest in forest carbon partnerships (REDD+, for example in Mexico and Costa Rica) and forest investment programs (Mexico, Peru, and Brazil) to build institutional capacity, forest governance, and information, as well as investments in forest mitigation efforts.

30. In terms of the clean agenda, priorities in this area include supporting countries like Peru and Colombia to strengthen their health evaluation analysis capacity in order to help identify priorities for action and countries like Argentina and Uruguay to strengthen their industrial pollution abatement and cleaner production processes, while for Brazil, encouraging "green cities" by incorporating environmental considerations into urban planning and design.

31. In relation to the resilience agenda the WBG will address the need for enhanced climate resilience by boosting work in adaptation, mitigation, and disaster risk management, using a variety of instruments including a) pioneering and developing low-carbon growth strategies through changes in land use (including smart agriculture) and in the energy, transportation, and waste management sectors (Mexico, Brazil, and Colombia), b) Using Carbon Finance-Assist to help countries and subnational entities develop low-carbon growth strategies (Rio de Janeiro, Brazil), c) Providing support in the Nationally Appropriate Mitigation Actions process to help governments identify new and country-driven mitigation opportunities (Mexico, Chile, Colombia, and Costa Rica), d) Developing climate change adaptation strategies at subnational levels (Mexico and Brazil's northeastern region) and e) Supporting renewable energy and energy efficiency investments (such as appliance efficiency in Mexico and Argentina, distributional efficiency in Brazil, wind and solar energy in Mexico, and small hydro through various carbon finance projects).

32. In terms of a specific strategy for Peru, WBG strategies are contained in the **Country Partnership Strategy for the Republic of Peru for the Period FY12-FY16**. [13].Strategic objectives 3.2 and 3.3 are of particular relevancy. Under 3.2 the WBG will support a more sustainable business rural development focused on increasing the productivity in regions where the poor are concentrated through improved access to water and other inputs. Given the high level of water scarcity in the country an especially in poor areas the Bank will continue its support through implementation of the Water Resources Management and Sierra Irrigation projects. Allowing it to help improve water availability through introduction of comprehensive river basin management approaches.

33. Under 3.3 the WBG willI address environmental vulnerabilities and the impact of climate change. Under the strategy the WBG will continue to strengthen environmental regulation and institutional capacity of the environmental authority, enhancing the biodiversity conservation system and providing lessons from adaptation to climate change pilot projects. Additionally the Bank will support a knowledge agenda by updating estimates on the economic cost of environmental degradation. Regarding biodiversity potential activities willI include a more effective inclusion of biodiversity conservation into national and regional development plan.

Table 1. WBG relevant strategic objectives

Strategic Objective 3 Sustainable Growth and Productivity			
3.1 Promoting productivity through enhanced labour skill and competitiveness of small and medium enterprises a	3.2 Sustainable rural development and water resources management	3.3 Strengthening environmental management	3.4 Increasing disaster risk management and urban planning
-Increased number of higher education programmes and institution with accreditation	-Increased value of production of families covered under the Sierra rural development project -Better management of water resources and irrigations systems	-Strengthened environmental regulation -National protected areas system expanded and conservation activities implemented within ecological corridors	-Policy and regulation framework for safe public health and education infrastructure approved and consolidated -Investment projects pipeline generated for structural reinforcement of public education and health infrastructure in Metropolitan Lima

B. Inter-American Development Bank

34. A new Inter-American Development Bank was released in June 2012[14] The strategy aims to help close the economic and social gaps that exist between urban and rural areas, and support productivity gains as a basis for inclusive, sustainable economic growth. The areas prioritized in the strategy are: (i) social inclusion; (ii) rural development and agriculture; (iii) housing and urban development; (iv) climate change and disaster risk management; (v) water, sanitation, water resources, and solid waste; (vi) energy; (vii) transportation; (viii) public management; and (ix) competitiveness and innovation.

35. The Bank's participation in rural Peru aims to help raise rural income levels by increasing productivity and diversifying economic activities in those areas, through the following actions: (i) improving the quality of delivery of key agricultural services for the

[13] Report No 66187-PE

[14] http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=1378544

sector's competitiveness; (ii) enhancing public management and promoting financing mechanisms for the maintenance and sustainable use of natural resources, particularly forestry resources; (iii) encouraging the formation of agglomeration economies in the form of clusters and value chains, both agricultural and non-agricultural; (iv) completing processes to regularize land ownership in the *sierra* and *selva* regions; and (v) supporting activities that reduce emissions arising from deforestation and the degradation of forest areas as a result of economic activities such as formal and informal mining and extensive ranching.

36. Regarding climate change and water resources the strategy includes (i) strengthening institutional management, building reporting capacity, and coordination and cooperation among the various stakeholders on climate change adaptation at the national, regional, local levels, to support the mainstreaming of climate change adaptation; (ii) supporting the adoption of climate change adaptation measures in environmental services and public investment instruments; and (iii) supporting activities to increase the resilience of climate-change-vulnerable ecosystems to economic activities that exert pressure on them (such as formal and informal mining).

37. Concerning water resources, the strategy aims at: (i) improving the integrated management of water resources including issues of water rights, climate change, energy efficiency, financial strategy, water culture, and management according to seasonality and quality, and the vulnerability of water resources in relation to climate change challenges; (ii) support implementation of the water and sanitation. The strategy further aims at making progress in universalizing access to drinking water service, and thus reduce disparities between urban and rural zones;39 (iii) support steps to expand the coverage of wastewater collection and treatment services and increase household connections; (iv) increase the efficiency of public utilities in the sector and help local governments to create efficient municipal utilities;40 (v) increase formalization among recycling entities; and (vi) implement the climate change adaptation approach in the national water resource management system, including strengthening its hydro-meteorological information system.

C. Andean Development Corporation

38. The **Environmental Strategy** of the Andean Development Corporation (CAF) [15] has two main objectives: to generate and improve legal and institutional frameworks, spaces and processes that can ensure responsible management of the environment and support countries in the conservation and sustainable use of natural resources and ecosystems. In addition, the CAF has established a Corporate Plan for Environmental Management, which aims to establish corporate environmental social responsibility. As part of its Environmental Strategy, CAF has designed and implements a number of specialized programs related to the environment. These promote and support national and regional initiatives for the conservation and sustainable use of natural capital in the region. CAF also helps to strengthen the environmental sector in each shareholder country through several specific programs such as: (i) a Biodiversity Program, (ii) a Latin American Carbon Program, (iii) a Clean Energy Program and alternatives, (iv) a Risk Management Program for Natural Disasters, (v) a Programme of Integrated Water Management, (vi) a Sustainable Urban Development Program, and (vi) a Program for Promoting Sustainable Development in Financial Institutions.

[15] http://publicaciones.caf.com/media/1407/estrategia_ambiental_eng.pdf

1.1 Appendix 1. Country data

COUNTRY DATA - Peru

Land area (km2 thousand) 2009 1/	1 280
Total population (million) 2009 1/	29.16
Population density (people per km2) 2009 1/	23
Local currency Nuevo Sol (PEN)	

GNI per capita (USD) 2009 1/	4 200
GDP per capita growth (annual %) 2009 1/	-1
Inflation, consumer prices (annual %) 2009 1/	3
Exchange rate: USD 1 = 2.64 PEN	

Social Indicators	
Population growth (annual %) 2009 1/	1
Crude birth rate (per thousand people) 2009 1/	21
Crude death rate (per thousand people) 2009 1/	5
Infant mortality rate (per thousand live births) 2009 1/	19
Life expectancy at birth (years) 2009 1/	73
Total labour force (million) 2009 1/	13.64
Female labour force as % of total 2009 1/	44
Education	
School enrolment, primary (% gross) 2009 1/	112
Adult illiteracy rate (% age 15 and above) 2009 1/	n/a
Nutrition	
Daily calorie supply per capita	n/a
Malnutrition prevalence, height for age (% of children under 5) 2008 1/	n/a
Malnutrition prevalence, weight for age (% of children under 5) 2008 1/	n/a
Health	
Health expenditure, total (as % of GDP) 2009 1/	4.6
Physicians (per thousand people) 2008 1/	n/a
Population using improved water sources (%) 2008 1/	82
Population using adequate sanitation facilities (%) 2008 1/	68
Agriculture and Food	
Food imports (% of merchandise imports) 2009 1/	11
Fertilizer consumption (kilograms per ha of arable land) 2008 1/	82
Food production index (1999-01=100) 2009 1/	153
Cereal yield (kg per ha) 2009 1/	3 910
Land Use	
Arable land as % of land area 2008 1/	3
Forest area as % of total land area 2006 1/	53.6
Agricultural irrigated land as % of total agric. land 2008 1/	n/a

Economic Indicators	
GDP (USD million) 2009 1/	130 325
GDP growth (annual %) 1/	
2000	3
2009	0.9
Sectoral distribution of GDP 2009 1/	
% agriculture	7
% industry	34
% manufacturing	14
% services	59
Consumption 2009 1/	
General government final consumption expenditure (as % of GDP)	10
Household final consumption expenditure, etc. (as % of GDP)	64
Gross domestic savings (as % of GDP)	26
Balance of Payments (USD million)	
Merchandise exports 2009 1/	26 885
Merchandise imports 2009 1/	21 706
Balance of merchandise trade	5 179
Current account balances (USD million)	
	-2
before official transfers 2009 1/	616
after official transfers 2009 1/	247
Foreign direct investment, net 2009 1/	4 364
Government Finance	
Cash surplus/deficit (as % of GDP) 2009 1/	-1
Total expense (% of GDP) a/ 2009 1/	17
Present value of external debt (as % of GNI) 2009 1/	23
Total debt service (% of GNI) 2009 1/	3
Lending interest rate (%) 2009 1/	21
Deposit interest rate (%) 2009 1/	13

a/ Indicator replaces "Total expenditure" used previously.
1/ World Bank, *World Development Indicators* database CD ROM 2011-2012

ANNEX 2. POVERTY, TARGETING AND GENDER

I. AREA AND POPULATION

1. The area of direct Project intervention consists of two basins: Jequetepeque and Cañete. The **Jequetepeque river basin** covers 29 districts in the department of Cajamarca and La Libertad. The total area of the basin is 393.545[16] ha. The **Cañete river basin** covers 29 districts in the Department of Lima. The total area is approximately 601.734[17] ha.

2. The Project's target group is composed of local residents, producer associations, and peasant communities of the upper and middle basins middle and in the lower valleys.

3. The total population of the Jequetepeque river basin is approximately 479 755 inhabitants while the population of the Cañete river basin is estimated at 106 880 inhabitants. In the first case the population density is found to be of 122 habitants per km2 and in the second only 18 h/km2.

4. The number of direct number of households to benefit from the Project has been determined by estimating the number of potential beneficiaries in the upper basins, who willI participate in activities included under Component 1.

II. POVERTY IN SELECTED AREAS

A. Poverty situation in the Cañete river basin

5. The Cañete River basin covers 3 provinces, of which the province of Yauyos located in the upper basin has a greater number of inhabitants (43%), followed by Huarochiri (32%) and Cañete (16%). Yauyos province also has the largest poverty level which reaches up to 60% in the districts of Tupe and Yauyos, and where extreme poverty conditions are 31% and 27% respectively. In Huancaya, Vitis Azangaro districts poverty levels are 53%, 51% and 49% respectively.

Table 1. Cañete Urban rural population

Department	Provinces	Population	% Urban	% Rural
Lima	Cañete	82,711	84	16
	Huarochiri	1,621	67.7	32.3
	Yauyos	22,548	57.2	42.8
	Total	**106,880**	**70**	**30**

[16] Source: Hydric Resources in Peru. ANA, 2012.
[17] Ibid

Table 2. Cañete poverty and extreme poverty

Department	Districts		Population	Poverty	Extreme Poverty
Lima	**Province**	**CAÑETE**	**82,711**	**31.0**	**6.7**
		San Vicente de Cañete	52,666	23.5	3.9
		Lunahuana	4,791	32.9	7.1
		Nuevo Imperial	21,735	30.7	6.3
		Pacaran	1,775	41.1	10.5
		Zuniga	1,744	26.6	5.8
	Province	**HUAROCHIRI**	**1,621**	**23.9**	**6.4**
		San Lorenzo de Quinty	1,621	23.9	6.4
	Province	**YAUYOS**	**22,548**	**40.1**	**15.0**
		Yauyos	2,749	62.8	27.6
		Alis	1,345	23.9	7.9
		Ayauca	2,046	42.4	14.5
		Azangaro	568	51.7	21.2
		Cacra	481	41.0	16.2
		Carania	358	38.0	14.8
		Catahuasi	1,024	30.5	8.2
		Chocos	1,162	40.2	(12,9)
		Colonia	1,385	48.0	19.4
		Hongos	418	43.3	16.4
		Huancaya	1,207	53.1	12.6
		Huangascar	617	36.0	(13,2)
		Huantan	959	36.9	12.7
		Laraos	855	29.6	9.3
		Lincha	869	42.6	(15,9)
		Madean	832	45.3	17.8
		Miraflores	458	21.7	6.5
		Putinza	478	25.4	5.7
		Tanta	516	30.9	(8,0)
		Tomas	1,123	34.3	10.6
		Tupe	665	64.3	31.1
		Vinac	1,839	31.3	(9,5)
		Vitis	594	48.9	17.3
Total			**106,880**	**31.7**	**9.4**

B. Poverty situation in the Jequetepeque river basin

6. In this basin, the largest number of rural population is settled in the department of Cajamarca with an average of 68% while in La Libertad the rural population only represents13%. The provinces of the department of Cajamarca with larger rural populations are San Miguel and San Pablo with 84% and 85% respectively

7. The department of Cajamarca shows high poverty levels, being the poorest districts Cospán (87%), Assumption (86%), Chetilla (85%),

Jesus (83%), Guzmango (78%), San Juan (75%), Cupisnique (73%) and Calquis (72%), of which Cospán, and Assumption and Chetilla exhibit extreme poverty of more than 50%. On the other hand, in the lower part of the basin of the Department of La Libertad the poorest districts are Guadalupe and Chepen, with an average of 40%.

Table 3. Jequetepeque rural urban population

Department	Provinces	Population	Urban %	Rural %
	Subtotal	**373,573**	**32**	**68**
Cajamarca	Cajamarca	284,066	55	45
	Contumaza	28,772	42	58
	San Miguel	36,850	16	84
	San Pablo	23,885	16	85
La Libertad	**Subtotal**	**106,182**	**87**	**13**
	Chepén	48,318	82	18
	Pacasmayo	57,864	93	7
	TOTAL	**479,755**	**60**	**40**

Table 4. Jequetepeque poverty and extreme poverty

Department	Districts		Population	Poverty	Extreme Poverty
	Sub Total		**373,573**	**60.9**	**28.7**
Cajamarca	Provinces	Cajamarca	284,066	70.6	40.1
		Asuncion	13,086	86.1	55.2
		Cajamarca	228,691	29.8	7.9
		Chetilla	4,300	85.7	55.2
		Cospan	8,109	87.3	56.2
		Jesus	14,947	82.7	49.8
		Magdalena	9,748	47.3	19.1
		San Juan	5,185	75.2	37.7
	Provinces	Contumaza	28,772	62.7	31.7
		Contumaza	8,829	67.3	36.2
		Chilete	3,012	34.1	13.1
		Cupuspisnique	1,552	73.2	42.0
		Guzmago	3,149	78.6	48.3
		Santa Cruz de Toledo	1,121	65.3	28.7
		Tantarica	3,044	60.1	29.6
		YonanN	8,065	60.4	23.6
	Province	San Miguel	36,850	57.0	21.5
		San Miguel	16,255	62.8	25.9
		Calquis	4,558	72.3	34.4
		El Prado	1,644	53.2	16.9
		Llapa	5,977	53.9	17.8
		Sand Silvestre de Cochan	4,673	38.5	12.0
		Union Agua Blanca	3,743	61.1	22.0
	Province	SAN PABLO	23,885	53.5	21.4
		San Pablo	13,878	64.6	30.7

		San Bernardino	4,917	59.2	24.5
		San Luis	1,364	39.4	12.6
		Tumbaden	3,726	50.6	17.9
La Libertad		SUB TOTAL	106,182	32.2	6.9
	Province	Chepen	48,318	40.1	8.1
		Chepen	48,318	40.1	8.1
	Province	Pacasmayo	57,864	24.3	5.7
		Guadalupe	41,985	40.2	9.2
		Jequetepeque	3,735	11.8	3.3
		San Jose	12,144	20.8	4.8
TOTAL			**479,755**	**46.5**	**17.8**

III. TARGETING

8. The Project's targeting strategy is consistent with IFAD policies in that it willl operate in rural areas in the Peruvian highlands where poverty prevails. The nature of this Project also demands specific targeting based on intervention to conserve particular ecosystems. Areas of the Cañete and Jequetepeque river basins include three distinct ecosystems *Bofedales* (peat bogs), *Pajonales* (grass lands) and relict forests that are located in the highlands region.

9. Conservation of peat bogs will only be undertaken in the Cañete river basin, in the districts: **Tanta, Tomas, Miraflores, Yauyos, Tupe and Madean** in the province of Yauyos.

10. Conservation of High Andean forests will be carried out in both basins, in the following districts: **Laraos, Colonia, Huantan and Madean** in the Cañete river basin and **Contumaza, Cupisnique, El Prado** and **Tantarica** districts in the Jequetepeque river basin.

11. The conservation and sustainable use of grassland willl be carried out in both basins, in the districts of **Huancaya, Vitis, Carania and Alis** in the Cañete river basin and **Asunción, Cospan, Jesus and Llapa** districts in the Jequetepeque river basin.

Table 5. Conservation in the Cañete river basin

	Ecosystem	**Conservation area**
Cañete	*Bofedales*	2,200
	Relict Forests	4,500
	Pajonales (grasslands)	10,000
	TOTAL	**16,700**

Table 6. Conservation in Jequetepeque River Basin

	Ecosystem	Conservation area
Jequetepeque	Relict Forests	1,500
	Pajonales (grasslands)	6,800
	TOTAL	**8,300**

12. **Direct beneficiaries.** Direct Project beneficiaries willI be determined by a combination of geographic self and direct targeting among groups settled in 21 districts: 13 in the province of Yauyos, 3 in Cajamarca, 3 in Contumaza and 2 in San Miguel. A total of 1322 rural families willI benefit in the Jequetepeque watershed, and 842 rural families in the Cañete watershed.

Table 7. Direct beneficiaries

Watershed	Province	Number of Districts	Families (1998)	Estimated Direct Beneficiaries Families	Estimated conservation area (ha)	Subtotal Watershed Subprojects Cost (USD)	Average Conservation Cost per Hectare (USD)
Cañete	Yauyos	13	2,106	842	16,017	1,291,652	81
Jequetepeque	Cajamarca	3	2,714	1,322	8,000	990,636	124
	Contumaza	3	1,322				
	San Miguel	2	370				
	Total	21	6,512	2,164	24,017	2,282,289	

Source: based on *Directory of Rural Communities by Department* (MINAG, 1994) and *Map of Poverty of Peru* (INEI,1998)

IV. GENDER DIMENSIONS

13. On average, the female presence in the basin is 48%. The higher concentration of women is in the lower part of the basin, in the province of Cañete with 50%, followed by Huarochiri (47%) and Yauyos (45%).

14. In rural areas the main economic activity is agriculture, which is led by men however; other economic activities like trade, manufacturing, education and other services are led by women, representing 40% of the economically active population (EAP). The illiteracy rate for women ranges from 6.6% and may reach 14% in areas where the higher areas of this basin. Among the total population without identity documents, 56% to 70% are women. The Project will consider providing support to women in obtaining relevant documents as these are key to full participation in project and institutional activities and decision making processes, and to claiming basic rights. Approximately 30% of household

heads are women, hence they form an important target group given their increased vulnerability, and the fertility rate is two children.

15. The whole Project will aim to bring benefits to broadly equal numbers of men and women, boys and girls. In addition, the project will build on the unique knowledge that both men and women possess in NRM through including women and men in consultations, especially in component 1. Finally, component 2 will see a focus on increasing women's participation in the institutional framework including in leadership positions.

16. The inception workshop and planning workshops thereafter offer important opportunities for gender orientation of key project staff and partners. Gender concerns will also be addressed during the supervision missions. The Project will also aim to identify any specific issues and potential to involve youth in activities.

V. SOCIAL ORGANIZATIONS

17. In order to determine the potential beneficiary families due consideration has been paid to the organizational elements of rural society in Peru and more specifically to Peasant Communities[18] of which there are 12 in the Cañete river basin and 8 in the Jequetepeque river basin. It is estimated that a total of 8618 families are members of these communities based on updated information in 1998 of data contained in the 1994 agricultural census of 1994. This data is subject to change as a new Agricultural Census will be undertaken in September 2012 that will allow for a more precise estimate of potential beneficiary families within these communities. The importance of these communities and their direct linkage to conservation efforts is due to the fact that the selected ecosystems are generally managed under common property regimes in which the role of Peasant Communities is of great importance.

Table 8. Peasant communities in selected basins

Provinces	Districts	# Families (1994)	# Families (1998)	Area (1994)
Yauyos	Alis	53	115	9510.23
	Carania	138	103	9921.38
	Tanta	42	93	1894.24
	Tomas	182	189	14677.06

[18] Peru's legal framework recognizes ownership, possession rights, leaseholds, and communal rights to peasant and native community lands. Land ownership rights may be private, communal, or held in partnership. In fact, rural and native community lands are usually held collectively and are known as *comunidades*. This tenure form is used by both indigenous people and peasant communities (GOP Constitution of Peru 1993; Lastarria-Cornhiel and Barnes 1999).
The 1993 Constitution provides that indigenous and peasant communities have the right to choose how their lands will be administered. Communities are considered autonomous in their organization, in communal work, and in the use and free disposition of their lands. Law No. 26505 permits native peasant communities to elect how they hold land (i.e., communally or individually). The actual management and administration of communal land depends on local conditions including production, resources, ecology, and historical use patterns (IDB 2007; Burneo de La Rocha 2005; Fuentes and Wiig 2009).
The general assemblies of communities have the power to give, rent, sell or mortgage community lands. The assemblies in coastal communities must have a 50% majority support for their actions; in the highlands and the selva, assemblies must have a two-thirds majority (IDB 2007; Fuentes and Wiig 2009).

	Miraflores	111	90	9276.15
	Yauyos	262	243	31350.9
	Tupe	172	131	25025.22
	Madean	268	176	15616.88
	Laraos	222	225	32704.78
	Colonia	538	349	26373.29
	Huantan	221	176	398803.86
	Huancaya	142	150	25880
	Vitis	56	66	10168.16
Total		**2,407**	**2,106**	**611,202**
Provinces	**Districts**	**# Families (1994)**	**# Families (1998)**	**Area (1994)**
Cajamarca	Asuncion	1489	925	6841.28
	Cospan	570	1145	13881
	Jesus	404	644	1400.42
Contumaza	Contumaza*	n/d	0	2544.08
	Cupisnique	357	560	26993.15
	Tantarica	517	762	14931.36
San Miguel	El Prado*	n/d	0	9926.45
	Llapa	182	370	3431.06
Total		**3,519**	**4,406**	**79,949**
Total		**5,926**	**6,512**	**691,151**

VI. STAKEHOLDER CONSULTATIONS

18. In order to consult and discuss the nature of the Project with stakeholders several meetings were held in both watersheds. The Project formulation team visited the Cañete River Basin area on 4 July and the Jequetepeque River Basin area on 5 and 6 July 2012.

19. The **Cañete River Basin** consultation was held in the city of Yauyos in the middle basin) with representatives of government agencies including Agro Rural, in charge of rural extension, reforestation, soil conservation and small irrigation projects; and SERNANP responsible for the administration of the Nor Yauyos Cochas Landscape Reserve which is part of the National Protected Area System. Communities and representatives of local associations participated and commented on their previous experiences working in natural resources projects with governmental and international support pointing out that these efforts had been discontinued and natural resource management activities were presently limited.

20. The main environmental and social problems presented were: limited availability of water for irrigation; poor maintenance of reservoirs and canals; low technological working levels and lack of technical assistance; melting of glaziers; presence of invasive grasslands species such as *Kikuyo Pennisetum clandestinum;* illegal mining activities; problems related

to water use for hydropower generation; and abandonment of land parcels and agricultural terraces.

21. Participants outlined a number of proposals to improve the present situation such as provision of technical support and use of new irrigation technologies; crop diversification benefitting from a great diversity of potatoes (65 varieties); promotion of ecotourism taking advantage of the Nor Yauyos Cochas Landscape Reserve; rehabilitation of canals and wetlands; improved livestock and pasture management; reforestation and soil protection; utilization of about 200 lagoons; preservation of approximately 10 000 ha of *queñuales;* generation and use of mining royalties; compliance with environmental impact studies by mining and hydroelectric companies; develop added value and productive value chains; undertaking improvement of existing land use planning; and strengthening the North Yauyos Development Committee (CODENI) that supports SERNANP activities in the Nor Yauyos Cochas Landscape Reserve.

22. Consultations in the **Jequetepeque River Basin** area included a meeting in the coastal town of Guadalupe with staff of the Compensation for Equitaval Hydrological Environmental Services project (CESAH) lead by CARE; the Regional Government of Cajamarca, the Local Water Authority (ALA) and Board members of the irrigation water user association. Staff of the CESAH project explained the advances in implementation while the representative of the Cajamarca Regional Government described the ecological and economic zoning (ZEE) process carried out in the region indicating that although this process had been completed still much needs to be done regarding land use planning. The ZEE was approved and validated in 2010 and produced a ZEE meso-scale map for determining land conditions for agrarian production purposes, conservation, and for urban and industrial use. In addition a desertification map describing this process in Cajamarca has been. It includes identification of biophysical and socioeconomic variables, construction of a conceptual model, thematic mapping and spatial modeling.

23. The CESAH project supported by CARE, the World Wildlife Fund for Nature (WWF) and the Regional Government of Cajamarca is being implemented in the Contumazá basin. The project has been implemented in two phases. During the first phase initial studies were carried out and proposals for linking suppliers and purchasers of environmental services were prepared and a water user's board was established. In the second phase an economic assessment was prepared. The project ends on October 2012. During a second meeting held in the city of **Chilete** in the middle basin participants expressed their satisfaction with the support provided by the CESAH project, expecting it to continue and to expand its coverage. Participants further noted that among the main benefits obtained with the project were introduction of technically advanced irrigation systems, construction of reservoirs, improved cooking stoves, plantations of *taya* or *tara*, avocado and cherimoya, guinea pig breeding and technical training. They also mentioned that seven committees for management of environmental services (COGESAM) were formed and legalized.

24. Participants further underlined the fact that a Memorandum of Understanding had been signed between the inhabitants of the lower basin and those in the upper basin. However, upper basin inhabitants felt there was a lack of commitment by the lower basin partners to whom they provide water. They also believed that the Water Resources Board Basin (CRHC) and the agency which will administer the compensation fund for environmental services, still needs to be created and should include the two regions (Cajamarca and La Libertad) sharing the Jequetepeque basin, as well as supervision by a national authority should be considered.

25. An additional meeting organized by Agro Rural, was held in the city of **San Miguel** in the upper basin), with 25 local actors from Agro Rural, civil society organizations including Conservation Committees. Participants underlined the benefits and need for rural extension and technical support for conservation, management and productive activities at the provincial level carried out from 1996 by PRONAMACHCS with funding from the Government of Japan. The approved IFAD funded project which willI support local Conservation Committees and local organizations was commended. Participants believed that the DELOSI project willI greatly contribute to furthering the concept of hydrological development.

26. Local participants made a number of suggestions regarding their previous experiences and the planned IFAD project. They expressed their interest and main needs, limitations, and expectations for their organizations and communities. Among the main environmental and social problems and concerns pointed out were: lack of resources for technical assistance and effective extension programs; protection and recovery measures needed to address degraded and overgrazed grasslands using wire fences; forestation and reforestation issues; land use planning improvement and practical implementation; development and implementation of more inclusive projects; and means and resources to add value to their agricultural and forestry products.

ANNEX 3. COUNTRY PERFORMANCE AND LESSONS LEARNED

I. INTRODUCTION

1. The following Annex provides summary information on IFAD operations in the country including a GEF grant linked to the *Sierra Norte* project and a new loan and grant operation to be considered by the Executive Board in September 2012. This section also includes a brief assessment of the performance of the IFAD portfolio. As required under GEF guidelines this Annex also covers descriptions of GEF funded projects in Peru and regional initiatives related to the main objectives of the proposed project.

2. A third section provides substantive information on lessons learned through implementation of IFAD and GEF funded projects that address management of natural resources, biodiversity and more specifically payment for environmental services.

II. OPERATIONS

A. IFAD and GEF funded operations

3. Ongoing IFAD operations in Peru encompass implementation of two loans and a GEF grant. Loans include a) the Strengthening Assets, Markets and Policies for Rural Development in the Northern Highlands SIERRA NORTE and b) Supplementary Loan and Grant- Southern Highlands Project SIERRA SUR II and the GEF grant Sustainable Management of Protected Areas and Forests in the Northern Highlands of Peru linked to the SIERRA NORTE project. A third loan as considered by the Executive Board in September 2012. Loan and grant negotiations took place in Lima, Peru in mid May 2012. The Loan Agreement was signed on 20 February 2013.

4. **Strengthening Assets, Markets and Policies for Rural Development in the Northern Highlands SIERRA NORTE.** This loan was approved in December 2007 for a total cost of US$ 21.7 million. The IFAD loan amounts to US$ 14.4 million. The objectives of this project include: (i) strengthening the capacity of local institutions, communities and rural organizations to manage their natural resources; (ii) strengthening and empowering organizations of the rural poor in their management capacities to undertake business ventures through the provision of financial and non-financial services; (iii) increasing the financial assets of poor rural women through the mobilization of savings and micro insurance; and (iv) promoting social capital and territorial development while harmonizing and coordinating activities between public and private institutions and beneficiary organizations.

5. **Supplementary Loan and Grant Southern Highlands Project SIERRA SUR II.** This project was approved by the Executive Board in December 2009 with an expected closing date in December 2013 for an amount of US$ 8.27 million in ordinary terms and a grant for US$ 300 000.The supplementary loan will increase the number of direct beneficiaries considered under the original loan by approximately 40 000 households in rural areas in an additional 119 districts in 33 provinces. The objectives and scope of the project have not changed from those considered in the original loan aimed at enhancing human, natural, physical, financial and social assets of men and women engaged in small-farm agricultural activities in the southern highlands as a way to improve their livelihoods and promote the creation of income-generating opportunities. Project implementation involves: improving the natural resources of the beneficiaries, providing greater access to markets,

and recognition and use of their knowledge. Expected results include increasing volume of trade in goods and services, greater availability of financial services, sharing knowledge and creating assets.

6. **Sustainable Management of Protected Areas and Forests in the Northern Highlands of Peru**. This grant approved by the GEF in June 2011 for a total of US$ 1,820,000 is being executed by the Fund for the Promotion of Protected Natural Areas of Peru (PROFONANPE) in close collaboration with the Sierra Norte project. The project's objective is to promote sustainable and participatory management of protected areas and forest lands in a small portion of the Sierra in the eastern part of the Lambayeque Region in two districts of Ferreñafe province: Incahuasi and Canaris.

7. The project aims at reducing barriers and threats to biodiversity while ensuring a sustained commitment in terms of catalyzing the growth of investments, strengthening implementation of activities and furthering participation of the rural poor. The results of the project include: (a) the establishment of a new protected area in an ecosystem not represented in the National System of Protected Areas, (b) strengthening the government's ability to address regional environmental concerns and natural resources, c) develop the capacity of members of management committees to participate fully in the administration of protected areas, (d) establish a reliable source of funding for environmental protection and conservation, (e) ensure the sustainable management of forests in the project area, (f) contribute to adding value to non-timber forest products through trading companies and, (g) understanding of the possibilities for the use of a Payment for Environmental Services mechanism.

8. **Strengthening Local Development in Areas of the Highlands and the High Rain Forest.** The purpose of the project is to contribute to rural poverty reduction in 85 districts in the departments of Lima, Cajamarca, Amazonas and San Martin. Its development objective is to deepen the effectiveness, efficiency and relevance of public investments from central regional and local governments to improve the wellbeing of the rural population and increase the value of their natural, physical, human, social and financial assets in the project area. Specific objectives include: a) Strengthening the capabilities and skills of groups and associations of the rural poor to participate fully in local development, increase productivity and competitiveness, including full access to citizenship, b) Transferring funds to groups of organized rural families and associations of rural men and women citizens for them to competitively: i) improve their natural resources and human settlements, ii) have grant funding to carry out profitable business ventures in a wide range of initiatives, and iii) mobilize savings and provide access to micro insurance access especially for rural women; c) Strengthening the institutional capacity of the Implementing Agency to deepen a territorial and micro watersheds approach, mobilize additional private investment to complement project investments to adequately implement an intercultural approach, institute monitoring and evaluation mechanisms and introduce a gender dimension in its projects and further strengthen its operational capacity at the district level.

B. Portfolio Performance

9. A mid-term assessment of implementation of the RB COSOP contains a brief summary of portfolio performance. The report provides information on the closure of the original Sierra Sur loan indicating that the project had been highly satisfactory in terms of its relevance having been aligned with national policies for rural development and poverty reduction as well as with national decentralization policies. In terms of efficiency the use of resources had been satisfactory. However, operational costs had been higher than expected. In relation to efficiency the report indicates that as a result of an analysis of progress

achieved by the project in meeting its objectives and outcomes it showed satisfactory results as the annual income of households was above the poverty line, determined by the value of a basket of consumer goods in the project area. However, the incomes of families surveyed involved in management of natural resources activities were below the poverty line determined in the area. The data analysis conducted as part of the preparation of the PCR shows that the project achieved positive impacts on reducing poverty among families who received incentives from the project. A survey of 530 families linked to the main production lines included in business plans indicates that the average income of these families increased by 37% compared to the project baseline established in 2005. Regarding the value of assets, these increased in value by an estimated average of US$ 1.098 in physical assets and US$ 1.413 in natural assets. The report concludes that the sustainability of project activities after completion is satisfactory as a number of tools and methodologies promoted by the project, both technological and institutional, are likely to continue.

10. **Lessons Learned**. The report further concluded that there is a need to: (a) strengthen territorial planning and management by citizens while strengthening their skills and capabilities to manage their demands for solutions before regional public bodies. Allocating resources for territorial development and land management has been recommended, (b) systematically recover innovation processes considering lessons learned and, from this knowledge, develop innovative proposals that meet the interests of local stakeholders and contribute in closing poverty gaps, (c) define project areas based on a territorial delimitation and not on political and administrative boundaries, (d) institute public accountability as a mechanism of social control in allocating project resources, (e) encourage strategic alliances for accessing markets and stimulate the organization of production linkages between small rural businesses, (f) enhance and revitalize the local talent market as the strategies for this processes are still unclear and understand how the knowledge market in rural areas functions, (g) provide opportunities for inclusion of youth in local economic development to encourage leadership, strengthen the human capital of rural communities and help reduce youth migration from rural areas, (g) institutionalize the tools, methodologies and approaches of projects while contributing to the development and strengthening of local capacities for the management of local economic development through provision of technical assistance to local governments.

11. **Strengthening Assets, Markets and Policies for Rural Development in the Northern Highlands SIERRA NORTE.** A supervision mission conducted in November 2011 indicated that the project was contributing effectively to strengthening the capacities of rural households in its area of intervention in order to overcome poverty conditions in a sustainable manner. Through field visits it was found that families were improving the quality of their homes, increasing the availability and use of food and valuing their properties, especially through implementation of management of natural resources plans. However, it was noted that in terms of implementation of business plans, most businesses were still in their infancy, with no clear business vision and that project beneficiaries lacked investment capital to build their business ventures. Provision of technical assistance was appreciated, but this alone was not enough to start profitable businesses. Given this finding, recommendations have been made to complement technical assistance with small revolving funds or other mechanisms for building assets. Progress in terms of financial inclusion activities were well below the overall goal of reaching 13,600 families through savings and provision of micro insurance policies. The need to review the relevance of this activity was highlighted considering the difficulties encountered.

12. Although the project has a social and economic baseline at district level it willl be necessary to supplement this study with the collection of information from direct users of the project to determine the added value of their assets and income, allowing for later

evaluation of the project's impacts. From a fiduciary point of view, the project continued to present budget problems that put it at risk. Considering an execution horizon until 2014, regular resources contributed by the Government are not sufficient to finance operating costs until the closing date. It has been recommended to reformulate project targeted goals and request the allocation of additional regular resources for its operation.

13. **Supplementary Loan and Grant Southern Highlands Project SIERRA SUR II.** Project implementation began in September 2011 and project activities are being undertaken following operational plans adopted as part of project launching. Implementation is judged complex as the area is practically twice the area covered by the initial project with half of the funds and the execution time of its predecessor. With this in mind, it has been agreed that the project should operate as a mechanism that clearly adds value to public policy and development of territorial initiatives and not operate by itself. Furthermore, planning has taken into account that the condition of success for a project with a short span of three years should be the immediate enhancement of knowledge and best practices in the territory, making this knowledge accessible to all stakeholders, co-financing sustainable initiatives not only through provision of financial resources but also supporting social and cultural endeavours. It has also been agreed that it is necessary to establish territorial concentration areas for implementation aimed at reducing dispersion, showing clear impacts and mobilizing new and existing players.

C. GEF funded initiatives in Peru and relevant regional initiatives

14. GEF funded activities in Peru include a number of projects in addition to the Sustainable Management of Protected Areas and Forests in the Northern Highlands of Peru initiatives. These include a) the Strengthening Biodiversity Conservation through the National Protected Areas Program (PRONANP).

15. **Strengthening Biodiversity Conservation through the National Protected Areas Program (PRONANP).** This program seeks to integrate the efforts of governmental agencies, multilateral and bilateral donors, civil society, and the private sector to lay the foundations for a broader future National Program for Protected Areas under the country's decentralized framework. This GEF grant is blended with a World Bank Environmental Development Policy Loan (DPL). The program provides technical assistance to SERNANP and PROFONANPE to operationalize the Action Plan for Natural Protected Areas System and SINANPE´s Sustainable Financial Strategy. Specifically, its Component 1 supports studies and consultations needed to prepare and approve regulations to remove barriers that limit the integrated financing and management of regional, local and privately owned protected areas and support a campaign and training program to increase the value of protected areas. Component 2 adopts an ecological corridor approach to increase the ecosystem representativeness, while supporting the establishment and integrated management of protected areas at the national, sub-national and local levels to enhance effectiveness, efficiency and connectivity, and support the development of new administration and other conservation management models with a variety of partners.

16. A number of other GEF regional projects are under implementation in which Peru is included. Three of these projects are of particular relevance: (a) the United Nations Environment Program (UNEP) – C*onsorcio para el Desarrollo Sostenible de la Ecoregion Andina* (CONDESAN), Conservation of Biodiversity of the *Páramo* in the Northern and Central Andes, (b) the World Bank, Andean Community (CAN), Design and Implementation of Pilot Climate Change Adaptation Measures in the Andean Region project; and (c) the UNEP-Andean Development Corporation (CAF),Facilitation of Financing for Biodiversity-based Businesses and Support of Market Development Activities in the Andean Region.

- **Conservation of Biodiversity of the *Páramo* in the Northern and Central Andes.** The project assists participating countries (Colombia, Ecuador, Peru and Venezuela) to overcome the major barriers for conserving the biodiversity of the ecosystem and safeguarding the hydrological and other environmental services and functions. The project objective is to support the conservation and sustainable use of the biodiversity of the ecosystem. Specifically, the project aims at (i) implementing examples of management good practices at nine critical sites, (ii) supporting different governmental and non-governmental levels to adopt key conservation policies, (iii) increasing the technical management capacity of area inhabitants and field practitioners, (iv) increasing awareness and information among decision makers and the population in general, and (v) replicating best lessons of the project to other areas and scales at Andean level.

- **Design and Implementation of Pilot Climate Change Adaptation Measures in the Andean Region project**. The broad development objective of the project is to contribute to strengthening the resilience of local ecosystems and economies to the impacts of glacier retreat in the Tropical Andes, through the implementation of specific pilot adaptation activities that illustrate the costs and benefits of adaptation. The specific objectives of the project, in support of this broad objective, are: a) the effective integration of the implications of glacier retreat into the regional and local planning in glacierized basins; b) the inclusion of glacier retreat impacts in local, sector development projects; and c) generation of data on glacier dynamics.

- **Facilitation of Financing for Biodiversity-based Businesses and Support of Market Development Activities in the Andean Region.** The objective of this project is to strengthen trade with and utilization of biological resources at local, national and regional levels as a strategy for the conservation and sustainable use of biodiversity with global significance. The project supports participating countries (Colombia, Ecuador and Peru) to overcome the main barriers to biotrade, attaining environmental externalities on a par with trade benefits. Specifically, the project aims to (i) facilitate the development and rationalization of policies favorable to biotrade; (ii) increase the access of products proceeding from biodiversity to markets that reward sustainable extraction and production; (iii) strengthen business capabilities within the scope of value chains of products based on biodiversity and promote an understanding of biotrade; (iv) improve the acquisition of and access to information on key biotrade products and markets; (v) leverage financial resources so as to direct them to biotrade initiatives; (vi) support pilot biotrade projects for biodiversity conservation; and (vii) agree on information and replication strategies for the project at the national and regional Andean level, including mechanisms for its implementation.

III. LESSONS LEARNED

A. Lessons from IFAD experience

17. IFAD´s experience in managing natural resources, mainly in the southern highlands, is based on the success of methodological approaches for community involvement and participation in their development. The main lessons arrived at come from implementation of the Management of Natural Resources in the Southern Highlands project (MARENASS) and are summarized below.

- Increasing the productive value of natural resources in a participatory manner is essential. It is paramount to recognize that the most important asset available to the rural

poor are their natural resources (land, water, forests) and, second, it is essential to make families and communities the centre of activities, with due respect for their own proposals, potential and abilities.

- Consideration must be paid to the spatial dimension of development. The conception that community members have of natural resources begins with their own dwelling and extends outward from there to encompass the garden, animal corrals, farmland, irrigation, organic production and pastures. Rural inhabitants have a logical conception of an undivided whole that is the space within which their lives and their productive activities take place.
- Combining a number of proven participatory tools in a comprehensive manner has ensured success of interventions. These have included: (i) farmer-to-farmer training in the use of technological alternatives for natural resource conservation and recovery; (ii) transfer of financial resources to communities to enable them to contract for technical assistance services and thus develop a market for such services; (iii) use of the *Pachamama Raymi* (celebration or worship of Mother Earth) methodology, which entails the organization of competitions for the dissemination and extension of technological alternatives.
- Interventions should not be limited to agricultural production. Although families and communities achieved good results in regard to natural resource management, especially in the agricultural and productive spheres, it is imperative to develop an appropriate approach for addressing economic issues and gaining access to and forging ties with markets. Economic issues may become the main obstacle to sustainability of the achievements generated or supported by the MARENASS project. Families' strategies for the future aim to end their dependence on agricultural production and diversify alternatives and occupations. Although they wish to continue living on their lands, they do not necessarily want to rely solely on agricultural activities for their livelihood. What the families and communities want is to expand their economic frontier.

B. Lessons from GEF and WBG experiences

18. A **GEF Annual Report on Evaluation**[19] addresses lessons learned in the implementation of five biodiversity projects in Peru implemented by the World Bank as a GEF implementing agency.

19. The evaluation noted that the GEF had been a key contributor to biodiversity conservation in and around protected areas and that long-term funding for management of priority protected areas was likely because of institutional sustainability of the funding mechanism (PROFONANPE), but noted that additional funds must be identified for covering recurring costs as many SINANPE areas lack sustained funding and each protected area should develop a business plan with a diversified funding base. It also underlined that achievement of potential environmental benefits requires that projects be designed to ensure local ownership, continued government support, and ongoing availability of funding after project closure.

20. The evaluation further noted that: a) the participatory management model for Peru's protected areas is likely to be sustained and replicated, b) the country has one of Latin America's most advanced protected areas policy systems and Management Committees and other protected areas mechanisms have integrated stakeholder participation into the policy framework and reserve management, c) although Peru regulates resource exploitation, gaps in the current laws constitute an important obstacle to effective protected area management and enforcement remains difficult in many areas due to long distances, rough terrain, and a lack of needed control equipment, d) while Peru has made substantial strides in establishing a legal and institutional framework for protected areas and conservation of biodiversity,

[19] GEF/ME/C.39/Inf.2 October 25, 2010

institutions should be strengthened and there is a need to prioritize regulation of extractive industry, control of natural resource overexploitation, and mainstreaming biodiversity conservation into other sectors, e) most projects analysed failed to adequately address clarification of land titling and tenure and bridge disagreements between indigenous people and conservation groups, f) access to biodiversity markets is unlikely at present for most projects have not yet generated any marketable environmentally friendly products and projects have focused too strictly on establishment of protected areas and ignored rural development and agricultural issues and, g) there was limited evidence of intended impacts and global environmental benefits due to absence of a national baseline.

21. Finally the evaluation identified two areas that need further attention from GEF: a) making capacity development for national biodiversity monitoring and evaluation systems a strategic priority and b) developing policies or guidelines on possible trade-offs that arise from conservation and sustainable use of biodiversity resources such as with land titling or community-based approaches.

22. **Global GEF PES assessment**. Concerning assessments of PES financed projects, GEF carried a review[20] based on an analysis of 42 GEF projects in which PES was the core objective of the project or there was an explicit PES component in the project's design. These 42 projects were chosen through a screening of the results frameworks of more than 400 GEF projects in GEF-1 to–4, which were in turn selected from the GEF Project Management Information System (PMIS) using key words closely related to PES. Additionally the STAP prepared a number of recommendations which, are consigned herein considering their relevancy.

23. The assessment noted that: a) there is a continuous need to build capacity at the local and national level to properly design and implement PES schemes for which it is necessary to determine how to deliver the required training to stakeholders allowing them to engage in meaningful and equitable agreements with buyers, b) PES schemes are likely to be developed and implemented in areas where water is in high demand and willl have the potential to deliver other important Global Environmental Benefits, such as biodiversity conservation for which it willl be advisable to select pilot sites that maximize the number of services provided and involve the private sector (agribusiness) and public utilities in the central and regional governments, c) climate change risk assessment is likely to become an integral part of project design, and increased spatial and temporal resolution of climate models willl need to be considered, d) government-financed PES systems that operate at large scales, are more efficient due to economies of scale and can provide benefits across the landscape and allow for the internalization of ecosystem services into national economies and should be considered based on lessons learned in the implementation of Costa Rica and Mexico schemes, e) projects that are designed for carbon sequestration but also target biodiversity rich areas should allow strengthening of biodiversity conservation in areas where REDD is also applied (REDD+) which, willl require producing a standardized system for GEF and other natural resource management (NRM) projects to measure, monitor and model carbon stock changes and greenhouse gas (GHG) emissions, f) projects that further development of public-private partnerships willl allow for the inclusion of market forces into the development of PES schemes. However, engagement with the private sector has been traditionally time consuming, making it essential to engage them early in project scoping.

24. **Scientific and Technical Advisory Panel recommendations**. STAP has suggested that GEF should support PES projects in three different ways: a) by funding direct payments of environmental services, especially when these short-term payments are likely to shift

[20] Payment for Eco System Services ,GEF, September 2010

land use or persuade interested long term buyers of environmental services, or when payments through associated trust funds look more promising to secure biodiversity conservation; b) by supporting government-financed multiple service payments for ecosystem services schemes. Leveraging biodiversity considerations in REDD design willI be particularly important in such cases; and c) by paying for the start-up costs of PES projects, but carefully considering if such investment is the only binding constraint in project implementation. While STAP recommends that GEF invest in PES, it also recognizes potential threats to the effectiveness of PES schemes, including noncompliance with the contractual conditions, poor selection of areas or individuals who are not in a position to supply the environmental services, "leakage" (whereby protecting a certain place pushes pressure elsewhere), and paying for services that willI have been provided even in the absence of payment.

25. **Comprehensive regional lessons learned.** A number of lessons learned have been extracted from implementation of schemes in Mexico, Costa Rica and Ecuador. These lessons have been summarized in a recent World Bank publication dated May, 2012 titled Lessons Learned for REDD+ from PES and Conservation Incentive Programs. Examples from Costa Rica, Mexico, and Ecuador. The report was prepared in collaboration with the National Forest Finance Fund (*Fondo Nacional de Financiamiento Forestal),* the National Forest Commission *(Comisión Nacional Forestal*), the Ecuador Ministry of the Environment, Forest Trends, the Forest Carbon Partnership Facility, and the Latin American and Caribbean Region of the World Bank.

26. The report covers a) Legal aspects of PES, conservation incentives and REDD+ programs through the lens of participation agreements b) Poverty reduction, livelihoods, and other equity issues c) Evaluating and managing trade-offs and synergies between programs, sectors, and incentives d) Monitoring, reporting, and verification of activities and outcomes e) Financial mechanisms, targeting, and controlling administrative costs.

27. Concerning legal aspects the report concludes that the political and institutional context for participatory agreements is incredibly important and that access to technical support and training are essential to increasing any program's reach and efficacy and the issue of tenure is a challenge. On poverty reduction it is necessary to conduct rigorous *ex-ante* assessments of the likely social outcomes (positive and negative) according to different strategies as this helps in identifying and prioritizing strategies that minimize trade-offs and/or aim for 'win-win' outcomes. The authors conclude that credible monitoring systems which factor in attribution are also essential for adaptive management and to improve program design. Regarding trade-off the report highlights the fact that PES schemes exist in a complex, potentially conflicting framework of social, environmental, and economic programs and goals and that in determining where, when, and how incentives should be used, policymakers must understand, evaluate, and manage trade-offs and synergies within this framework. Based on experience the report states that in theory, PES programs that reward multiple benefits have several advantages over programs that pay for a single service. In terms of monitoring, reporting and verification (MRV) the report provides a comprehensive view of the systems used in the three countries and among its several lessons underlines that building an effective MRV system that can form the basis for payment disbursement requires expertise across disciplines, including technical analysts with experience in collecting, manipulating, and analyzing remotely-sensed data; ecologists who are able to assess conditions on the ground and to identify appropriate classification systems used in the analysis of remotely-sensed data; and economists with an eye for research design. Additionally, resources must be set aside for the costs of the monitoring technologies themselves, which may vary widely depending on the quality needed. Finally, on financial mechanisms the report highlights the fact that financial success of both PES and

REDD+ is hinged upon integration. Integrating different sources of public and private finance, regional scales and duration of funds, land use economic models with conservation outcomes, and existing land use public and private sector funding. Sustainable finance for PES and REDD+ willl be most effective if integrated with established administrative processes for fund disbursement, MRV, and registration. Designing PES and REDD+ programs to be complementary to recognized certification programs, compliance requirements, government funding frameworks, and mainstream agricultural project finance will increase success of a conservation incentive programs by facilitating enrollment, maximizing co-investment, and amortizing transaction and administration costs across programs. A key challenge for PES, conservation incentives, and REDD+ is financial sustainability, that is, creation of a stable long-term funding path to achieve the desired outcomes. The financial success of these programs hinges on integration at various levels: of different sources of finance; of funding commitments of varied duration; of private sector participants; of clearly defined objectives and adaptive management approaches; and of administrative processes for fund disbursement, MRV, and registration. While more experimentation in funding mechanisms is necessary, experiences in Mexico, Costa Rica, and Ecuador highlight the potential of environmental endowment funds to increase financial sustainability of PES and REDD+ national programs. These entities can incorporate short- and long-term payment solutions. The following Table contained in the report summarizes 29 lessons learned extracted from a literature review and the analysis of the relevant programs in the three countries.

Table 1. Lessons Learned

Issue	Lessons Learned
Participation agreements	Lesson 1: Provide a clear institutional framework that facilitates inter-sector cooperation. Lesson 2: Use simple contracts, backed up by clear, easy-to-reference program guidelines. Lesson 3: Invest in legal capacity building and technical support. Lesson 4: Explore options for overcoming tenure barriers to participation. Lesson 5: Set contract duration based on the relative need for certainty in ecosystem service delivery versus flexibility in enrolled properties. Lesson 6: Make payments directly or indirectly conditional on ecosystem service delivery. Lesson 7: Design program activities to minimize the costs of participation while allowing for productive activities to occur alongside REDD+. Lesson 8: Incorporate robust and transparent guidelines for measurement, reporting and verification (MRV). Lesson 9: Provide clear, transparent, enforceable sanctions for non-compliance, in combination with risk management mechanisms
Equity and social objectives	Lesson 10: Strengthen the enabling legal, policy and governance framework. Lesson 11: Support implementation with good governance and appropriate institutions at multiple levels. Lesson 12: Adopt a rights-based approach that respects internationally-agreed safeguards. Lesson 13: Use targeted outreach and capacity building, and control transaction costs to overcome obstacles to participation of the poor Lesson 14: Incorporate credible monitoring of social outcomes and impacts
Trade Offs and synergies between multiple benefits	Lesson 15: Account for multiple benefits in targeting payments or incentives. Lesson 16: Use multiple criteria to minimize trade-offs and enhance synergies when selecting eligible participants and activities. Lesson 17: Explicitly consider multiple or co-benefits in evaluating outcomes. . Lesson 18: Evaluate synergies and trade-offs with other environmental and economic development policies and programs. Lesson 19: Use differentiated payments to recognize and reward actions that enhance synergies among multiple environmental services.
Measuring, reporting and verification (MRV)	Lesson 20: Understand the advantages and disadvantages of PES MRV systems, taking into consideration the key differences in scale, scope and objectives that distinguish requirements for REDD+ MRV. Lesson 21: Use effective MRV design to achieve and attribute additional emissions reductions Lesson 22: Design MRV systems to track leakage in order to improve efficiency of program performance against REDD+ objectives. Lesson 23. In order to assess—and adaptively manage—performance on social and environmental safeguards, set clear targets and baselines and regularly measure and evaluate relevant indicators Lesson 24: Identify opportunities for cost-efficiency in MRV while recognizing trade-offs between cost and accuracy or precision. Lesson 25: Invest in human capital and capacity building at both “ends” of the payment.
Sustainable finance in PES and REDD+	Lesson 26: Diversify funding sources and duration to reduce risks and contribute to sustainability. Lesson 27: Engage the private sector with public programs via an enabling legislative framework. Lesson 28: Improve targeting by clearly defining objectives and baselines and using adaptive management techniques. Lesson 29: Explore options to control administrative costs

ANNEX 4. DETAILED PROJECT DESCRIPTION

1. The following document provides a brief description of the Project area and population and a detailed description of Project components and activities.

I. PROJECT AREA AND POPULATION

2. Following discussions with national authorities two watersheds were identified for Project implementation: the Cañete and Jequetepeque watersheds.

A. The Cañete Watershed

3. The Cañete Watershed is located on the central coast of Peru between UTM 8'543,759 – 8'676,000 north y 345,250 – 444,750 east. The watershed has an area of 6,017.34 km^2 covering three provinces of the department of Lima: Yauyos, Cañete and Huarochirí and 29 districts.

4. Altitudes range from sea level to 4,429 m, where the Ticllacocha Lake is located. According to the physiographic configuration, the basin has two distinct areas: a mountainous section covering approximately 95% of the total area and an alluvial plain (Cañete Valley), located in the lower part of the basin and covering the remaining 5%.

5. Precipitation is directly related with altitude, the lower part of the watershed receives less precipitation than the upper areas. Districts such as Tanta, located at 4,500 m, present an average annual precipitation of 999.3 mm. Huantan and Colonia districts, with an average altitude of 3300 m, register an average annual precipitation of 514.2 mm and 463.5 mm respectively.

6. The lower part of the watershed, Cañete, Pacarán and Catahuasi districts, with an altitude between 150-1370 m, receive an average annual precipitation of 7.8 mm, 13 mm and 24.8 mm respectively. In the upper part of the watershed it rains throughout the year, with higher precipitation from January to March, and lower values from July to September. At the lower watershed, precipitation is minimal.

7. Temperature varies from 20°C in the coastal desert (Cañete Valley) to 0°C above de 4000 m. Evaporation in the lower part of the basin presents higher values between December-April, while evaporation in the upper part of the watershed is higher during July-October (dry season).

8. The National Bureau of Natural Resources Assessment (ONERN for its acronym in Spanish) identified seven Soil Associations. The most important are Paramasols, Districo-Litisol, Andino Districo, Litico-Litosol Desertico and Litisol Andino Eutrico which cover 39.3%, 20.9% and 20.6% of the total area correspondingly.

9. According to the Vegetation Map of the Ministry of Environment (2012), the main types of vegetation in the basin are: High Andean Grasslands *(Pajonal altoandino-Pj),* Scrub shrub *(Matorral arbustivo -Ma),* Coastal Desert *(Desierto costero),* Andean and Coastal Agriculture *(Agricultura Andina y Costera),* Relict Forest *(Bosques Relictos-Brm)* and Peat lands or bogs *(Bofedal-Bo).* The predominant vegetation in the basin is the High Andean Grassland covering 46.03% of the total basin area, followed by Scrub shrub with

23.02% and the coastal desert with 11.69%. The area covered by Relict Forest (0.97%) and Peat bogs (0.46%) is small and located mainly in the province of Yauyos.

10. In the upper part of the basin is the National Landscape Reserve *Nor Yauyos Cochas* Landscape Reserve, which covers around of 35% of the total area of the basin. A total of ten types of vegetation have been identified being High Andean Grasslands the most prominent. Vegetation with the highest floristic diversity is scrub shrub. In addition, there are a great variety of birds and in lesser extent mammals, fish, reptiles and amphibians. Some of the most representative birds found at the reserve are: *Podiceps spp.*, ("zambullidores"), *Egretta thula*, *Casmerodius albus* y *Nycticorax nycticorax* ("garzas"), *Plegadis ridgwayi (*"yanavico"), *Chloephaga melanoptera (*"huallata"), *Bubo virginianus (*"lechuza"), *Vultur gryphus (*"cóndor") and *Glaucidium brasilianum (*"paca paca"). According to Appendix 1 of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), two species found in the reserve are in danger of extinction: *Vultur gryphus* ("cóndor andino") and *reailurus jacobita (*"gato andino").

11. According to the 2007 Census of the National Institute of Statistics and Informatics (INEI), the population of the Cañete Basin totaled 97,101 inhabitants, with a population projection of 106,880 habitants for 2012. Approximately 75% of the population lives in Cañete province, while 23% live in Yauyos and 2% live at Huarochirí.

12. On average, the Cañete Basin has a rural population of 26.89%. In the case of the province of Cañete its rural population accounts for 21.69%, while in the province of Huarochiri and Yauyos it accounts for 18.20% and 48.46% respectively. It is important to state, that most of the urban population still maintains relationship with the rural sector.
Poverty levels reach 31.7%, being Yauyos province the most poverty struck. In this province, the districts of Tupe and Yauyos exceed 60% of poverty and have a 31.1% and 27.6% respectively of extreme poverty. Other districts such as Huancaya, Vitis and Azangaro exhibit also high rates of poverty. On the other hand, in the lower part of the basin, the poorest district is Pacaran with 41.1%.

13. The economy in the basin depends on agricultural and livestock activities. Livestock activity is being developed mainly at the middle and upper part of the watershed, whilst agriculture is based on subsistence activity. Livestock identified in the *Nor Yauyos Cochas* Landscape Reserve are: sheep, alpacas and llamas. In the lower part, specifically in the Cañete Valley, agriculture is the most important economic activity. The main crops are: corn, sweet potato, cotton, grapes, potatoes, cassava, asparagus, apple, tangerine and avocado.

14. Basin population does not suffer from water scarcity. Availability of water includes water from the Cañete River and recovery and infiltration water. The annual average water volume is 1729.67 MMC (55.24 m^3/s). The main water uses are: agricultural, domestic, industrial, mining, hydropower and tourism[21]. Agriculture has the highest demand, followed by domestic and mining. The total annual water demand is estimated at 504.72 MMC, of which consumption in the lower part of the watershed represents 86.8% of the total demand.

15. The organizational model in Peru for natural resources management involves several public organizations at national, regional and local level. These include: the ministries of Environment, Agriculture, Energy and Mines and Production, Regional Governments and

[21] Hydropower and tourism are not considered consumptive uses.

local authorities. The functions of these offices vary depending on their respective mandates. A full description of related government agencies is provided in Annex 5.

B. The Jequetepeque Watershed

16. The Jequetepeque watershed is located on the north coast of Peru between 7° 6´ and 7°30´ S and 78°30´ and 79° 40´ E. The location corresponds to the western part of the Andean Cordillera. The watershed area is 393 545 ha distributed in areas of the department of La Libertad (Pacasmayo and Chepen provinces) and Cajamarca (Cajamarca, Contumaza, San Pablo, and San Miguel). It covers a total of six provinces and 29 districts.

17. Altitudes range from sea level to 4,188 m. The topographic configuration determines ecological regions with diverse microclimates.

18. There are three distinct sectors:
• Lower Jequetepeque, ranging from 0 to 225 m, formed by desert slopes and plains. In this area the Jequetepeque River is the only alluvial river plain.
• Middle Jequetepeque, from 225 to 600 m, formed by the arid and semi-arid Andes, with some seasonal tributary rivers.
• Upper Jequetepeque, from 600 m to the divide, formed by the Western Cordillera, with climates from semi-arid to pluvial peri-glacial, with numerous lakes

19. Average annual rainfall in the upper part of the watershed is 500-1,000 mm. The lower part receives less than 200 mm. There is also a clear contrast in precipitation distribution over time. In the upper part of the watershed it rains throughout the year, with higher precipitation from January to March, and lower values from July to September. In the lower part of the watershed most of the precipitation falls during the hottest months. Rainfalls are intense, sometimes with catastrophic results. The El Niño phenomena have important effects on the lower part of the watershed.

20. Temperature varies from 23°C in the coastal desert (400-800 m) to 3°C in the Andean *paramos* (4,000 m). Evaporation varies from 200 mm in the valley up to 1,500 mm in the Andean zone. Relative humidity ranges from 80 to 90% in the valley to 60% in the upper part.

21. The Jequetepeque River Basin is located over sedimentary and volcanic-sedimentary formations, as follows: Recent deposits (Qr-al/e), Calipuy Group (Ti-vca), Chicama Formation (Js-chic), Goyllarisquizga Group (Ki-g), Chimu Formation (Ji-chic), Yumagual Formation (Ks-yu), Cajabamba Formation (Ks-ca).

22. Because the soil is overexploited by agriculture and livestock, there are almost no natural vegetative areas in the watershed. Land-use maps show there is less than 1% of the total watershed area as natural forest.

23. According to the Vegetation Map of the Ministry of Environment, the main types of vegetation in the basin are: *Dry Forest mountain* (Bosque Seco de montaña -BSmo) located in the Andean mountain range west of the northern zone, between 200 and 1500 m, comprising the department of La Libertad. *The scrub shrub (Matorral arbustivo -Ma)* is widely distributed in the Andean region, from about 1000 to 3000 m in the north of the country. *Meso Andean (Relict Forest*-Brm) is distributed in installments in some specific areas of the Meso-Andean region, which is approximately between 3000 and 3800 m., Being located specifically in the upper portion of the steep mountain slopes, much of the western

Andean slope (zone north) and valleys, often coinciding with the headwaters of some rivers and streams. *High Andean Grasslands (Pajonal altoandino-Pj)* is made up of grasslands located in the upper portion of the Andes mountain range, roughly between 3800 and 4800 m in the south and central, and over 3000 m in the north of the country. It develops on areas ranging from nearly flat to undulating uplands, in depressions and deep valleys and glaciers, to steep or very steep mountain slopes in the high Andes and summits. *Peat bogs (Bofedal-Bo)* is a hydromorphic ecosystem distributed as "patches" in the high Andean region, above 3 800 m. The vegetation is dense, compact evergreen, carried padding or cushion.

24. In the upper part of the basin is the Coto de Caza Sunchubamba, where are two types of vegetation exist including natural forests such as molle, shaman and alder in abundance, and replanted forests: more than 10 species have been developing vigorously in 500 hectares distributed throughout the preserve. Highlights include pine, cypress and grevillea.

25. Main species of fauna in the area include: gray deer, red deer, the latter an introduced species, some birds: quail and dove, mammals: fox and wild rabbit, and other species including: skunks, opossums, vizcachas, harriers, kestrels and hawks.

26. According to INEI, the population of Jequetepeque River Basin is approximately 479 755 inhabitants: 373 573 in the department of Cajamarca and1 106 182 in the department of La Libertad.

27. The largest number of rural population is settled in the department of Cajamarca with an average of 68% while La Libertad, has only 13%. The provinces of the department of Cajamarca with larger rural population are San Miguel and San Pablo districts with 84% and 85% respectively.

28. The Cajamarca department shows higher poverty levels, being the poorest districts Cospán (87%), Assumption (86%), Chetilla (85%), Jesus (83%), Guzmango (78%), San Juan (75%), Cupisnique (73%) and Calquis (72%), of which Cospán, and Assumption Chetilla exhibit extreme poverty of more than 50%. On the other hand, in the lower part of the basin of the Department of La Libertad, the poorest districts are Guadalupe and Chepen, with an average of 40%.Agriculture is the main economic activity within the watershed. In the upper part of the watershed the main crops are wheat, corn, rice, barley, pea, and potato. In the lower part, the main crops are rice and corn.

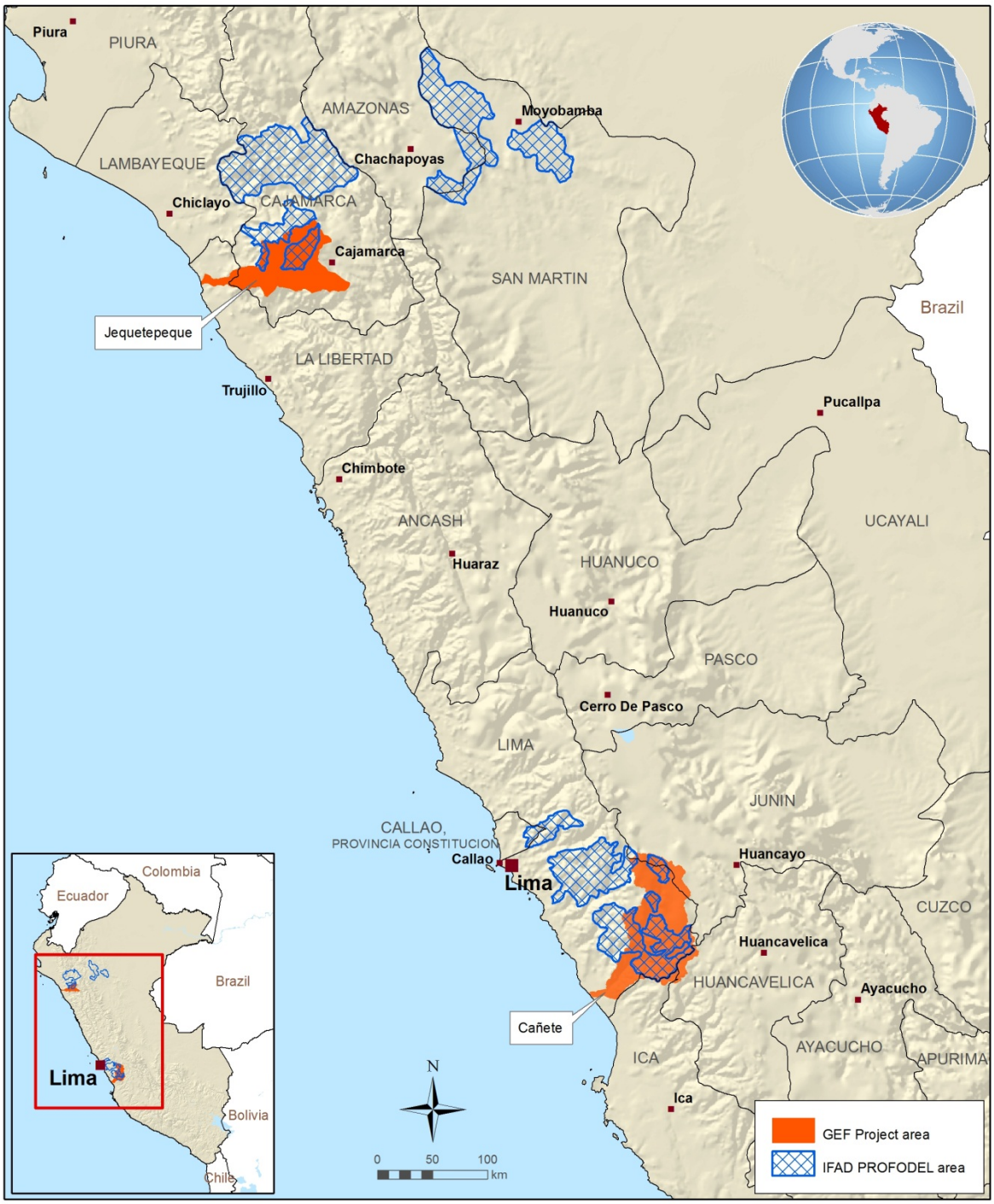
29. The Upper Jequetepeque experiences water scarcity during the second half of every year, affecting water availability both to the upper and lower watershed areas. There are occasional restrictions in the second annual crop-growing season. In some years the rainy season produces mudslides and crop losses as well as floods.

30. In dry years water availability is insufficient to satisfy irrigation needs; the same is true for dry periods.

31. Water use in the watershed includes agricultural, domestic, livestock, and industrial. Agriculture makes the highest demands, followed by domestic, industrial, mining, and hydropower. The total annual water demand is estimated at 720.1 million m^3 (UNESCO, 2004).

Peru

Conservation and Sustainable Use of High-Andean Ecosystems of Peru through Compensation of Environmental Services for Rural Poverty Alleviation and Social Inclusion



The designations employed and the presentation of the material in this map do not imply the expression of any opinion whatsoever on the part of IFAD concerning the delimitation of the frontiers or boundaries, or the authorities thereof.

IFAD

Map compiled by IFAD | 09-11-2012

II. PROJECT COMPONENTS

A. Component 1: Conservation and sustainable management of High Andes ecosystems

32. Implementation of this component will have as outcome the conservation and/or sustainable use of approximately 25,000 hectares of High Andes ecosystems and landscapes, including 2200 ha of headwater peat lands or bogs (*bofedales*); 16 800 ha of high Andean natural rangelands, This ecosystem known locally in its integrity as *pajonales* and according to its precipitation regime, moisture, and latitude from North to South, as *paramos*, *jalcas* and *punas*; and 6000 ha of relict and upper basin forests (mostly composed by tree species such as *quinual, quishuar, chachacomo, tara, aliso* in addition to the important and threatened *romerillo* endemic species in the Jequetepeque basin.

33. The *bofedales, paramos, jalcas* and at a lesser extent, the *punas,* can be also considered as wetlands. The main instrument for conservation and sustainability of these High Andes ecosystems, as the main focus of the Project ascertains is the implementation of PES/CES schemes centered in better water management, closely related to maintenance of the natural vegetation cover and biodiversity. In particular, this GEF intervention includes conservation and proper management of those three integrated high elevation Andean ecosystems, under a watershed criteria, as well as improvement of agrarian activities and land use, resulting in better delivery of water to the lower basin.

34. This component will finance the conservation and management of three of the main High Andes ecosystems or vegetation cover types as peat lands, grasslands, and forests, whose proper care and use willl make the upper basin able to provide water to it users at lower elevations. In order to fulfill these goals, individual conservation and management community plans, under the same general scheme, but with specific activities adapted to each ecosystem are proposed.

35. **Phased implementation and sub projects.** Implementation of this component will be undertaken in a phased manner.

Phase 1. Consultations and site selection. During a first phase the following activities willl be undertaken mainly in the districts identified in which sub projects willl be implemented:

- *Local consultation and coordination*. This is considered a fundamental and continuous activity and it is carried out at the beginning of the Project and at least once a year to ensure the active participation of local actors (including women and men through culturally appropriate methods) and their inputs and feedback during the life of the Project, looking forward to keep it running afterwards by decision of the local organizations.

- *Evaluation, baseline definition and prioritization of key areas according to their conservation status and hydrological functioning*. Since most of the High Andes ecosystems are poorly studied and understood, an initial evaluation and baseline definition willl be needed in order to properly perform the monitoring and control activities of the Project as a whole. A better knowledge of the potential intervention sites willl also allow for prioritizing working areas in order to better allocate Project funds looking for the best possible investment returns mainly in terms of higher water production. Evaluation, baselines and prioritization willl be done in sequence using modern technology (GPS, GIS, satellite images and maps) with adequately organized and timed field work and control. In these activities

support from local agencies such as Agro Rural, regional and local governments, universities and NGOs willl be important. Required equipment and procedures for this activity are described below under monitoring and control activities.

- *Identification of intervention areas*. After the definition of the broad project prioritized areas at the basins headwaters, using water production and vegetation cover criteria, the specific intervention areas willl be defined with participation of local actors and communities taking advantage of a first meeting for local consultation and coordination.

Phase 2. Sub project implementation. Following the consultation process Project staff supported by Agro Rural field personnel willl launch a competitive process among present communities and local farmer groups or associations who willl present sub project proposals for conserving peat lands, high Andean grasslands and relict forests. The selection process and operational dimensions are described in the Project's Operational Manual.

a) Peatlands. These can be described as water saturated ecosystems with specially adapted and diverse vegetation dominated by cushion plants growing on anoxic soils at very cold temperatures. Despite their much lower extensions than rangelands and forests, due to the location at the foothills of glaciers and surrounded by lagoons and ponds, peat lands regulate important volumes of water flows, which according to some calculations could be up to tenfold the amount of Andean grasslands.
Sub projects willl build on knowledge disseminated during Phase 1 underlining the need for protection and land use control According to the revised information and activity to be performed on degraded peat lands after the initial evaluation, willl include creation of artificial ponds as well as the use of re vegetation techniques to stimulate the recovery of cushion and other typical vegetation types.

b) High Andean grasslands present variations mainly depending on annual and seasonal precipitation regimes, which are related to latitudinal range location; and vegetation cover. *Paramos* and *jalcas* are located in the higher rainfall zones of Northern Peru (Jequetepeque) and *punas* in the Central (Cañete) and Southern and dryer areas. When well conserved, these very extensive natural High Andean prairies infiltrate and yield downhill high volumes of water feeding springs, streams and rivers. They are also a very important grazing resource for cattle, sheep and South American camelids. *Paramos, jalcas* and *punas,* are communities dominated by grasses, with dispersed trees and shrubs, characterised by low temperatures and pronounced climatic variations during the day. Soils are usually rich in organic matter and have a high capacity for water storage. In *paramos* and *jalcas,* water is found in ponds, marshland, lagoons and first order streams, sometimes outflowing from underground. Due to their soils and vegetation capacity of retaining high volumes of water, the majority of these wetlands could be classified as extensive semi-aquatic ecosystems. *Paramos* and *jalcas* are wetter and more similar. *Jalca* is considered in Northern Peru and alternative name of *paramo* and also as a transitional bioregion between *paramo* and *puna.* The dryer and extensive *Puna* formation is located from the central Peruvian Andes to the South.

Sub projects could address the need to ensure total exclusion, protection, and land use control. For degraded grasslands the implementation of exclusion areas in both basins willl probably be the most significant and needed activity and carried out by using armed or simple fencing wire and timber poles. The total protection of the patch of grassland from cattle grazing (known as *apotreramiento* in Cajamarca) willl allow for fast recovery in cover density, as well as in biodiversity. After exclusion is successfully applied, grassland protection and land use control measures willl need to be considered. At this point

education and training willl play an import role empowering local people to do this required preventive task.

c) High Andean forests are remnant dense or semi-dense tree dominated ecosystem mostly composed by small endemic trees like *quinual, quishuar, chachacomo, tara, aliso* and other species of trees and shrubs. An important and almost extinct species found in the Jequetepeque basin headwaters and its upper hillsides, is *romerillo (Podocarpus sp)*, the only native Peruvian conifer tree. These forests play an important role as well by capturing and condensing atmospheric water droplets from the permanent Andean fog and low cloud cover and adding water to the soil. Sub projects could include using the "protection forests" concept. In both basins an exploratory forest inventory willl assist in sub project implementation using satellite images. Here also other protection and land use control measures are needed and local populations have to be empowered to do this mostly preventive task. It is important to point out that forest protection in the upper Jequetepeque river basin (San Miguel) is specially needed to protect the only native conifer tree of Peru: *romerillo* (*Podocarpus sp*.) endemic of that region.

Phase 3. Vegetation and hydrological monitoring. This activity willl be performed across the board with some specific indications for each ecosystem. Peat lands vegetation cover vitality and density monitoring will be performed using simple short vegetation inventory equipment similar to that commonly used for grasslands, by means of a 1m x 1m square frameworks for counting of species diversity and cover density, looking for relative improvement or degradation of the peat lands vegetation since the baseline definition and among the different working sites. Grasslands vegetation cover vitality and density monitoring will be performed using simple grass inventory equipment similar to that used for peat lands. Forests vegetation cover vigor, density and natural regeneration monitoring will be performed using forest inventory methods and installing permanent plots to check the evolution of the forests vegetation since the baseline and among the different regions.

36. Hydrological function monitoring willl address the need to determine basic water balance information on rainfall and discharge, as well as measurements of soil infiltration capacity, soil moisture, soil erosion and sedimentation. To do so a set of automatic meteorological and hydrological stations for continuous precipitation and discharge measurements willl be implemented at each upper basin; infiltration rings (3 for each basin) for biweekly control of infiltration capacity, a digital soil moisture meter (1 for each basin), 30 cm steel erosion pins (50 for each basin, 30 m of 3 mm thick wire), and 2 kits for suspension sediments (water sampler, hand pump, filter paper, crystal ware, and other plastic material) will be acquired to perform such measurements at each basin.

Phase 4. Communications, information. Further to the initial information and communication activities the Project willl continuously provide information to local actors, authorities, partners, decision makers and others, in order to obtain feedback and additional support. Tools to be used willl include the use of local, regional and national media networks, as well as the use of brochures or flyers.

37. **Local and global environmental benefits.** To achieve the goals of the management plans and its activities presented above, will contribute to the following local and global environmental benefits: protection of the natural capital of High Andes farmers including species that are important for maintaining biological diversity; conservation of important and significant natural habitats for in situ conservation of biological diversity, including endemism, vulnerable species and threatened ecological communities; and regulation and provision of ecological services, mainly water. At the same time, peat lands, grasslands and forests well protected and managed, will be capable to better support the traditional living

activities of the Andean rural populations and increase their possibilities and advantages to offer and sell goods and services.

B. Component 2: Improvement of the Institutional Framework for ES in Peru through Implementation of PES/CES schemes

38. The Project willl implement payments for ecosystem services (PES) schemes in two watersheds. The purpose of these schemes is to allow water-related ecosystem services (WES) beneficiaries to keep benefiting from maintaining or improving water levels in quantity, quality and regularity, while reciprocating these benefits to people that manage lands where WES are provided. It is expected that this reciprocity, in the form of economic retribution, will promote the sustainable use of the ecosystems (and the biodiversity that they contain) that provide these services. The actual definite value to be transferred from ES beneficiaries to ES providers willl be determined during a negotiation process. For this, MINAM willl provide reference values generated by current efforts of its partners at valuing the water-related ecosystems services for different sectors as well as the opportunity costs for ES providers (if available). PES willl incorporate at least two sectors benefiting from the provision of WES.

39. Implementation willl entail four main activities described herein:

Activity 1. Preparatory activities for setting up the PES schemes. As mentioned elsewhere the Project is built upon previous efforts oriented at providing inputs towards the design of PES schemes in the selected watersheds. Although there are already advances in this regard, the implementation of these schemes requires a preparatory phase in order to communicate properly to stakeholders the objectives, term and implications of these schemes, and to ratify through formal means the intentions of PES beneficiaries to participate in the PES schemes negotiation and operation. Thus, this preparatory phase should ensure that stakeholders are aware, understand and agree upon project objectives, activities and expected outcomes. In addition, during this preparatory phase the Project willl determine the land tenure status properly verified in the field and in the respective land titles[22] offices of COFOPRI. The expected outputs from this activity are: 1) Communication strategy designed and implemented; and 2) Signed formal ratification of actors regarding their participation in the PES schemes, and 3) Baseline on land tenure and control.

40. **Communication Strategy design and implementation** The PIU jointly with MINAM's communication team willl design and implement a communication strategy oriented to disseminate project objectives, plan of activities and ultimate goal of the Project. This strategy willl be implemented throughout the life of the Project in order to communicate results and receive constant feedback from stakeholders in order to facilitate project adjustment when required. The strategy should be considered an integral part of the Project's learning and knowledge management process described in Annex 6.

41. The strategy should allow feedback from local stakeholders, including from women and women's groups, that participate in and/or who benefit from project activities. The communication strategy willl consider inception workshops and annual planning meetings for its implementation. Also, during the design phase of this strategy, the team should review any past or existing communication efforts from PES-related activities in the

[22] In addition, sub-project proponents ("PES beneficiaries" will be able to formalize their water rights following ANA's guidelines for obtaining water use permits; in this process, land use rights (even if informal) will be clarified, following ANA's simplified procedures. This formalization process of water rights that will go along the recognition of land tenure would constitute an additional incentive to participants in the PES scheme.

watershed in order to know what, where and who has been informed about PES. Main components of the communication strategy willl include:

- Mapping of main contacts to be approached in order to inform, refine and adjust project activities and outputs; as well as to discuss with them project achievements and lessons learned;
- Targeting of main messages regarding PES objectives and reflections based on the project's progress and studies to be undertaken as part of the Learning Process and Knowledge Management project component[23]. This should include messages about the justification of the PES creation in terms of conservation priorities and the value of High Andean ecosystems which are not widely acknowledged;
- Creation of main communication materials to disseminate targeted messages;
- Implementation of the strategy

42. **Stakeholder's commitment to PES implementation.** During this activity the Project willl work towards achieving formal agreements with WES beneficiaries and providers as a prior step to constitute an institutional basis for PES establishment and decision-making. At this stage, formal agreements ratifying the stakeholder's intention to participate in subsequent activities for PES design and establishment, and provide formal evidence that participants are aware of the project and PES objectives willl be pursued.

43. This activity should not be needed in case formal agreements exists or are achieved prior Project start-up.[24] The latter could be a Letter of Intent (LOI) duly signed between stakeholders and MINAM. In these LOI's monetary contributions to the PES willl not be included, as this willl be agreed upon during the actual negotiation process. The *expected output* of this activity is formal ratification of actors regarding their intent to participate in PES design and implementation processes.

44. **Verification of land tenure status and control.** The Project willl concentrate early efforts on revising land tenure titles or other means of land tenure recognition. This willl be verified and cross-checked by means of field verifications and revision of land titles in the respective land title offices. Field verification is especially important in order to determine who is living and controlling the areas before Project start-up. This is especially important in order to avoid future controversies caused by a potential increment of "ES providers" caused by the flow of non-residents to the ES providing areas, stimulated by the PES incentives[25]

[23] These studies are: a. The cost-effectiveness of investments on the conservation, restoration and sustainable management of High Andean ecosystems; b. The socioeconomic impacts of project components on poverty alleviation and equity at the watershed level; c. The success and failure factors in PES implementation in Peru; d. The actual potential of scaling out and up of water-related PES schemes in Peru; e. The effectiveness of linking local implementation of pilot PES schemes with the formulation of rules and regulations for the proposed Law on Ecosystem Services Retribution; and f. The usefulness and pertinence of linking PES schemes in Peru with watershed committees following a consultation and decision-making instance for the operation of PES schemes in Peru (Annex 6)

[24] This is a step forward already recognized as needed by MINAM in the Cañete watershed, so might be probable that is given before Project's start up. In the case of Jequetepeque watershed, there is already an agreement with the hydropower company and recently with the irrigation system users, who are contributing with small funds to conservation activities in the upper part of the watershed. The Project will built upon this and will work towards strengthening the institutional capacity for managing the PES as well as enhancing the size of the Fund itself –with GEF funds and new leveraged funding.

[25] This phenomenon has been already observed in Moyobamba's PES case.

Activity 2. Creation of PES schemes. This activity includes: Setting up institutional platforms to further PES negotiation and operation

45. **Setting up institutional platforms for PES negotiation and operation.** The establishment of PES schemes requires an institutional platform with the following functions: a) Congregating ES provider's representatives (SERNANP and local communities), ES beneficiaries, MINAM, National and Local Water Authorities, and Project representatives to discuss and agree on PES objectives, justification and conservation targets; b) negotiating monetary contributions from ES beneficiaries; c) agreeing on operational design of PES and subscribing such agreements; d) decision making on PES operations and investment; e) monitoring and evaluation of PES performance as described in Annex 6.

46. In order to further the establishment of platforms the Project willl facilitate and enhance the creation of **watershed ad hoc committees** as the main institutional platform in each Project site as described in the organizational framework section of the Main Report. To achieve this, the Project willl build on existing initiatives (if any) to constitute the Watershed Water Resources Council (CRHC in Spanish) whose creation is contained in the Water Resources Law. In the event that no progress has been made in establishing these Councils at Project start-up these *ad hoc* watershed committees could be proposed as pioneer pilot groups of the CRHC. Thus, if the initiative to establish the CRHC's arises and is pursued, then the meetings of the ad hoc committees could be used to begin the establishment of the CRHC's and therefore prevent stakeholders be convened twice to discuss issues related to water management in the basin. The *expected outcome* of this sub-activity is: two watershed ad hoc committees created and operating.

47. To create these watershed *ad hoc* committees, the Project willl facilitate their installment by supporting the following activities:

- Stakeholder meetings to propose their creation, functions and PES-related objectives
- Legal advice to determine the most appropriate legal frameworks for these committees
- Legal-based creation of the committees including their organizational and governance structure and PES-related roles.
- Periodical meetings to perform the committee's functions. To facilitate initial functioning and dynamism, Basin Coordinators willl act as the Committee's Secretariat in order to ensure that meetings are undertaken as planned, follow up agreements and actions, communicate them and decide on next steps.
- Efforts to include women on these committees will be made – if this is not possible, mechanisms to include the concerns and ideas of women i.e. from women's groups and civil society, will be established.

48. **Design and operation of PES[26].** The Project, in coordination with the Watershed *ad hoc* committees, willl design the PES operation structure, procedures and governance rules. For this, the Project willl take into account the results of the analysis of the legal framework and legal recommendations for PES implementation conducted by the Peruvian Society of Environmental Law (SPDA in Spanish) and commissioned by MINAM. In case this analysis does not cover a specific legal issue for any of the two PES cases, the Project willl commission a specific legal study to cover it.

[26] MINAM will ensure that these activities are complementary and fully integrated to ongoing dialogues with stakeholders for the creation of PES/CES schemes in the selected watersheds.

49. The PES willl be designed taking into consideration the following aspects previously discussed with MINAM during preparation of the Project Design Report (PDR).

a. *PES governance*: The watershed *ad hoc* committees willl be the instance at which PES decision-making takes place, especially regarding: approval of PES investment, agreements regarding contribution from ES beneficiaries, and M&E of PES schemes. For this, the Project jointly with the Assessing, Valuing and Funding of Natural Heritage Directorate of the MINAM willl propose specific procedures and operational manuals for the PES schemes to be shared with the watershed *ad hoc* committees for their endorsement. These manuals willl include procedures for the acceptance of new participants in the committees considering the relevance of their participation in the implementation of the PES schemes. They willl also include procedures to elect and clarify the roles of committee representatives and authorities. The manuals willl clearly designate the conservation priorities in the watershed to be targeted by PES investment and the type of conservation, restoration and rehabilitation activities to be financed with PES. For this, the Project willl consider previous studies undertaken in Cañete and Jequetepeque watersheds regarding the location of ecosystem services providing areas, biodiversity inventories, impacts of management practices, or any other relevant studies.

b. *PES financial management*: The PES scheme willl be financially managed by PROFONANPE through the creation of a Trust Fund in each watershed. The Trust Funds willl be deposited in a commercial bank that willl invest them in moderate-risk market options. The bank willl be selected based on a competitive basis, where the most profitable and convenient proposal in agreement with MINAM.

c. *PES sustainability and capacity*: The Trust Fund willl combine two modalities: 1) Endowment Fund and 2) Sinking Fund. The Endowment Fund portion willl be capitalized with GEF contributions of about US$1M per Trust Fund. Revenues from the Fund willl be used to cover recurrent costs associated to PES M&E and biodiversity conservation, in order to guarantee the sustainability of these two fundamental aspects and for which it is more difficult to leverage funding from local ES beneficiaries. This contribution willl also be used to leverage additional funding from other ES buyers (e.g. Hydropower companies, mining companies, farmers, urban water users, other industries, philanthropic organizations, donors, local and regional governments, etc.). Additional funds from other ES buyers willl be used to constitute the sinking fund portion –unless the ES buyer prefers its contribution to be allocated in the endowment portion. The sinking fund willl be created with the purpose of implementing conservation actions in priority areas for the provision of WES. It is expected that agreements with ES buyers, especially with those who permanently benefit from WES willl be in a long-term or even perpetual basis. In this regard the sinking fund willl be sustainable over time. This mixed design, -endowment and sinking-, of the Trust Funds is expected to allow sustainability to the PES scheme by proving a permanent sustainable financial platform (via the capital for the endowment fund) and recurrent permanent payments (via permanent contributions to the sinking fund portion). On the other hand, this design willl provide the Fund with the capacity to cover required immediate investment for conservation priorities (through the sinking fund) that cannot wait until the endowment fund growth is enough to cover it.

d. *PES investments and disbursements*: Revenues from the endowment funds and the sinking funds willl be used to provide conditional economic incentives to ES coadjutants for the effective implementation of actions for conserving and restoring WES and High Andean biodiversity. These actions may be similar to those that were successfully implemented as part of the Component 1, prove to be effective and feasible to implement, therefore should be extrapolated to other sites in the watershed.. It is highly probable that an overlap

between areas critical for biodiversity conservation and hydrological ecosystem services provision will occur, incrementing the cost-effectiveness of the PES investments. In either way, PES investments should demonstrate they are in line with the procedures and operation manuals of the PES scheme and be approved by the watershed ad hoc committee. PROFONANPE willl not disburse funds to cover expenses of activities not previously approved by the committees.

e. ES incentives willl be disbursed to communities with clear and secure land tenure and legally enable them to receive the funds from PROFONANPE. For this, the entity willl enter into formal agreement with the communities (or any other ES "provider") where conditions for PES reception willl be stated and agreed between parties. These agreements in the form of contracts willl also include sanctions in case these conditions are not met. Private contracts (in the case of communities located in non-protected areas) or conservation agreements (in the case of communities located inside protected areas) willl also include sanctions in case these conditions are not met.[27]

50. Once the PES scheme is designed and agreed upon the members of the watershed *ad hoc* committees, willl need to be recognized in accordance with any legal requirements that may apply on this matter, if any.[28]

51. In summary the *expected outputs* from activity 2 are: legal framework revision and complemented in needed aspects; two watershed ad hoc committees created and operational along with their respective procedures and operational manuals; two Trust Funds created and operating.

Activity 3. PES Monitoring and Evaluation. The Project willl fund a number of M&E activities including the design of the system and its operations.

52. **Design of PES M&E system.** Most of the current PES schemes in watersheds in the Andean region lack a proper M&E system able to measure and evaluate the impacts and progress on ecosystem services provision and biodiversity conservation. Furthermore, there is no monitoring of the effects of PES schemes in poverty conditions. The few M&E efforts are focused on the financial performance of the PES schemes. Consequently, the Project is oriented to fill this gap and contribute with experiences towards the implementation of "PES best practices" including proper M&E systems. Thus, the M&E specialist and the Assessing, Valuing and Funding of Natural Heritage Directorate of the MINAM willl develop monitoring and evaluation system for the Project PES schemes. It is worth mentioning, that successful PES practices of the Project willl provide the guidelines and insights for the MINAM to replicate in other similar PES initiatives in the country.

53. The PES M&E system willl address three aspects: Financial and operational PES performance, quality of PES investment and poverty targeting.

- Financial performance: As described in Annex 6, Trust Fund's financial reports willl be produced by PROFONANPE and reviewed by the M&E team and Project Coordinator before submission to IFAD/GEF by MINAM. It is expected that after the Project completion, PROFONANPE willl continue to report the financial status of the PES scheme. The watershed *ad hoc* committee (according to the functions proposed for these committees mentioned

[27] In Protected Areas is not possible to sign private contracts with land users. For these cases, it is allowed to subscribe Conservation Agreements that are legally binding and endorsed by SERNAMP. This Project will follow the existing guidelines approved by SERNAMP, for the creation and signature of these agreements.
[28] E.g. the current draft of the ES Law in Peru proposes that any PES scheme in the country willl need to be registered and approved in and by the MINAM.

previously) shall review these reports. These details should be agreed upon during the design of the PES scheme and its M&E system. The reports willl include the financial status and market performance for both, endowment and sinking funds. The operation status of PES schemes willl also be monitored by tracking the status of formal agreements between PES contributors (ES beneficiaries besides GEF) and the PES fund, and by the performance of the watershed ad hoc committees.

- Level and quality of PES investment: During M&E design, a set of indicators willl be developed to assess the quality and degree of investment with PES. Indicators to assess the degree of investment willl include coverage (ha) of implemented activities (conservation, restoration and rehabilitation activities, including those of component 1) with respective geographical coordinates. To assess the quality of investment, the Project willl develop short and long-term indicators. Short-term indicators willl allow PES managers to evaluate with proxy indicators the impacts of PES activities on biodiversity conservation and ecosystem services provision (e.g. indicators to measure compliance of technical recommendations for effective conservation and restoration of ecosystems and species). Long-term indicators willl be expected to aim at evaluating the actual impacts on ecosystem services delivery. As a means to measure some of the most important long-term indicators relevant for these PES schemes, a hydrological monitoring system willl be designed and implemented to measure the impact of land use/management practices in the watershed (including those implemented by Component 1 and through the investment of revenues from the Trust Funds). In this regard, the M&E system willl be implemented during the early stages of the Project and to be maintained beyond as part of the PES scheme operation. The latter is important due to main impacts on hydrology are expected to occur in the mid and long-term.
- Effective poverty targeting: During PDR formulation targeted communities located in areas critical for the delivery of water-related ecosystem services and biodiversity conservation have been identified. These communities are located in watershed areas under poverty conditions. In order to ensure that this targeting is kept during direct Project interventions, the Project willl monitor who is receiving PES benefits, aiming also for an analysis by gender as well as other socio-economic indicators. This willl be contrasted by the M&E specialist with the initial targeting exercise and refined with a socioeconomic baseline study to be implemented as part of the Learning and Knowledge Management component (see Annex 6 for details).

54. The purpose of designing a PES M&E system as part of the PES operational requirements is to contribute to the sustainable functioning and monitoring of the PES scheme beyond the Project's life. This may provide insights on the actual environmental impacts of these economic mechanisms and their financial sustainability. *Expected output* of activity 3 is a PES M&E System designed and implemented.

55. **Activity 4. Development of Rules and Regulations for the Law on Ecosystem Services.** GEF funding willl also support the development of the institutional framework for environmental services in the country helping to implement the Law, once approved, and allowing MINAM to lead the preparation of rules and major guidelines for its application. In order to achieve these objectives the Project willl undertake the following main tasks:

- Bringing to the national ES Law discussion group jointly with MINAM, the main key aspects of PES design and implementation that should be institutionalized to catalyze the replication of PES schemes in Peruvian watersheds.
- Sharing lessons learned and information on PES impacts based on evidence provided by Project studies[1].
- Supporting MINAM in organizing, when required, activities part of the prior consultation and informed consent process.

- Disseminating information regarding ES Law contents, including proposed Rules and Regulations.
- Bringing feedback to MINAM from civil society including local communities, indigenous people, productive sectors, etc.

56. The *expected output* of activity 4 will be ES Law content broadly disseminated, ES Law rules and regulations consulted with civil society, PES lessons learned informed and disseminated to MINAM, PES promoters, water authorities, WES beneficiaries, among others.

ANNEX 5. INSTITUTIONAL ASPECTS, LEGAL FRAMEWORK AND IMPLEMENTATION ARRANGEMENTS

I. INTRODUCTION

1. This document contains information required under the guidelines for project design and an additional chapter on the legal framework as this element is an important component of the activities envisaged under the proposed project.

2. Chapter II describes the overall institutional setting for project implementation including the project implementation unit (PIU), project guidance and linkages with other institutions and their roles. Chapter III expands on the legal framework and more specifically on the proposed Payment for Environmental Services Law. Chapter IV summarizes the main responsibilities assigned to several government agencies involved. Chapter V provide summary information on capacity building measures aimed at developing and or strengthening existing implementation mechanisms, procedures and competencies of staff of implementing agencies and partners. Following a decision by IFAD to consider scaling up approaches Chapter VI provides an indication of the possibilities for scaling up the approach instituted for this project on a wider scale. This Annex also includes two appendices with the organizational chart and the terms of reference of Project staff.

II. INSTITUTIONAL SETTING

3. The Project's institutional setting was early established in the PIM indicating that it willl be MINAM the principal implementing agency. During formulation a more precise definition was arrived at by determining that the Project willl be within the mandate of the Assessing, Valuing and Financing Natural Resources General Directorate of the Vice Ministry of Strategic Development of Natural Resources. Notwithstanding, the need to closely collaborate with MINAG and more specifically with Agro Rural willl require that the Project be perfectly blended with the IFAD funded DELOSI project in areas of Project intervention and further consistency of policies and strategies of both ministries especially with the National Water Authority which is under the *aegis* of MINAG. A proposed Project Advisory Committee willl serve the purpose of ensuring this consistency as representatives of both ministries willl be members. The need to establish two Trust Funds and a decision to manage the Project's financial resources under a private sector mode has resulted in including in the Project's overall institutional setting the national Fund for National Protected Areas (PROFONANPE). In addition there are a number of other government agencies whose roles are described further below who willl be involved according to their specific mandates.

4. The national decentralization process willl also require including Regional and Local governments of the selected watersheds in decision making processes and implementation arrangements. This willl be achieved by including representatives of these two levels of government in Project committees.

III. LEGAL FRAMEWORK

5. The legal framework a policy on water resources and: a) the National Protected Areas Law, b) the Water Resources Law and a proposed Environmental Services Law

6. **National Policy on Water Resources**. In July 2012 the *Acuerdo Nacional* [29]adopted a National Policy on Water Resources. The policy document states that the Government is committed to consider water as national heritage and as fundamental right of human beings. Water should be used in harmony with the common good, as a renewable and vulnerable natural resource which integrates social, cultural, economic, political and environmental values. The policy further states that no single person or public or private entity can claim to ownership of water and that the State establishes the rights and conditions of use and promotes public and private investment for efficient management. Similarly, the government is committed to ensuring the coordination of policies on water with policies for the conservation and efficient use of natural resources at national, regional, local and watershed levels. The policy covers 13 main principles committing the government to:

a) Give national priority to water supply in quantity and quality for human consumption and food security

b) Ensure universal access to safe water and sanitation to urban and rural populations in an appropriate and differentiated manner, with an institutional framework that ensures the viability and sustainability of access, promoting public, private and associated investments with a spatial and basin vision, to ensure efficiency in service delivery, transparency, regulation, oversight and accountability.

c) Ensure the integrated management of water resources including provision of technical support, institutional and multi-sector participation to ensure rational, appropriate, equitable and, sustainable use that respects ecosystems, taking into account climate change and promotion of economic, social, and environmental development in social harmony.

d) Protect the balance of the hydrological cycle and the quality of water bodies, taking into account: the interdependence of the different states of water and components of the hydrological cycle taking into account that the basin is the unit for water management, and that land use and human activities impact the cycle requiring that they are managed together considering peculiarities based on physiographic regions and ecological and climatic conditions of the country

e) Implement measures to ensure that actors involved in the basins will protect, rehabilitate and compensate environmentally negative impacts generated by their involvement in water resources, considering inter alia the combined effect of interventions, environmental liabilities, the evacuation of sewage and the characteristics of each basin.

f) Create the conditions for sustainable reuse and recycling of wastewater previously treated, protecting ecosystems, environmental services and public health

g) Strengthen the National Water Resources Management System, the institutional administrative, economic and functional autonomy of the National Water Authority as

[29] The *Acuerdo Nacional* is the space for dialogue and an institutionalized instance for monitoring and promoting compliance with state policies. Its structure is tripartite, involving the Government, political parties that have representation in Congress and organizations representing civil society at national level. The President of the Republic is the President of the *Acuerdo Nacional*.

lead agency, to act as a specialized, autonomous body, independent and decentralized manner, involving regional governments and local authorities, user organizations and others involved in water management.

h) Promote the institutionalization of integrated basin-wide towards establishment of Basin Water Resources Councils, supported by tools and technical bodies endorsed by the National Water Authority.

i) Prioritize the prevention and management of water disputes and related issues through decentralized bodies and user participation. A specialized and autonomous body of the National Water Authority will decide management disputes ultimately management. If required this body will apply sanctions if required.

j) Strengthen the integrated management of water resources in transboundary basins, establishing agreements with neighboring countries and supporting organizations created for this purpose.

k) Plan and encourage public and private investment in the catchment and water availability, to: optimize the efficient use and reuse of water, avoid risks, mitigate the effects of extreme events, treated effluent, and to obtain future alternative water sources, including desalination.

7. **The National Protected Areas Law.** This Law established the activities permitted in each category of national protected areas and divides those that are for direct and indirect use (National Parks, National Sanctuaries, and Historical Sanctuaries) where extractive activities are not permitted. In addition, the Natural Protected Areas Law also regulates the buffer zones and establishes management committees which facilitate the participation of civil society in the co-management of protected areas.

8. **The Water Resources Law** provides an adequate framework for project activities, as it stipulates an “economic retribution” per cubic meter to all water users as payment for the use of this public resource. The value should be determined according to the costs of integrated water resources management incurred by the National Water Authority, including water users’ information system and environmental remediation. According to its regulations, the amounts recovered should be used to pay for the formulation of water management plans in each watershed, manage water sources, and protection and control activities intended to protect water quality, increase the supply of water and the protection of sources. All this sets the stage for the implementation of PES/CES schemes.

9. **The Forest and Wildlife Law.** The Forestry and Wildlife Law (29763), was published in July 2011 and replaces the previous Forestry and Wildlife Law (27308) which sets out the fundamental rights and duties related to the forestry heritage and wildlife of the nation. Every person has the right to access to use and enjoy the forest heritage and wildlife of the nation according to the procedures established by the national and regional authority and planning and land management instruments.

10. The Law sets out the general principles applicable to forest management and wildlife, in addition to the principles, rights, duties and provisions approved in Peru's Constitution, such as regarding wildlife and forest governance, participation in forest management, free and informed prior consultation, equity and social inclusion, inter cultural dimension , traditional knowledge and adopt the ecosystem approach in support of the sustainability of forest management and wildlife in Peru

11. **The Prior Consultation Law.** The consultation process contemplated in the law aims to obtain consent from indigenous communities on measures that will affect their rights and way of living. The introduction of the law, which complies with Convention 169 of the International Labour Organisation (ILO), is expected to help reduce the high number of ongoing conflicts resulting from investment projects in mining, energy and hydrocarbons. However, not all conflicts of which there are more than 200 currently active involve indigenous communities, and unless the State strengthens its overall mediation capacity, conflicts around the exploitation of natural resources are not likely to cease. There is also a risk that the consultation process becomes a crucial hurdle for investors in natural resources, a key source of fiscal revenue and hard currency. Nevertheless, the law is an important step towards reducing levels of polarisation in the country.

12. **The Environmental Services Law.** Additionally, and in an effort to norm specific aspects, a draft text of an **Environmental Services Law** is being currently discussed. The draft text outlines how a PES/CES system willl look like in Peru and the responsibilities of the different Government institutions and other stakeholders, assigning the leading role to MINAM. The proposal of the "Promotion of Rewards Mechanisms for Ecosystem Services" bill, aims to promote and regulate mechanisms to value and reward conservation, restoration and sustainable management of ecosystems as a source of ecosystem services. These mechanisms which, willl be voluntary and flexible, willl help to maintain the source of ecosystem services with communities receiving remuneration (financial incentive) subject to the effective maintenance or improvement of the provision of these services. The payers of such incentives shall be any person or entity, public or private, domestic or foreign, voluntarily willing to contribute under the guidelines of these schemes. It is encouraged that local, regional and national governments allocate resources from public investment. The Ministry of Environment is responsible for drafting the guidelines for the assessment, definition, valuation and financing sources of ecosystem services, as well as to monitor the development and implementation of rewards for ecosystem services mechanisms.

IV. STRATEGIC ORGANIZATIONS FOR PROJECT IMPLEMENTATION

A. Government ministries and governmental organizations

13. Main strategic organizations for project implementation include three ministries and a number of departments and agencies within. Ministries involved include the Ministry of the Environment, the Ministry of Agriculture and the Ministry of Energy.

14. **The Ministry of Environment (MINAM).** MINAM was created, in May 2008 by Legislative Decree 1013 in order to design, establish, implement, monitor and evaluate the National Environmental Policy and to promote sustainable use of natural resources and conserve biodiversity and natural protected areas. Specific objectives of MINAM include *inter alia*: (a) furthering the sustainable use of resources, conservation of biodiversity and natural protected areas, and sustainable development of Amazon region of the country; (b) prevent environmental degradation and natural resources, and reversing negative situations affecting them; (c) ensuring public participation in decision-making processes for sustainable development; (d) contributing to the country's competitiveness through efficient environmental performance and (e) integrating the principles of sustainable development into country policies and programs. It is organized under two Vice-ministries the Environmental Management Vice Ministry and the Natural Resources Strategic Development Vice Ministry. The first deals with Policy, Legislation and Environmental Assessment; Management Tools; Science, Technology and Environmental Innovation; Education, Culture and Environmental Citizenship and with Environmental Quality. The second deals with

Biodiversity and Coastal Marine Resources; Forestry and Wildlife Heritage; Climate Change and Land Management and Soils.

15. The **Strategic Development of Natural Resources Vice-Ministry** is responsible for a) designing the national policy and strategy for integrated management of natural resources and monitoring its implementation, b) developing and coordinating the national biodiversity strategy and overseeing its implementation, c) developing and coordinating the national climate change adaptation and mitigation strategy and monitoring its implementation, d) developing and coordinating the national strategy for combating desertification and drought and monitor its implementation in coordination with relevant sectors, e) issuing the corresponding resolutions within its mandate, and enforcing environmental regulations in the field of competence, f) inventorying and establishing mechanisms to enhance, compensate and maintain the provision of environmental services, and promote their financing, payment and monitoring thereof.

16. The Vice-ministry includes four Directorates i) the Biological Diversity Directorate, ii) the Climate Change Desertification and Water Resources Directorate , iii) the Land Management Directorate and, iv) the Assessing, Valuing and Funding of Natural Heritage Directorate.

- The **Biological Diversity Directorate**. This directorate is responsible for: a) formulating policies, plans, strategies and biodiversity standards while monitoring the National Biodiversity Strategy through the Council on Biological Diversity b) formulating, conducting and overseeing policy, plans, strategies and tools for ecosystem management of the country, c) preparing a list of fragile ecosystems in Peru, c) promoting actions between different public and private sector organizations for biological conservation and ecosystems for sustainable use of its components, d) promoting integration, analysis and dissemination on the status of biological diversity components d) administering the Information Exchange Center on Biodiversity and Biosafety, e) formulating and proposing a national biosafety policy and e) implementing international conventions, exercising the functions of CITES Scientific Authority in Peru and f) elaborating the national endangered species list ,guidelines for their conservation while maintaining required inventories for managing biological diversity.

- The **Climate Change, Desertification and Water Resources Directorate** is responsible for a) formulating policies, plans and national standards for the management of climate change, b) developing and coordinating the National Climate Change Strategy and the National Strategy to Combat Desertification and Drought together with the National Commission on Climate Change, c) maintaining a national record of adaptation and mitigation projects including research and studies, d) developing the National Environmental Policy on Water Resources, d) promoting the implementation of national strategies on climate change within policies and national, regional and local development plans, e) acting as the National Authority in relation to commitments under the United Nations Framework on Climate Change, and f) implementing the national inventory of greenhouse gases.

- The **Land Management Directorate** is responsible for, a) formulating policies, plans, strategies, guidelines, and national standards for land use planning, b) conducting, promoting, advising and evaluating land use planning processes, b) conducting processes for Economic Ecological Zoning while providing training on Ecological and Economic Zoning and land use, c) administering the Geographic Information System of the Ministry) organizing the national registry on land use and Economic and Ecological Zoning d) conducting and promoting concerted joint development plans, risk

management, decentralization regionalization processes and development of the land borders in the context of land use planning and e(emitting technical opinions on proposed rules and regulations.

- The **Assessing, Valuing and Funding of Natural Heritage Directorate** is responsible *inter alia* for a) formulating and promoting policies, plans, strategies, tools, standards and national directives for the evaluation and value-assessment of natural resources, biodiversity, environmental services and their degradation, b) promoting the design of economic instruments for the strategic development of natural resources and preventing their degradation, c) developing, disseminating and updating an inventory and integrated national assessments of natural resources and environmental services and, d) formulating and proposing a national policy related to environmental services and compensation.

17. MINAM also includes three related agencies a) the National Services of National Protected Areas, b) the National Meteorological and Hydrology Service and c) the Environmental Assessment and Oversight Agency.

- The **National Service of National Protected Areas** SERNANP was created under the same law that established MINAM as a technical public entity. It is the governing body and technical authority of the National System of Protected Areas by the State (SINANPE). Its main functions are to oversee the SINANPE, approve rules and technical and administrative procedures for establishment and management of protected areas and to manage, directly or by administration contracts, protected areas of national level. Other responsibilities include: (a) proposing and updating the *Plan Director* of SINANPE; (b) approving technical proposals for the creation of new protected areas of national and regional levels; (c) proposing to the Minster of the Environment, the recognition of Private Conservation Areas and, (d) approving Master Plans for all protected areas including Private Conservation Areas.

- The **National Meteorology and Hydrology Service** SENAMHI was established in 1969 to undertake all meteorological, hydrological and environmental activities and participate in world atmospheric vigilance while providing specialized services that contribute to sustainable development, security and national wellbeing. Is responsible *inter alia* for; a) organizing, promoting and conducting specialized technical studies to be undertaken by national or foreign entities, b) disseminating scientific and technical information, c) participating in scientific studies and projects related to the atmospheric environment, e) organizing, operating and maintaining a network of meteorological and hydrological stations, f) developing forecasts and Global Atmosphere Watch (GAW - WMO) reports, g) providing technical advice to public and private institutions in support of economic development, h) organizing and managing national meteorological, hydrological and environmental databases, i) entering into contracts and technical cooperation agreements with public and private national and international institutions and, i) representing Peru at the World Meteorological Organization (WMO).

- The **Environmental Assessment and Oversight Agency (OEFA).**This entity is a technical specialized public agency, in charge of the oversight, supervision, control and penalties in environmental matters. Some of its functions are to direct and supervise the application of the common regime of environmental oversight and control, and the incentive regime provided for in the General Law of the Environment as well as directly supervise and control observance of the activities included within

the scope of its jurisdiction and performance of authorities with environmental responsibilities.

18. **Ministry of Agriculture.** The Ministry is responsible by law for increasing the level of competitiveness of the agricultural sector, furthering sustainable use of natural resources including land, water and forestry resources and providing access to basic production services to small-scale agricultural producers.

19. Following the reorganization of the environment public sector MINAG now includes three distinct agencies or departments with a bearing on implementation of the proposed project. These include the General Directorate for Forest and Fauna, the National Water Authority and the Directorate of Agricultural Environmental Affairs. In order to streamline implementation of sector projects the reorganization of MINAG encompassed the creation of a special program under the title of Agro Rural responsible for implementation of the IFAD funded Strengthening Local Development in Areas of the Highlands and High Rainforest.

(a) The **Directorate of Forests and Fauna** responsible for proposing policies, strategies, plans, programs and projects related to sustainable use of forest resources and wildlife associated genetic resources in agreement with the National Environmental Policy and environmental regulations. More specifically the Directorate has among other functions the following: a). issuing views, opinions and technical reports on conservation and sustainable use of forest resources, wildlife and microorganisms, b) promoting research on conservation and sustainable use of forest resources and wildlife, genetic resources and associated microorganisms and disseminate their results, c) granting permits for research on wildlife conducted at the national level, d) issuing certificates of origin of genetic resources of native species of wildlife , e) authorizing the collection for research and export of biological material or use of biological resources involving flora and fauna, f). developing, proposing and maintaining a classification of threatened species of flora and fauna and the relationship of fragile and endangered ecosystems, which are part of the national lists of endangered species and fragile ecosystems; g) issuing technical reports for the declaration of closed seasons for the extraction of flora and fauna,. h) providing advice and training to public and private sector entities on conservation and sustainable use of forest resources and wildlife, I). granting export and import permits of flora and fauna specimens, j) implementing in coordination with the Ministry of Environment the Convention on Migratory Species, k) expressing a technical opinion for the signing of national and international agreements in the field of competence, l) analyzing and approving the terms of reference for research with or without collection of wildlife and genetic resources, m) authorizing the removal of specimens of flora, fauna and microorganisms for research or cultural diffusion and authorizing the exchange of specimens of wildlife breeding zoo-born nationals, n). advising, coordinating and supervising the activities and procedures related to the conservation and sustainable utilization of non-domesticated South American camelids, o) maintaining updated wildlife resource inventories and their assessment , p) promoting, supporting and providing assistance in forest management and wildlife to regional governments and forest management committees, q) implementing, monitoring and evaluating the agreements signed and ratified by Peru in its area of competence.

(b) The **National Water Authority** is the governing body and highest technical authority responsible for the National Water Resources Management System. The Authority is responsible *inter alia* for: a) developing a Policy and National Water Resources Strategy, b) leading, supervising and evaluating its implementation under

the National Environmental Policy, c) issuing rules and establishing procedures to ensure integrated and sustainable management of water resources, d) proposing legislation for water management, e) establishing guidelines for the development and updating of Basin Water Resources Management Plans and approving and monitoring their implementation, f) developing methods and determining the value of economic rewards for the right to use water and the dumping of treated sewage in natural water sources, g) approving fees for monitoring and management of groundwater use and water infrastructure, h) approving reserves of water resources and river basin water transfers; i) declaring the depletion of natural sources of water, closed areas, buffer and protected zones and declaring states of emergency in the natural water sources; j) granting, modifying and extinguish, based on technical studies, water use rights, authorizing discharges and wastewater reuse; k) leading, organizing and administering the National Water Resources Information System, the Administrative Register of Water Use Rights, the National Register of Water Users Organizations, the Dumping Control Registry and other records as appropriate, l) issuing technical opinion for adoption of environmental management tools involving natural sources of water; m) coordinating, organizing and directing actions necessary for the functioning of national water resources management, and monitoring and evaluating the impact of activities and the fulfillment of the objectives of the system, n) exercising exclusive administrative jurisdiction on water, developing management actions, monitoring, control and surveillance, to ensure the conservation and protection of water in respect of quantity and quality of natural assets associated with water infrastructure across sectors; exercising for this purpose, the power to impose sanctions and coercive measures, (o) establishing efficiency standards applicable to the use of water resources in accordance with the National Environmental Policy, (p) promoting and supporting project development and implementation of activities that further the efficient, saving, preserving, protecting water quality and increasing the availability of water resources and authorizing the execution of hydraulic infrastructure in natural resources areas, q) developing actions for the integrated management of water basins and the preservation of resources in the basin headwaters, so as to prevent damage as a result of occurrence of extreme hydrological events, r) approving the territorial demarcation of watersheds, the classification of water bodies, the definition of marginal strips and volumes of environmental flows, the latter in coordination with the Ministry of Environment, s) promoting education and awareness of the importance of water to mankind for the establishment of a water culture that recognizes the social, environmental and economic value of water resources, t) coordinating with the Ministry of Foreign Affairs, and the signing of multinational agreements that aim at the integrated management of water resources in trans boundary basins.

(c) The **Directorate of Agricultural Environmental Affairs** is responsible for implementing the objectives and provisions of the National Environmental Management System in its field of competence. The Directorate has among its functions: a) coordinating with the Ministry of the Environment the sustainable use of renewable natural resources within its competence, and proposing plans, programs, projects and standards for reducing vulnerability and adaptation to climate change in agriculture under the National Strategy to Combat Climate Change, b) approving environmental impact studies in agriculture, c) giving its opinion on the procedures for environmental impact assessment referred to it by other sectors or by the Ministry of Environment; d) assessing the status of degraded environments in the field of competence and proposing measures aimed at recovery and sustainable use, e) proposing plans, programs, projects and policies on sustainable use and exploitation of soil resources for agricultural use, f) generating processing and

automating mapping and satellite information related to renewable natural resources within its jurisdiction, keeping updated a database in accordance with the provisions of the National Environmental Information System, g).tracking the status of renewable natural resources within its jurisdiction, h) proposing rules and operating manuals and procedures in the field of competence, i) implementing monitoring and evaluating agreements signed and ratified by Peru in its area of competence

20. MINAG also includes **Agro rural** whose mission is to promote and manage successful models of rural development to facilitate the articulation of public-private investment and contribute to the inclusion of rural families. The strategic objectives of Agro Rural are to: (a) promote the streamlining of programmes and projects for more efficient state interventions in rural areas; (b) strengthen the institutional framework for public-private management of rural development at the national, regional and local levels;(c) promote knowledge management to highlight successful experiences in rural development; and (d) promote investment in the rural sector by mobilizing resources through public-private partnerships. All IFAD funded projects area managed by Agro Rural under the Central Implementing Nucleus modality.

21. Another relevant ministry is the **Ministry of Energy and Mines** and its **Directorate of Energy Environmental Affairs** that is the technical body responsible for proposing regulatory policies and evaluating, proposing and / or issuing the necessary regulations while promoting the implementation of activities aimed at conservation and environmental protection for sustainable energy development. More specifically the General Directorate of Energy Environmental Affairs is responsible for: a) proposing policies for conservation and environmental protection for sustainable energy activities, consistent with national sustainable development policies, b) formulating, proposing and adopting, as appropriate, technical and legal standards related to conservation and environmental protection in the energy sector; c). standardizing the assessment of environmental studies of energy sector activities, d) analyzing and issuing an opinion on the complaints of violation of environmental regulations and to establishing preventive and corrective measures for the control of impacts; e) authorizing public and private institutions to develop environmental studies on the impact of energy development activities; f) developing and promoting environmental studies required for development and growth of the activities of the energy sector; g) assessing and approving the environmental and social studies to be presented to the Ministry of Energy and Mines; h).developing and promoting Environmental Protection and Sustainable Development Programs in the Energy Sector in coordination with the Directorate General of Electricity and Hydrocarbons, Regional and Local Governments, industry and other public and private institutions; i). advising senior management on environmental issues in the Energy Sector, i) promoting and implementing projects with international technical cooperation related to environmental issues in the energy sector, j) promoting training and education programs on environmental issues, in Peru or abroad, both for the public and private sectors and, k) collecting and participating in the processing and analysis of statistical information on the actions of conservation and environmental protection at the sector level.

22. Other government agencies involved include: a) the Agency for Formalization of Informal Property, b) the National Institute of Statistics and Informatics and the National Strategic Planning Centre.

23. The **Agency for Formalization of Informal Property (COFOPRI**) The overall objective of COFOPRI is to implement the process of formalization of land properties at the national level, in order to generate legally secure property rights that are sustainable over time. More specifically COFOPRI must design, regulate and control the process of

formalization of land property and maintaining formality that includes physical and legal recognition and titling and the cadastre in rural and urban areas, transferring knowledge and skills to regional and local governments within the framework of the decentralization process. Additionally the Agency directs, implements and controls actions aimed at formalization of fallow land titling and those of peasant communities with MINAG.

24. The **National Institute of Statistics and Informatics (INEI)** is the governing body of the National Statistical System and responsible for regulating, planning, directing, coordinating, evaluating and monitoring the country's official statistical activities. Among research work carried out by INEI are studies on the characteristics and determinants of poverty quantifying each of the variables describing poverty in Peru based on National Household Survey (ENAHO). The ENAHO is conducted nationwide in urban and rural areas of the 24 departments and the Constitutional Province of Callao This survey generates monthly indicators, which show the evolution of household poverty, welfare and living conditions. Additionally its implementation allows for measuring the extent of social programs in improving the living conditions of the population and serves as a source of information to public and private institutions, as well as allowing researchers to make comparisons with similar research.

25. The **National Strategic Planning Centre.** The Centre is responsible for integrating in a concerted and coherent manner, different proposals for the preparation of national, institutional and sector plans and provides guidance on methods, processes and instruments for strategic planning. Additionally the Centre is in charge of developing processes and actions for monitoring results while promoting administrative modernization of government agencies to reach efficiency standards, promote cooperation and agreements between the public and private sectors in planning and implementing priority programs aimed at national development and improving competiveness and developing theoretical frameworks to substantiate strategic plans within national and international contexts.

B. Environmental Funds

26. There are three relevant funds in Peru: PROFONANPE, FONAM and the *Fondo de las Americas* (FONDAM).

27. The **National Fund for Protected Areas by the State (PROFONANPE)** was established by legal decree, as a private nonprofit organization on December 29, 1992. Its statutes provide for a long-term grant making program and the creation of independent sub accounts, in coordination with different donors, to finance the country's protected areas. Its highest governing body is the Directive Council (*Consejo Directivo*), with seven members: (1) three representatives of the public sector: Ministry of Economy and Finance, SERNANP), and the Presidency of the Council of Ministers, (2) three representatives of the private sector selected from the Peru Environmental Network (RAP); and (3) one representative of international donor agencies. The presidency of the Council is held by the Minister of the Environment. The Council is responsible for the definition of institutional policies, approval of annual plans and budgets, and selecting the Executive Director based on a competition of merits.

28. Currently PROFONANPE supports 26 protected areas, financing activities such as management plans, recurrent costs, preparation and implementation of management plans and establishment and management of buffer zones. The institutional development of PROFONANPE has had two phases. In the first phase, the institution dedicated itself to financing basic operational costs of protected areas, and in the second, beginning in 2001, the central theme has been financing activities that strengthen the participation of diverse

actors in protected area management to leverage resources. To date PROFONANPE has built a portfolio worth over US$108.5 million for supporting operations of protected areas and includes both sinking and endowment funds. PROFONANPE has had the capacity to generate additional resources, and to have a multiplier effect with new resources that otherwise would not have been directed to biodiversity conservation.

29. The Fund began operations in 1993 with financing from GTZ/Germany. In 1995, PROFONANPE received seed funding of US$5.2 million from GEF/World Bank, as an endowment to cover the costs of the institution and to finance protected area activities. Since 1996, PROFONANPE has concluded six debt swaps with Germany, Finland and the United States for a total of $34.6 million. PROFONANPE has also been the recipient of the GEF/World Bank grant for the Participatory Management of Protected Areas project (GPAN) of US$14.8 million, plus US$4.4 million in counterpart funding from the Government of the Netherlands for participatory management in five protected areas, covering their recurrent operating costs and financing natural resources management subprojects for communities in buffer zones. Additionally, the German government approved a request from PROFONANPE to expand the Natural Protected Areas Program in 2004 with US$9 million.

30. **The National Environmental Fund (FONAM)** created by law under a private regime is the official CDM and Carbon Market Promotion Office. It promotes alternative energy initiatives, much of which, but not all, related to the Carbon Market, including forest CDM. Its goal is to promote and support the financing of public and private investment in alternative energy projects.FONAM was created in 1997 through Law No.26793, with the purpose to promote public and private investment in programs, projects and activities destined to improve environmental quality. FONAM remained for years without any resources until 2000 when, through a World Bank-GEF operation on sustainable transport, received the necessary budget to begin operating. Since, then, FONAM has defined its areas of action which cover: (i) energy; (ii) transport; (iii) forestry, water and waste; and (iv) mining environmental legacies. The first two areas are directly linked to climate change. As for the latter, the recently approved Law for Environmental Legacies of Mining Activities (No. 28271), assigns the mandate for fundraising and financing for the remediation and rehabilitation of legacies to FONAM.

31. **The Fund for the Americas (FONDAM).** Its main objectives are to: a) promote the conservation of biological diversity through participatory initiatives, b) promote the sustainable management of renewable natural resources and the environment, c) support local communities in the management and sustainable development of economic activities compatible with conservation of the environment, d) promote improved nutrition of children in poor areas, e) promote the improvement of sanitation conditions and access to safe water consumption of children and families in poor areas, f) attract financial and economic resources, g) develop and improve tools for management and development of human talents and, h) establish and strengthen synergies, partnerships and interagency networks.

V. PROJECT IMPLEMENTATION

A. Approach

32. PES is the pivot element of the Project and constitutes one of the innovative approaches that have become popular including in the context of GEF funded initiatives, as a new paradigm to procure "conditional conservation". PES constitutes a new alternative to attract new funding sources for conservation of ecosystems and biodiversity.

33. In the context of this Project, the GEF willl invest in pilot watershed PES schemes in Peru with already some degree of advance towards their design. These cases are relevant for the MINAM since they are meant to provide guidelines for designing a scaling up strategy especially in aspects such as: contract negotiation, investment targeting, definition of "PES best practices" and legal and institutional required frameworks. The existing advances in the selected Project sites include characterization of the environmental services, identification of their beneficiaries and suppliers, determination of current land uses and management practices, ecosystems status, economic importance of the ES, willingness to pay, land use alternatives for delivering ES, among other aspects[30]. These advances provide the basis for an evidence-based PES implementation, where payments willl be able to be differentiated and targeted spatially according to the opportunity costs of distinct watershed areas and their relative importance in the provision of the ES and the conservation of biological diversity.

34. The main focus of the Project willl be to support the design of the PES schemes and their respective operational procedures in a way that willl not become one more PES project constrained by a small finite donor budget, short planning horizons, and temporal institutional and legal arrangements for management of funds. In this respect, the focus is to invest GEF funds in a long-term PES strategy (financial and institutional) instead of using these funds only for finite payments. Also, GEF is expected not to be the only ES buyer since private sector participation in the PES scheme willl be also enhanced.

35. The proposed PES scheme for this Project consists in a layered user-financed PES scheme[31]. This design permits to use GEF funding as a sustainable financial platform by the creation of Trust funds. The revenues from the Trust funds willl be oriented to cover biodiversity conservation and recurrent costs of M&E activities. Permanent contributions from others ES "buyers" willl be used to cover the cost of direct interventions for promoting adequate land use, management practices and conservation actions in areas on which the delivery of hydrological ES depend on. This design is feasible in the selected Project sites since there is an important overlap of areas that are relevant for both, water provision and biodiversity conservation. Another part of the GEF grant willl be used to invest in early implementation of conservation measures in order to test their effectiveness and demonstrate this to other potential ES buyers, as a persuasive strategy.

[30] These advances were obtained in the context of the following development and research initiatives: In Jequetepeque watershed: Project title: "Equitable compensation for hydrological environmental services" implemented by CARE and the World Wildlife Fund (WWF), funded by the Danish International Development Agency (DANIDA) and the Netherlands Government. In the Cañete watershed: Project title: "Participatory design of a Payment for Hydrological Environmental Services Scheme" implemented by MINAM, CIAT and CARE with the financial support of WWF and the CGIAR Challenge Program on Water and Food.

[31] Layered PES schemes: Multiple buyers of separate ES jointly finance start-up costs and/or recurrent costs of ES provision from the same plot (GEF, 2010. Payments for Environmental Services and the Global Environmental Facility. Scientific and Technical Advisory Panel document.)

36. Thus, the Project willl combine three entry points recognized by GEF for PES-related projects [32]:

- "to set up and pilot direct payments" combining two modalities: 1) testing payment and conservation measures effectiveness to persuade pre-identified long-term ES buyers; and 2) creating trust funds for long-term payments to secure biodiversity and ecosystem services.
- "Co-finance multiple services strategies" by supporting a PES scheme with payments to conserve ecosystems critical for Andean biodiversity conservation and water-related ecosystem services. In these schemes sources of financing willl target the same ecosystems for either biodiversity conservation or provision of hydrological ecosystem services, or both.
- "Financing PES start-up costs", by financing some of the costs for setting-up PES. Mainly the Grant willl fund the consolidation of stakeholder platforms by establishing watershed *ad hoc* committees as the main instance to prioritize collectively investments, leverage private contributions to PES schemes and safeguard that PES actions are in line with conservation priorities

37. Project design includes a Monitoring and Evaluation System (see Annex 6) in order to study the impacts of this approach. According to the GEF STAP, few existing PES consider undertaking impact studies. Thus, the PES schemes to be implemented by the Project willl have an inherent intention and commitment to evaluate environmental and socioeconomic impacts. The Project willl also contribute to Learning Objective 3 of the Biodiversity Focal Area ("Enhancing Impacts through Improved Understanding of the Causal Relationships between Popular Mainstreaming Approaches and Conservation Outcomes).

The main challenges that the Project willl face and address are contract negotiation, legal issues for multi-stakeholders PES involvement watershed-based institutional settings for managing PES, and financial operation of PES with scaling-up and scaling-out potential. Achievements on these aspects are highly relevant for the MINAM who is concerned about the design of national guidelines for setting up PES schemes. Contributions to the Ecosystem Services legislation are especially important considering that there is a proposal for passage of a Law for ES rewards that once enacted, willl require drafting and approving related rules and regulations. In this regard lessons to be learned from the implementation of the two PES schemes considered by the Project and the activities to facilitate discussion and consultation of ES rules and regulations willl be extremely useful for the MINAM.

B. Organizational framework

38. The Project willl be implemented by a small **Project Implementation Unit (PIU**) to be located with the organizational structure of the Assessing, Valuing and Financing Natural Resources General Directorate of the Ministry of the Environment as the **Lead Project Agency (LPA).** Notwithstanding, the LPA willl, by virtue of an Grant Agreement between IFAD and the MINAM**,** will entrust PROFONANPE as the financial administration of the Grant as described further below.

39. The **Assessing, Valuing and Funding of Natural Heritage Directorate** is responsible *inter alia* for: a) formulating and promoting policies, plans, strategies, tools, standards and national directives for the evaluation and value-assessment of natural resources, biodiversity, environmental services and their degradation, b) promoting the design of economic instruments for the strategic development of natural resources and

[32] GEF, 2010. Payments for Environmental Services and the Global Environmental Facility. Scientific and Technical Advisory Panel document.

preventing their degradation, c) developing, disseminating and updating an inventory and integrated national assessments of natural resources and environmental services and, d) formulating and proposing a national policy related to environmental services and compensation.

40. The PIU willl be staffed by a **Project Coordinator**, a **Monitoring and Evaluation specialist** and an **M&E assistant** to be based in Lima and two **Basin Coordinators** one based in the city of Yauyos in the department of Lima and the second one in the city of San Miguel in Cajamarca department in Agro Rural premises.

41. The **Project Coordinator** willl report to the Director General of the Assessing, Valuing and Funding of Natural Heritage of the Vice Ministry of Strategic Development of the Ministry of Environment as his/her immediate supervisor and to the IFAD Country Programme Manager (CPM) and willl be responsible for among other tasks: (a) ensuring timely and effective Project implementation, (b) providing oversight and guidance to Basin Coordinators for the adequate implementation of the Project in both watersheds, in accordance with project objectives, (c) furthering the creation and implementation of Ad Hoc Basin Committees, (d) oversee the implementation, monitoring and evaluation of subprojects to be implemented by communities and associations in each of the watershed, (e) coordinating with PROFONANPE, the transfer of funds for the implementation of Project activities and implementation of subprojects, (f) overseeing the recruitment and activities of Project staff, consultants, and consulting service providers, (g) issuing technical reports, financial documentation and accounts, and procurement requests; (h) ensure implementation of the participatory, iterative, multi-faceted approaches of the Project and (i) providing support to IFAD supervision missions and the preparation of auditing reports and, (j) overseeing the creation and operation of the Trust funds.

42. The **Monitoring and Evaluation Officer** willl report to the Project Coordinator and be responsible for: (a) collaborating closely with the Project Coordinator and Basin Coordinators in the implementation of sub projects and PROFONANPE in development and implementation of the Trust Funds, (b) providing regular and timely submission of reports based on M&E plans and activities, (c) participating in monitoring visits and consultation/s on the review of progress and lessons learned on a quarterly basis, (d) collating, consolidating and issuing reports on M&E activities and processes as required for reporting to the Project Coordinator, MINAM and IFAD and, (e) undertaking research, data collection and maintenance of a database on relevant tools and references for harmonization of M&E instruments and technologies.

43. **Basin Coordinators** willl report to the Project Coordinator and be responsible for: (a) ensuring effective implementation of Project components and activities at the watershed level; (b) coordinating closely with local authorities while promoting dialogue for the sustainable management of water resources, (d) providing oversight and guidance to rural communities for the adequate implementation of the Project in the watershed and more specifically with the identification, formulation, implementation and self-monitoring of sub projects, (e) participating actively in the creation and implementation of Ad Hoc Basin Committees and acting as their secretariat and ensuring dissemination of the decisions taken and follow-up and; (f) submitting periodic and annual reports on all activities implemented in the watershed.

44. **Project guidance.** Overall Project guidance willl be provided by a Project Advisory Committee (PAC) at the central level and by Ad hoc Basin Committees at the watershed level.

45. The **Advisory Committee** willl ensure compliance with the strategic directions set out in the Grant Agreement and GEF and IFAD strategies and policies. The PAC willl be composed by central authorities involved in implementing the Project including: (a) a representative of the MINAM, who shall preside, (b) a representative from SERNANP (c) a representative from PROFONANPE, d) a representative of the National Water Authority, (e) a representative of MINAG (Agro Rural), (f) a representative of the respective corresponding regional governments and (g) a representative of the private sector selected among agricultural, mining and hydro electrical enterprises contributing to the implementation of PES schemes and probably an official of SUNASS and the water supply company -in case they contribute to the PES scheme. The PAC willl be mandated to: (i) approve the annual funding of sub-projects, based on AWP&B, (ii) ensure transparency and competitive participatory processes to access financial resources of the Project, (iii) promote the identification and processing of new and increased funding for initiatives or sub projects in the area of the selected watersheds, (iv) promote cooperation between the Project and other institutional settings, depending on the nature of sub projects promoted and financed by the Project, (v) establish and approve guidelines for the implementation of Project activities, (vi) consider candidates for the position of Project Coordinator, (vii) monitor the implementation of the Project and consider annual auditing reports. The PAC willl hold a regular meeting twice a year and extraordinary meetings if circumstances do merit.

46. ***Ad Hoc* Watershed Committees**. These Committee willl be responsible for providing support to the monitoring of sub-projects to be implemented and further participatory approaches at the watershed level They willl be composed of: (a) a representative of MINAM who willl preside (ii) the Basin Coordinator as a non-voting representative , (iii) a representative of MINAG (Agro Rural), (iv) a representative of civil society selected among locally recognized such as professional associations and NGOs, (v) a representative of the Local Water Authority (ALA), (vi) a representative of Regional Governments, (vii) a representative of Local Governments in the Basin, (viii) an official from the private sector represented by agribusiness, mining and hydroelectric enterprises and (viii) a representative of SERNANP.

47. Basin Committees willl: (a) endorse, advise and monitor each of the initiatives proposed in accordance with Project purpose and objectives, (b) organize and implement competitions for the selection of local sub projects (c) facilitate the development of the sub projects selected and support them, (d) analyze possible problems that may arise in the development of sub-projects and propose possible solutions, (e) propose organizational measures and operational parameters for local bodies to ensure the implementation of sub projects and (f) promote the dissemination of information on interventions in order to publicize the results of the interventions. These committees are expected to continue endorsing, advising and monitoring PES investments beyond project completion.

VI. CAPACITY BUILDING MEASURES FOR PROJECT IMPLEMENTATION

48. Bearing in mind the innovative character of the Project which, aims at furthering the introduction of PES/CES schemes, significant capacity building measures willl be required. For this purpose the PIU and more specifically the Project's Basin Coordinators willl need to fully cooperate with field staff of the IFAD-funded DELOSI project, more specifically during the induction process for that project in both selected watersheds which includes activities aimed at: (i) understanding the strategy of IFAD-funded operations in Peru and elements of project designs, (ii) identifying and sharing lessons and learning that support the design and implementation of sub projects envisaged, (iii) analyzing and deepening understanding of

the technical, administrative and financial elements of the implementation cycle of project activities, tasks involved, responsible actors and use of tools required.

49. Among the capacity building initiatives considered in the DELOSI project there are several activities that willl contribute towards furthering understanding of the rationale of the Project and its operational elements including activities which have been pioneered by IFAD in Peru such as Learning Routes and the use of *in situ* training, through internships or field exercises to strengthen the capacities and skills of project participants in adopting best practices for improving management of natural resources. Special consideration willl be given to the inclusion of rural women and rural community leaders. These activities willl supplement efforts to inform target populations through watershed workshops to be organized and carried out at the beginning of the Project. Capacity building measures willl cover the preparation of training materials, including a toolkit to be distributed to community leaders and associations of potential beneficiaries. This toolkit willl contain useful information, pedagogically organized and easy to understand to ensure and facilitate the use of the tools needed to participate and compete for rewards for the improvement of natural resources and biodiversity conservation.

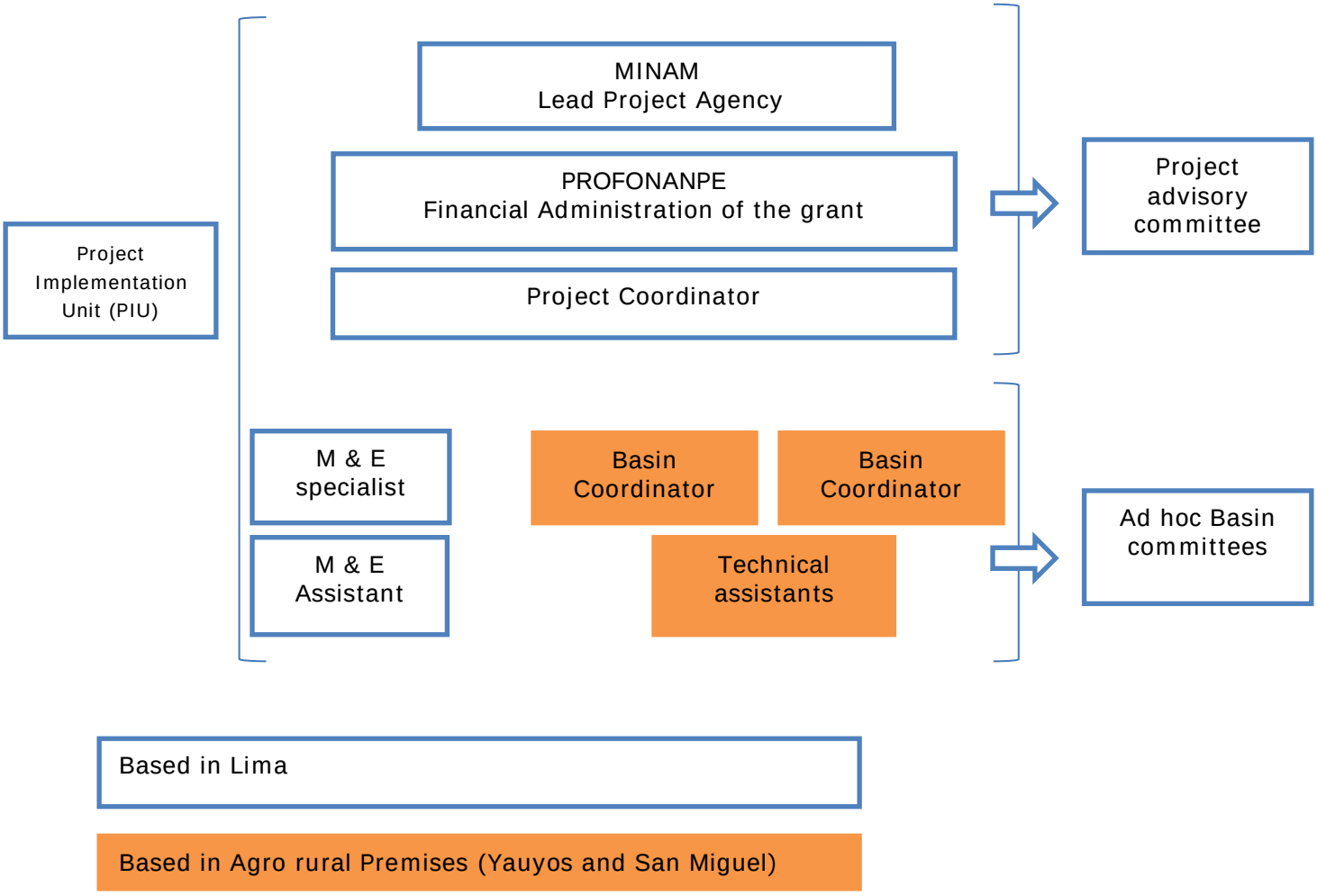
VII. SCALING UP POSSIBILITIES AND CONSTRAINTS

50. The Project has the potential for scaling up providing the scaling up process or initiative meets agree upon spaces for scaling out as adopted by IFAD[33] including financial, natural resource/ environmental, policy, institutional and organizational capacity, political, cultural and learning spaces.

51. The financial space willl be critical as any PES initiative is going to require mobilization of private sector resources. The environmental space willl be assured because of the inherent nature of PES/CES initiatives. The policy and legal space is still a work in progress and willl eventually depend on the rules and regulations for a Payment for Environmental Services Law being discussed in congress. Although some advances have been made in terms of an organizational capacity space much more needs to be done and clearly defined. The political space needs to be reinforced and may become apparent during discussions on the proposed PES law. As with other spaces possible cultural obstacles or support mechanisms need to be identified and the intervention suitably adapted to permit scaling up in a culturally diverse environment. Partners need to be mobilized to join in the effort of scaling up and knowledge about what works and doesn't work in scaling up needs to be harnessed through monitoring and evaluation, knowledge sharing and training.

[33] Adapted from Hartmann and Linn (2008)

5.1 Appendix 1: Organizational Chart



Project advisory committee

Functions:

- Facilitate coordination, communication, interaction and learning among Ministries, regional Gov.
- Provide overall management through PIU
- Selection of consultants and preparation of Annual Working Plan & Budget

Presided by: Director General The Assessing, Valuing and Funding of Natural Heritage Directorate (MINAM)
Members: Representative ANA, MINAG (Agro Rural), PROFONANPE, SERNANP

Ad hoc Basin committees

Functions:

- Watershed ad hoc committees-to ensure participation at local and regional levels

Members: PES Fund contributors, representative local water agency, Chief of Nor-Yauyos Cochas Reserve, PES beneficiaries representatives, MINAM representative and representative of Local agency of AgroRural.

5.2Appendix 2:Terms of Reference of Key Project Personnel

A. Project Coordinator

Qualifications and Experience:

- University degree in Environment, Forestry, Agriculture or related discipline relevant to the natural resources with sound knowledge of PES schemes in Peru and natural resource management.
- A minimum of ten years in management level in a relevant public institution, private sector or an international organization, with proven skills in the management and co-ordination of projects/programs.
- Specialization in environmental services
- Creative, energetic and pragmatic approach to problem solving and an appreciation of the respective roles of the public and private sectors in rural areas and natural resource management.
- Knowledge of the international area related to PES projects.
- Ability to work in a team environment.
- Computer literacy wil be a requisite and good command of spoken and written English will be an advantage

Job Description:

The Project Coordinator will report to the Director General of the Assessing, Valuing and Funding of Natural Heritage of the Vice Ministry of Strategic Development of the Ministry of Environment as his/her immediate supervisor and to the IFAD Country Programme Manager (CPM) and will be responsible for:

- Leading the necessary activities to ensure proper implementation of project components, according to procedures and obligations specified in the IFAD Grant Agreement and implementation arrangements detailed in the Project Operations Manual;
- Provide oversight and guidance to Basin Coordinators (BCs) for the adequate implementation of the Project in both watersheds, in accordance with project objectives.
- Participate in the creation and implementation of *Ad Hoc* Basin Committees (AHBCs).
- Commission and coordinate the procedures and operational manuals for the PES schemes, with the Basin Coordinators (BCs) and the Project Advisory Committee
- Act as secretary for the Project Advisory Committee and arrange for dissemination of the decisions taken and follow-up;
- Oversee the implementation, monitoring and evaluation of subprojects according to the activities of component 1.
- In coordination with Basin Coordinators, preside over meetings of the AHBCs.
- Review periodic and annual reports submitted by the organizations benefiting from the donation sub contracts.
- Coordinate with PROFONANPE, the transfer of funds for the implementation of Project activities and implementation of subprojects
- Oversee the recruitment and activities of Project staff, consultants, and consulting service providers, Basin Project Coordinators, in accordance with the conditions of the IFAD Grant and procedures for procurement of goods and services;
- In addition to the internal documentation (including technical reports, financial documentation and accounts, and procurement requests) prepared at the basin level,

co-ordinate the submission of other internal documentation (payments, background documents, financial reports, replenishment requests) as appropriate and in accordance with the arrangements specified in the Operations Manual;

- Ensure implementation of the participatory, iterative, multi-faceted approaches of the Project that are crucial to maintaining its focus on poverty reduction and natural resource conservation and rehabilitation; and
- Receive and arrange for the reproduction and circulation of reports, studies and other Project documentation from consultants as appropriate.
- Provide support to IFAD supervision missions and the preparation of auditing reports

Duty station. The Project Coordinator will be based in the city of Lima and will be selected in an open merit competition. His appointment will be subject to consideration by the Project Advisory Committee and a no objection by IFAD

Length of contract. Five years subject to annual performance evaluations

B. Monitoring and evaluation officer

Qualifications and Experience:

- University degree in social sciences with a focus on Monitoring and Evaluation, data collection/surveys and analysis of data, community based monitoring or monitoring and Evaluation systems including hydrological and biodiversity monitoring activities.
- Experience in project management and knowledge of IFAD procedures desired
- Knowledge of Human rights based programming and results based management willl be an advantage.
- Experience and/or ability to work with government officials, national statistical offices of statistics and knowledge of Living Standards Measurement Surveys (LSMS) or related surveys.

Job Description:

The Monitoring and Evaluation Officer will report to the Project Coordinator, in close coordination with the Director General of the Assessing, Valuing and Funding of Natural Heritage of the Vice Ministry of Strategic Development of the Ministry of Environment and PROFONANPE, and other Project staff especially with Basin Coordinators in the field

- Coordinate closely with the Project Coordinator and Basin Coordinators in the implementation of sub projects and PROFONANPE in development and implementation of the Trust Funds.
- Design a M&E strategy for the Project's impacts on social and environmental indicators, and liaise with project partners collecting the required data to ensure its suitability
- Provide regular and timely submission of reports based on M&E plans, activities, and status of implementation.
- Participate in monitoring visits and consultation/s on the review of progress on a quarterly, periodic basis as well as provide guidance to ensure M&E plans are consistent with IFAD and PROFONANPE guidelines and policies.
- Collate, consolidate and prepare reports on M&E activities and processes as required for reporting to the Project Coordinator, MINAM and IFAD.
- Undertake research, data collection and maintenance of a database on relevant tools and references for harmonization of M&E instruments and technologies.

Duty Station. The M&E officer will be based in Lima within the structure of the Assessing, Valuing and Funding of Natural Heritage Directorate of the Vice Ministry of Strategic Development of the Ministry of Environment

Length of contract. Five years and subject to annual performance evaluations.

C. Basin Coordinators

Qualifications and Experience:

- Degree in Environment, Forestry, Agriculture or related discipline relevant to natural resources management with sound knowledge of high Andean ecosystems.
- A minimum of three years in management level in a relevant public institution or private sector including Non-Governmental Organizations (NGO).
- Experience working with rural communities
- Knowledge of PES schemes.
- Working experience in river basin areas
- Ability to work in a team environment.
- Computer literacy willl be requisite

Job Description:

The Basin Coordinator will report to the Project Coordinator, in close coordination with the the Assessing, Valuing and Funding of Natural Heritage Directorate of the Vice Ministry of Strategic Development of the Ministry of Environment

- Coordinate closely with the Project Advisory Committee for the design and implementation of the Project.
- Commission and coordinate the procedures and operational manuals for the PES schemes, with inputs from the *Ad Hoc* Basin Committee members
- Lead the necessary activities to ensure proper design and implementation of Project components and activities;
- Coordinate closely with local authorities and promote dialogue for the sustainable management of water resources.
- Provide oversight and guidance to rural communities for the adequate implementation of the Project in the watershed, in accordance with Project objectives and more specifically with identifications, formulation, implementation and self-monitoring of sub projects.
- Participate actively in the creation and implementation of Ad Hoc Basin Committees (AHBCs).
- Act as secretary for the *Ad hoc* Basin Committees (AHBCs) and arrange for dissemination of the decisions taken and follow-up;
- Oversee the implementation, monitoring and evaluation of subprojects according to the activities of component 1.
- Coordinate with the Project Coordinator, the provision of guidance for the proper functioning of *AdhHoc* Basin Committee (AHBCs) especially in terms of approval of subprojects.
- Submit periodic and annual reports on all activities implemented in the watershed.
- Provide guidance to the members of the AHBC;
- Ensure implementation of the participatory, iterative, multi-faceted approaches of the Project that are crucial to maintaining its focus on poverty reduction and natural resource conservation and rehabilitation; and
- Receive and arrange for the reproduction and circulation of reports, studies and other Project documentation from consultants as appropriate.

Duty station. The Basin Coordinators will be based in the city of Yauyos in the department of Lima in Agro Rural premises and in the city of San Miguel in the department of Cajamarca equally in Agro Rural premises

Length of contract . Three years and be contracted by open merit competition and subject to approval by the Project Advisory Committee and a no objection by IFAD.

D. Monitoring and Evaluation Assistant

Qualifications and Experience:

- Degree in social sciences with a focus on data collection/surveys and analysis of data,
- Experience working in international donor funded projects (three years)
- Knowledge of monitoring and evaluation system is an advantage.
- Ability to work with government officials, national statistical offices , NGOs, and local governments
- Computer literacy willI be a requisite

Job Description:

- The Monitoring and Evaluation Assistant will report to the Monitoring and Evaluation Officer end the Project Coordinator, in close coordination with the Director of the Assessing, Valuing and Funding of Natural Heritage Directorate of the Vice Ministry of Strategic Development of the Ministry of Environment, PROFONANPE, and Project staff.
- Coordinate closely with Basin Coordinators the implementation of Project activities and PROFONANPE on Trust Fund operations supporting the M&E Officer.
- Support the elaboration and submission of reports based on M&E plans, activities, and status of implementation.
- Participate in monitoring visits and consultation/s on the review of progress on a quarterly, periodic basis as well as to provide guidance to ensure M&E plans are consistent with IFAD and PROFONANPE guidelines and policies.
- Support gathering, processing of relevant information, consolidate and prepare reports on the M&E activities and processes as required for reporting to the Project Coordinator and MINAM.
- Support undertaking research, data collection and maintenance of a database on relevant tools and references on the harmonization of M&E instruments and technologies.

Duty station. The M&E Assistant will be based in Lima within the structure of the Assessing, Valuing and Funding of Natural Heritage Directorate of the Vice Ministry of Strategic Development of the Ministry of Environment

Length of contract. Three years and be contracted by open merit competition

E. Technical assistants

Qualifications and experience

- Three years of experience in working in rural areas

- Knowledge of computerized processes, data processing and related software
- University degree in one of the following fields hydrology, forestry, geography, environmental Sciences,
- Knowledge of GIS and GPS techniques willI be an asset,
- Proficiency in using information technology (hardware, software, intra and internet) required.

Job description

- Responsible for meteorological, hydrological, infiltration, erosion and sedimentation data gathering and processing from headwater stations;
- Preparation and implementation of informative presentations for the general public and display weekly digital and written reports of his/her work, to the local, regional and national authorities related to the Project

Duty station. Technical assistants willI be based in the city of Yauyos in the department of Lima in Agro Rural premises and in the city of San Miguel in the department of Cajamarca equally in Agro Rural premises.

Length of contract. Part time contracts during the duration of the project

ANNEX 6. PLANNING, MONITORING AND EVALUATION, AND LEARNING AND KNOWLEDGE MANAGEMENT

I. INTRODUCTION

1. This document contains information required under the guidelines for project design and includes details on Planning, Monitoring and Evaluation plans and budgets, knowledge management strategy and learning processes. Information on the planning process is provided in the Main Report.

2. Chapter II describes the operational details for implementing the Project's Monitoring and Evaluation system including system design, participatory approach and the required budget estimates. Chapter III refers to the learning and knowledge management strategy aimed at organizing and systematizing information to critically reflect on Project implementation and share Project outputs, outcomes and lessons learnt. Appendix 1 presents first and second level indicators of the IFAD Results and Impact Management System (RIMS) and Appendix 2 the GEF Tracking Tool.

II. PLANING AND REPORTING

3. **Planning.** Planning of Project activities will be undertaken by the PIU in coordination with the LPA and PROFONANPE using standard procedures including the preparation of **Annual Work Plans and Budgets (AWPB)** starting with a first AWPB to be based on the Detailed Design Document and its Annexes. Subsequent plans should include a brief description of the implementation of the Project during the period and the possible challenges and opportunities during the year, including a strategic analysis of the approach and rationale of the Project. The report must also include: (i) the results obtained by component and the proposed plan for the next year including execution times and specific goals, (ii) the estimated budget by category of expenditure and sources of financing, (iii) foreseen procurement and, (iv) the M&E plan for the year.

4. During implementation the PIU willl submit semi-annual **Progress Reports** which shall contain a brief summary of Project objectives and description of planned activities and performance issues. The progress reports should present the main achievements, issues and constraints of the previous period, including the main recommendations of supervision missions and the state of related follow-ups, as well as an appreciation of the impact of the project on the poverty and gender situation. These reports should contain information on financial and physical achievements in comparison with targets set in AWPBs as well as possible impact and outreach. The reports should highlight the implementation strategy and describe the main physical results obtained so far, indicate positive results as well as implementation problems and the reasons for them, as well as an analysis of the level of expenditures by components and performance of the portfolio of the endowment funds. Specific reference should be made to recommendations by supervision missions and to changes in the poverty and gender situation as reflected in national government studies.

III. MONITORING AND EVALUATION

5. The Project willl have an M&E system to be implemented according to IFAD and GEF procedures and guidelines[34]. The M&S system willl be designed based on the activities,

[34] IFAD's Project M&E Guide: http://www.ifad.org/evaluation/guide/index.htm

indicators and means of verification specified in the Logical Framework. The M&E activities willl follow the principles of adaptive management (to update information needs and indicators overtime) and participatory evaluation.

6. **Responsibilities and Linkages.** M&E system operations willl be under the direct responsibility of the Project Coordinator and a M&E Project Officer to be contracted on a half- time basis with Grant funds for the duration of the Project. The M&E Officer willl be responsible for tracking project progress and achievement of results for which he/she willl ensure that the necessary information is timely gathered and processed in order to verify Project progress and compliance with objectives and planned activities. The M&E Officer willl be supported by a Technical Assistant during three years of Project implementation. Detailed Terms of Reference (TORS) are provided in Appendix 3.

7. The M&E Officer willl contribute to the six-monthly, annual, mid-term and final reports of the Project. He/she willl continuously provide feedback to the Project Coordinator in order to give timely advice on required adjustments if needed. This willl be undertaken in order to facilitate an adaptive management of the Project. Any suggested adjustments to Annual Work Plans and Budgets (AWP&B) willl be reflected in Progress Reports for consideration by the MINAM and IFAD for their consent and endorsement.

8. Field staff of Agro Rural and the SERNANP, who willl be involved in the identification with community participation of conservation and restoration of High Andean ecosystems, willl ensure that information on implementation is provided in a timely manner.

9. The M&E Officer willl collaborate with the M&E officer of Agro Rural to be appointed in the context of the IFAD funded DELOSI project by providing information required for the submission of annual reports related to the Results and Impact Measurement System (RIMS) more specifically as it relates to first and second level indicators in terms of: a) natural resources, b) agricultural technologies and production and, c) policy and community programming. First and second level indicators for these elements of the RIMS methodology are provided in Appendix 1.

10. **Financial monitoring and reporting** at the Project level willl be the responsibility of the Financial Comptroller of PROFONAMPE. Financial reports should be endorsed by MINAM before being submitted to IFAD for Grant disbursements. Trust Fund, financial reports willl be produced by PROFONAMPE and reviewed by the M&E team and the Project Coordinator before submission to IFAD/GEF by the MINAM. It is expected that after Project completion, PROFONAMPE willl continue reporting on the financial status of the PES schemes but these reports willl be reviewed by the designated instance to manage and control the scheme (e.g. the watershed committee). These details should be agreed upon during the design of the PES scheme and its M&E system (see monitoring levels in the M&E design section below).

11. **Participatory evaluation**. The M&E team willl compile information on Project progress using participatory methods and field verifications. Appropriate participatory methods involving men and women willl be selected in order to gather information on aspects that may be preventing the Project from achieving planned outputs, any emerging risks and opportunities for success, unintended and intended outcomes, lessons learned, and immediate required actions to ensure the satisfactory progress of the Project. Methods to be selected willl consider IFAD guidelines[35] for this purpose. The M&E team willl ensure

[35] http://www.ifad.org/evaluation/guide/annexd/index.htm

the involvement in these activities of all stakeholders directly impacted by the Project and any other stakeholders whose involvement and opinions are relevant for the successful implementation of the Project.

12. **System design**. The M&E team willl be responsible for the design of the M&E system at two levels/purposes: i) at the Project level to be operational during the Project's duration period and, ii) at the specific PES schemes level to be operational during and beyond Project duration. The first level willl be designed based on the Logical Framework to be further detailed in the Project's AWP&B.

13. The Project's AWP&B willl be formulated by the Project Coordinator in collaboration with the Project's M&E team and with contributions by MINAM/SERNAMP and Agro Rural staffs. The plans willl be consulted and shared with local actors to ensure their engagement and support while guaranteeing the pertinence of proposed specific activities and timeframes to local conditions and contexts. For this, the Project willl hold one inception workshop in each watershed and subsequent annual planning workshops in each watershed.

14. At the Trust Fund level and implementation of the PES scheme in general, the M&E team jointly with MINAM willl design an M&E System for each of the PES schemes to be implemented in the Cañete and Jequetepeque River Basins. This system should permit to evaluate progress made, possibilities and constraints during the Project's lifetime and beyond it:

a. The financial performance of the PES fund -which includes GEF's funds deposited in an endowment fund and other contributions from ES beneficiaries or others.
b. The level and quality of the investment of the revenues of the endowment fund and ES beneficiaries' contributions. Indicators for evaluating the quality of investments willl consider the field experience of Component 1 when implementing conservation, restoration and sustainable land use practices in the watersheds.
c. The impacts of Component 1 and subsequent PES investments on the hydrological ecosystem services. For this, a hydrological monitoring system willl be designed and implemented for measuring the impact on land use/management practices in the watershed. In this regard, this network may require to be implemented during early stages of the Project and to be maintained beyond it as part of the PES scheme operation. Technical assistants willl be hired by the Project to assist in this process.
d. The status of formal agreements between PES contributors (ES beneficiaries apart from GEF) and the PES fund.
e. Advances in the creation of the *ad hoc* watershed committees including the development of appropriate tools to track their transparent operation, rules for stakeholder's participation and clear definitions of their role in the operation of the PES schemes.
f. Creation of formal procedures for decision-making, participation and financial management of the PES schemes.

15. The purpose of designing a PES M&E System as part of the PES operational requirements is to contribute to the sustainable functioning and monitoring of the PES scheme beyond the Project's life. This may provide insights on the actual environmental impacts of these economic mechanisms and their financial sustainability.

16. **Tracking Tools.**The Project's M&E Team willl ensure that the Biodiversity Tracking Tool provided in Appendix 2 of this document serves to measure progress in achieving the impacts and outcomes established at the Project level under the biodiversity focal area. Data willl be aggregated for analysis of directional trends and patterns at a GEF 5 portfolio-wide level to inform the development of future GEF strategies and to report to the GEF Council on portfolio-level performance in the biodiversity focal area. The Tracking Tool provided herein willl be further applied at Project mid-term, and at Project completion.

17. **Aichi Targets**[36] The M&E Team willl also ensure that progress in meeting the Aichi Targets is contained in Progress Reports as they relate to: a) people awareness of the values of biodiversity and the steps they can take to conserve and use it sustainably, b) , integration of biodiversity values into national and local development and poverty reduction strategies and planning processes that are being incorporated into national accounting, as appropriate, and reporting systems, c) elimination of incentives, including subsidies, harmful to biodiversity are being phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied; c) steps taken by Government, business and stakeholders at all levels to achieve or implement plans for sustainable production and consumption, keeping the impacts of use of natural resources well within safe ecological limits; d) reduced rate of loss of all natural habitats, including forests as well as significant reductions of degradation and fragmentation, e) sustainable management of areas under agriculture, aquaculture and forestry thus ensuring conservation of biodiversity; e) levels of pollution, including from excess nutrients that are not detrimental to ecosystem function and biodiversity; f) maintenance of genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species and development and implementation of strategies for minimizing genetic erosion and safeguarding their genetic diversity; g) contributions of ecosystems that provide essential services, including services related to water that contribute to health, livelihoods and well-being which, are being restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable ; h) enhanced ecosystem resilience and the contribution of biodiversity to carbon stocks has through conservation and restoration of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification; i) improved knowledge, science base and technologies relating to biodiversity, values, functioning, status and trends, and the consequences of its loss, are widely shared and transferred, and applied; j) development and adoption by national authorities of policy instruments which, and being implemented and are effective, participatory and updates on the national biodiversity strategy and action plan.

IV. LEARNING AND KNOWLEDGE MANAGEMENT

18. Payment for Ecosystem Services is the main approach of this Project and is one of the innovative approaches supported by GEF to mainstreaming biodiversity. Since 2010, the Ministry of Environment of Peru has started to promote and support the design of evidence-based PES schemes with the support of other research and development partners. Up to date, there are already advances towards the identification of ES spatial providing units in the watersheds and the economic valuation of these services (see WP 3). However, there is now the need to finally implement the PES schemes based on these advances. This will need to include developments on the required institutional (rules and regulations) and

[36] http://www.cbd.int/sp/targets/

organizational setting, and the design and implementation of effective incentive-driven conservation actions.

19. Knowledge management activities of the Project willl contribute towards meeting the Learning Objectives of the GEF 5 Biodiversity Focal Area[37] which underline the fact that despite the increasing popularity of the PES approach, the evidence base for their effectiveness and the understanding of the conditions under which they have the greatest potential to be effective is largely undeveloped. In many PES schemes there is an inadequate definition of the services being paid for (Wunder, 2005) and the hydrological ecosystem services being traded in watershed PES systems are normally inadequately defined and quantified, yet widely accepted in a pragmatic way (Quintero and Estrada, 2006). The stated Biodiversity Learning Objectives highlight the fact that basically some questions still need to be answered in order to evaluate the effectiveness of these approaches for which knowledge management activities of the Project will assist in providing adequate responses to the following question: What are the impacts of PES schemes on biodiversity, human wellbeing (Sutherland, et al. 2009) and ecosystem services?; what is the relation between incremental area conserved or restored and marginal ecosystem service gains? (Dasgupta et al., 2000); how institutions and stakeholder's should be designed/adapted/organized in order to implement a transparent, reliable and sustainable PES schemes in watersheds? what rules and regulations need to be formulated under the proposed Law of Promotion of Ecosystem Services Retribution in Peru in order to facilitate a successful operation of the PES schemes? A unique contribution that this project will consider is that of assessing the gendered impacts of PES on men and men of different ages and backgrounds.

20. The same document points out that as a leader in supporting innovative incentive-based and information-based mainstreaming approaches, the GEF has observed an increase in the number of funded projects using certification, PES and ecosystem service valuation. Thus, the GEF has an opportunity to contribute the evidence base of these approaches *by* supporting work to answer these questions mentioned above. For this, a learning process will be undertaken by the Project supported through participatory evaluation of the Project, on impact studies of the PES schemes to be implemented in Peru in selected watersheds and following critical reflection on the main lessons learnt.

21. Subsequently, the Project willl deepen knowledge management, critical reflection[38], communication and information to be implemented in tandem so as to ensure their effectiveness as suggested by the IFAD strategy for Learning and Knowledge Management[39].

22. Learning and Knowledge Management activities willl take into account M&E system activities as part of the learning process. The M&E results willl provide the basis for a reflection process on lessons learnt and critical analysis. In this regard, the Knowledge Management and Learning sub-component willl take M&E results one step further towards reaching an understanding and critical analysis on the following topics:

a. The cost-effectiveness of investments on the conservation, restoration and sustainable management of High Andean ecosystems;

[37] GEF/R.5/Inf.14 September 18, 2009. Third Meeting for the Fifth Replenishment of the GEF Trust Fund. October 14-15, 2009, Paris, France

[38] As part of the M&E System as required by the IFAD M&E guidelines

[39] http://www.ifad.org/pub/policy/km/e.pdf

b. The socioeconomic impacts of project components on poverty alleviation and equity at the watershed level
c. The success and failure factors in PES implementation in Peru;
d. The actual potential of scaling out and up of water-related PES schemes in Peru
e. The effectiveness of linking local implementation of pilot PES schemes with the formulation of rules and regulations for the proposed Law on Ecosystem Services Retribution.
f. The usefulness and pertinence of linking PES schemes in Peru with watershed committees following a consultation and decision-making instance for the operation of PES schemes in Peru

23. A number of studies willl be prepared to provide insights on issues identified above. Substantive experts will prepare these studies to further encourage a critical reflection processes among involved actors. These analyses willl build on findings of a baseline study and IFAD guidelines for selecting methods that promote critical reflection for improved action[40]. Hydrological monitoring undertaken as part of the M&E system willl inform the effectiveness analysis of conservation measures on hydrological ecosystem services as an input for addressing cost effectiveness. These studies willl take into account the dialogues, agreements and recommendations arising from stakeholders' consultations and platforms such as the *ad hoc* watershed committees to enrich the reflection and analysis of the above mentioned topics. In this sense, the watershed committees should be also understood as learning groups and as such should be considered in the Project's overall communication strategy.

24. Results from the above mentioned studies willl be shared and discussed with relevant policy makers, private and public PES "promoters", and water and environmental authorities for refining lessons learnt and finding consensus on the overall merits of PES implementation in Peru. For this, a communication strategy for project results, PES implementation lessons learnt, linkages between watershed committees and PES schemes, application of the ES law; and the environmental and socioeconomic impact of conservation activities promoted by PES willl be designed and implemented. This willl help ensure that the lessons being learned in Project implementation are packaged and disseminated or used in ways that are appropriate to regional, national and international target audiences and deliver the highest impact for the resources invested.

25. In addition to communicate project achievements and lessons learnt, the communication strategy willl be prepared bearing in mind the need to share information on the value of High Andean ecosystems which are not widely acknowledged and to reinforce the need for establishing mechanism for PES schemes. This should be implemented at Project start-up and during Project implementation as a strategy to enable better achievement of goals through effective and efficient sharing of information and knowledge.

[40] http://www.ifad.org/evaluation/guide/8/index.htm; http://www.ifad.org/evaluation/guide/annexd/index.htm

Table 1. M&E and Knowledge Management activities and budget

	Responsibility	GEF (US$)	Timeframe
Project coordinator recruitment	MINAM / GEF / IFAD	208,000	At Project start-up
Staff recruitment (M&E team)		109,610	Within two months following project start up
Inception workshop (first annual activity plann ing for two watersheds)	MINAM/Project coordinator and M&E team	2,000	Within three months following Project start-up
Second annual planning workshop (in two watersheds)		3,000	Within the first month of PY 2
Third annual planning workshop (in two watersheds)		3,000	Within the first month of PY 3
End of Project workshop		3,000	At Project completion
Equipment (GPS, laptops, hydrological, climatic stations, motorcycles)	PROFONAMPE	68,544	Within six months following project start-up
Hydrological impact analysis	MINAM/Project coordinator and M&E team	12,300	By the first semester of PY 5
Assessment of implemented PES schemes		13,120	By the first semester of PY 5
Design of PES M&E system (procedures, tools and manuals)		16,400	During first semester of PY 1
Mid Term Report	MINAM / GEF / IFAD	9,840	Within the first month of PY 3
End-of Project Report		9,840	Within second quarter of project completion
TOTAL		458,654	

6.1 Appendix 1: Results and Impact Measurement System Indicators

First and Second Level Results	
Natural resources (land and water)	
1.1.1 People trained in infrastructure management (*) 1.1.2 Groups managing infrastructure formed and/or strengthened 1.1.3 People in groups managing infrastructure (*) 1.1.4 Groups managing infrastructure with women in leadership position, 1.1.5 Land under irrigation schemes constructed or rehabilitated 1.1.6 Livestock water points constructed or rehabilitated 1.1.7 Rainwater harvesting systems constructed or rehabilitated 1.1.8 Fish ponds constructed or rehabilitated 1.1.9 People trained in NRM (*) 1.1.10 Groups involved in NRM formed/strengthened 1.1.11 People in NRM groups (*) 1.1.12 NRM groups with women in leadership positions 1.1.13 Environmental management plan formulated 1.1.14 Land under improved management practices conservation methods 1.1.15 Other productive infrastructure constructed/ rehabilitated	2.1.1 Likelihood of sustainability of the groups managing infrastructure formed and/or strengthened • Number of groups operational/functional 2.1.2 Effectiveness of productive infrastructure • Percentage of delivered vs. required water • Number of farmers with secure access to water • Incremental hectares of crop grown 2.1.3 Likelihood of sustainability of productive infrastructure • Number of functioning infrastructure • Number of farmers with secure access to water resources • Number of fishers with secure access to resource base • Number of fishing pond operational after three years 2.1.4 Likelihood of sustainability of the NRM groups formed and/or strengthened • Number of groups operational/functional 2.1.5 Effectiveness of NRM and conservation programmes • Hectares of land improved through soil/water
Agricultural technologies and production 1.2.1 Staff of service providers trained (*) 1.2.2 People trained in crop production practices and technologies (*) 1.2.3 People trained in livestock production practices and technologies (*) 1.2.4 People trained in fish production practices and technologies (*) 1.2.5 People accessing facilitated advisory services (*) 1.2.6 Households receiving animals from distribution and/or restocking 1.2.7 Households receiving facilitated animals health services 1.2.8 Crop/livestock production groups formed/ strengthened 1.2.9 People in Crop/ livestock production groups (*) 1.2.10 Crop/ livestock production groups with women in leadership positions	2.2.1 Effectiveness: Improved performance of service providers •Operational self-sufficiency 2.2.2 Effectiveness: Improved agricultural and livestock production • Number of farmers reporting production/yield increase • Number of farmers adopting recommended technologies • Number of small farmers reporting increased herd size • Number of fishers adopting recommended technologies 2.2.3 Likelihood of sustainability of the agri/ livestock production groups formed and/or strengthened • Number of groups operational/functional
Rural financial services 1.3.1 Savings and credit groups formed and/or strengthened 1.3.2 People in savings and credit groups formed/ strengthened (*) 1.3.3 Savings and credit groups with women in leadership positions 1.3.4 Financial institutions participating in the project 1.3.6 Voluntary savers (*) 1.3.7 Value of voluntary savings 1.3.8 Active borrowers (individuals) (*) 1.3.9 Active borrowers (enterprises) 1.3.10 Value of gross loan portfolio (individuals) 1.3.11 Value of gross loan portfolio (enterprises) 1.3.12 People trained in financial service (*)	2.3.1 Likelihood of sustainability of the credit/saving groups formed/strengthened • Number of groups operational/functional 2.3.2 Effectiveness: Improved access of the poor to financial Services 2.3.3 Sustainability: Improved performance of the financial institutions • Portfolio at risk • Operational self-sufficiency • Active borrowers/personnel • Operating expenses ratio
Markets 1.4.1 People trained in post-production, processing and marketing (*) 1.4.2 Roads constructed/rehabilitated 1.4.3 Market facilities constructed and/or rehabilitated 1.4.4 Marketing groups formed and/or strengthened 1.4.5 People in marketing groups (*) 1.4.6 Marketing groups with women in leadership positions 1.4.7 Processing facilities constructed and/or rehabilitated 1.4.8 Storage facilities constructed and/or rehabilitated	2.4.2 Likelihood of sustainability of the roads constructed/rehabilitated •Number of functioning infrastructure 2.4.3 Likelihood of sustainability of market, storage, processing facilities • Number of functioning market, storage, processing facilities 2.4.1 Effectiveness: producers benefiting from improved markets access • Number of farmers using purchased inputs • Number of fishers using purchased inputs

	2.4.2 Likelihood of sustainability of the roads constructed/rehabilitated •Number of functioning infrastructure 2.4.3 Likelihood of sustainability of market, storage, processing facilities • Number of functioning market, storage, processing facilities 2.4.4 Likelihood of sustainability of the marketing groups formed and/or strengthened • Number of groups operational/functional
Enterprise development and employment 1.5.1 People trained in Income Generating Activities 1.5.2 People receiving vocational training (*) 1.5.3 People trained in business and entrepreneurship (*) 1.5.4 Enterprises accessing facilitated non-financial services 1.5.5 Enterprises accessing facilitated financial services	2.5.1 Effectiveness: creation of employment opportunities • Number of jobs generated by small and medium enterprises 2.5.2 Likelihood of sustainability of enterprises • Number of enterprises operating after three years
Policy and community programming	
1.6.1 Government officials/trained (*) 1.6.2 People trained in community management topics (*) 1.6.3 Community workers and volunteers trained (*) 1.6.4 Community groups formed/strengthened 1.6.5 People in community groups formed/strengthen. (*) 1.6.6 Community groups with women in leadership positions 1.6.7 Village/Community plans formulated 1.6.8 People accessing development funds (*) 1.6.9 Apex organisations formed/strengthened	2.6.1 Effectiveness: promotion of pro-poor policies and institutions • Number of pro-poor legislation and regulations enforced at the local or central level • Number of households with long-term tenure security of natural resources • Number of enabling policies promulgated 2.6.2 Effectiveness: community development • Number of community action plans included in local government plans • Number of community project implemented 2.6.3 Likelihood of sustainability of the community groups formed and/or strengthened • Number of groups operational/functional 2.6.4 Likelihood of sustainability of the apex organisation
Social Infrastructure 1.7.1 Schools constructed/rehabilitated 1.7.2 Health centres constructed/rehabilitated 1.7.3 Drinking water systems constructed/rehabilitated 1.7.4 Other infrastructure/facilities constructed and/or Rehabilitated 1.7.5 Groups managing social infrastructure formed and/or strengthened	2.7.1 Effectiveness of social infrastructure • Number of households served by wells 2.7.2 Likelihood of sustainability of social infrastructure • Number of functioning infrastructure, school, health centres • Number of community projects functional 2.7.3 Likelihood of sustainability of the groups managing social infrastructure formed and/or strengthened • Number of groups operational/functional
Total Outreach 1.8.1 Individuals receiving project services (*) 1.8.2 Households receiving project services 1.8.3 Groups receiving project services 1.8.4 Communities receiving project services	

(*) Indicators reported on a sex-disaggregated basis and, where relevant, differentiation between indigenous/nonindigenous peoples should be introduced

ANNEX 7. FINANCIAL MANAGEMENT AND DISBURSEMENT ARRANGEMENTS

1. **Flow of funds.** IFAD, as an Implementing Agency of the GEF willl sign a Grant Agreement with the MINAM. PROFONANPE willl act as Grant financial administrator. IFAD willl open a Gran Account from which it willl transfer an initial amount of US$ 2.8 million to a Designated Account opened by PROFONANPE in a commercial bank in Peru in United States Dollars satisfactory to IFAD. PROFONANPE willl through an Asset Manager establish the Trust Funds for an amount of US$ 2 million and open a designated Grant account with two sub accounts. One to manage funds to be transferred to local communities who willl implement conservation sub projects in accordance with the Sub project Implementation Manual to be considered by the Project's Advisory Committee for submission to IFAD for no objection and a second account for payment of consulting services and a limited number of purchases of goods, based on approved Procurement Plans. Funds willl be transferred to communities and willl be subject to selection by the Basin *ad hoc* committees. The Project Coordinator, based on the specific request by the Committees willl solicit PROFONANPE to transfer the amount for sub project implementation to an account in a commercial bank opened by the beneficiary community or association who in turn willl undertake procurement of goods and services under community contracting procedures acceptable to IFAD.

2. **Financial management and accounting.** PROFONANPE willl be responsible for fiduciary aspects (financial management and procurement) of the Project and willl coordinate Project implementation activities with the MINAM, SERNANP MINAG, Agro Rural and with regional and local governments.

3. An assessment of PROFONANPE's financial management and to implement procurement actions was carried out by the World Bank for the PRONANP Project which, looked at PROFONANPE's: (a) organizational structure, (b) facilities and support capacity, (c) qualifications and experience of the staff responsible for procurement, (d) record keeping and filing systems, (e) procurement planning and monitoring/control systems used, and (f) capacity to meet the procurement reporting requirements.

4. The assessment concluded that PROFONANPE was able to define and establish adequate accounting policies and procedures in accordance with acceptable accounting standards- for the recording of transference of funds to sub-projects, which are accounted as expenses upon the transference of funds and transference of endowment fund's revenues, which are be accounted as pending advance until they are documented.

5. Accounting policies and procedures willl be described in detail in the administrative and financial section of the final Operational Manual including PROFONANPE's responsibility to manage revenue from the endowment funds. PROFONAMPE has in place a tailored made financial information system (SIGA) which includes the basic standard modules: budget, accounting, and treasury. This information system provides the data to prepare Project financial statements; therefore the Project willl continue using SIGA. PROFONANPE has enhanced and modernized this financial information system so as to permit the preparation of: (i) the financial statements; and (ii) the preparation of Statement of Expenses (SOEs).

6. **Financial Reports,** Project financial reports willl be prepared manually on Excel spreadsheets. PROFONANPE has put in place the required internal control mechanisms to ensure the quality and reliability of those reports. Since enhancement of SIGA, financial reports are prepared automatically from the information system.

7. On an annual basis, PROFONANPE willl prepare the Project's financial statements including cumulative figures for the year. Project financial statements willl also include explanatory notes in accordance with the Cash Basis of Accounting, and its assertion that Grant funds were used in accordance with the intended purposes as specified in the Grant Agreement and in accordance with eligible categories established in the Grant Agreement. Working papers for the preparation of the annual financial statements willl be maintained and be made easily accessible to IFAD supervision missions and to external auditors.

8. **Trust Fund management.** Management of Trust Funds willl be undertaken in accordance with procedures already established by PROFONANPE including hiring of an Asset Manager. The Asset Manager services willl be hired by PROFONANPE to manage the trust fund portfolio, among the three top ranking banks as established by the National Banking Superintendency. After the Asset Manager is selected, a "Trusteeship Contract" *(Contrato de Comisión de Confianza)* willl be signed, whereby the Asset Manager willl make the Project's endowment investment decisions on behalf of PROFONANPE. The Asset Manager willl record and keep separate accounts for portfolio transactions and yields.

9. The selected Asset Manager willl open a temporary special account, which willl be used exclusively to transfer the endowment funds from IFAD. From this account, the Asset Manager willl structure the investment portfolio. PROFONANPE willl open another special account where the earning of the endowment willl be used to cover costs associated with monitoring and evaluation and other recurrent costs of operating de ad hoc Basin Committees.

10. **Disbursements.** IFAD willl make an initial disbursement as described above. Further disbursement from the Grant Account willl be made based on submission of detailed financial reports and Statements of Expenditures (SOE).Disbursements willl be made under the advance reimbursement method. Bearing in mind that the amounts set aside for procuring services and equipment and the fact that implementation of sub projects willl be implemented gradually it is possible to determine that the initial amount of US$ 800 000 willl cover expenditures for the initial year and requests for reimbursements could be made on an annual basis together with submission of annual financial statements.

11. Supporting documentation for Project expenditures under the advances reimbursement methods willl evidence eligible expenditures (e.g. copies of receipts, invoices) for payments of consultant services against contracts valued at US$75,000 or more for firms, and US$ 35 000 or more for individuals and for payments of goods against contracts valued at US$ 150 000. For all other expenditures below these thresholds and operating cost and non-consultant services, supporting documentation for documenting project expenditures willl be Statements of Expenditures (SOEs). All consolidated SOEs documentation will be maintained for post-review and audit purposes for up to one year after the final withdrawal from the Grant account.

12. **Auditing.** As noted PROFONANPE willl prepare the annual financial statements of the Project and the financial statements of the Endowment Fund, which willl be audited following International Standards on Auditing (ISA) by an independent firm, in accordance with terms of reference (TORs), both acceptable to IFAD and in accordance with IFAD guidelines[41]. The audit opinion covering Project financial statements willl contain a reference to the eligibility of expenditures. Additionally, the audit scope willl include a review of the

[41] http://www.ifad.org/pub/basic/audit/borrower_e.pdf

eligibility of sub-project expenditures. An audit firm willl be hired by PROFONANPE to IFADs satisfaction. Guidelines for the preparation of the audit terms of reference are provided in Appendix 2, PROFONANPE willl submit the audit report to IFAD no later than 6 months after the end of each fiscal year. The audit work of the Project of the Endowment Fund and Sinking Fund when established willl be financed with Grant proceeds.

7.1 Appendix 1: Flow of Funds

Tripartite agreement signed: IFAD, MINAM and PROFONANPE
PROFONANPE: Grant financial administrator

Initial amount transferred: US$ 2.8 million to PROFONANPE Asset Manager

Trust fund (US$ 2 million)

Grant Account-Two sub accounts

 Funds to be transferred to local communities for sub-projects

 Payment of consulting services, purchase goods

7.2 Appendix 2: Auditors Terms of Reference[42]

Guidelines for the preparation of the auditor's TOR's are contained in the Guidelines for Project Auditing approved by the Executive Board in December 2011 indicating that these should contain: i) Description of the employing project authority or entity; ii) Term of the auditor's engagement, namely whether it is for a fiscal year or some other period; iii) Description and the timing of the financial statements and other material to be provided by project management for the audit; iv) Terms for delivery of the audit report; v) Specification that the audit be carried out in accordance with internationally accepted auditing standards; vi) Provision of a management letter; vii) Statement of access to project records, documents and personnel available to the auditor; and viii) Details regarding submission of a proposal and work plan by the auditor. The guidelines indicate further that the TORS should include: i) A description in the TORs of the entity engaging the auditor, ii) Legal and general descriptions of the project and the LPA, in sufficient detail to enable the auditor to understand their nature, objectives and activities, iii) Organizational charts; iv) Names and titles of senior managers; v) Names and qualifications of officers responsible for financial management, accounting and internal audit; vi) Name and address of any existing external auditor, if a change is made; vii) Description of information technology facilities and computer systems in use; and viii) Copies of the latest financial statements, financing agreement, minutes of financing negotiations, project design document, and annual work programme and budget, if available.

[42] EB 2011/104/R.46

ANNEX 8. PROCUREMENT

1. **Procurement**[43]**.** Procurement willl be undertaken under IFAD guidelines. Considering that most of Grant funding willl be destined to establishing two Trust Funds and that implementation of sub projects for conservation in the selected watersheds willl be carried out by communities themselves. The main procurement method willl be national shopping for purchasing limited office equipment and other equipment for hydrological monitoring based on three quotations. Selection and contracting of consultant services willl be undertaken based on Fixed Budget Selection process and qualifications among at least three personal history forms.

2. Procurement under the sub projects of Component 1 willl be undertaken using **community contracting.** Community refers groups of project beneficiaries, community groups with no legal status, associations or groups with legal status but with or without separate legal personality as a group, small-scale artisans and other small commercial organizations and guilds, and small local-level organizations that support and facilitate rural agricultural and social activities. The "community" in such cases may participate as procurement agent, implementing agency, or contractor and supplier of goods, works and related services for project activities

Table 1. Procurement Plan

Concept/Item	Type	Procurement method	Prior review	Budget PY1 (USD)	Budget PY2 (6 months) (USD)
Project staff	Consultants	Consultant selection	Yes	4160	20,000
Computing / information technologies /motorcycles	Goods	Direct Purchase	Yes	49,000	0
Territorial Management Plans	Consultants	Consultant selection process	Yes	13,800	0
Public Consultations	Consultants	Direct Purchasing	Yes	30,000	10,000
Audits	Consultants	Consultant selection process	Yes	8,000	8,000
Hydrological / Biodiversity Baseline Study	Consultants	Bidding Consultant selection process	Yes	30,000	0
Subprojects	Subprojects	Bidding Community Contracting	Yes	0	315,000

[43] EB 2010/100/R.27/Add.1

ANNEX 9. DETAILED COST CALCULATIONS

Table 1. Subproject Detailed Costs

Management and Conservation of Peatlands Subprojects in Canete						
Description	**Area**	**Unit**	**Unit Cost**	**Source**	**Detailed Description**	**Estimated Cost**
Hydrological evaluation of peat bogs		global	4394	own	global technical assistance	4394
Community control setup	151	ha	2937	Agrorural p.13	demarcation and workshops	2937
Signs and miscellany		global	1665	Agrorural p.13	trails, signs and posts	1665
Wetlands keepers	na	man day	13	Agrorural p.61	30 man days PY2 and PY3	390
Technical assistance and training related costs	na	week	814	own	3 weeks	2443
Subproject cost						11830
Subprojects quantity	**14**					
Total subprojects of community peatlands conservation						165621
Total area (ha)	**2113**					

Source: Proyecto Recuperación y Manejo de Pastos Nativos de la Zona Altoandina de las Comunidades Campesinas de Langaico y Atcas - Distritos de Laraos y Huantan- Provincia de Yauyos, Huanca W., AGRORURAL (2011)

Management and Conservation of Grasslands Subprojects in Canete						
Description	**Area**	**Unit**	**Unit Cost**	**Source**	**Detailed description**	**Estimated Cost**
Closures	186	ha	10476	Agrorural p.3	poles every 5 m	10476
Revegetation	na	global	3814	Agrorural p.3		3814
Infiltration works	4.26	ha	5527	Agrorural p.3	width 0.40 to 0.60 m depth 0.40 m distance between 15 - 30 m	5527
Technical assistance and training related costs	na	week	139	own	30 weeks in field in PY2	4156
Subproject cost						23973
Subprojects quantity	**50**					
Total subprojects of grasslands management						1198649
Total area (ha)	**9316**					

Source: Proyecto Recuperación y Manejo de Pastos Nativos de la Zona Altoandina de las Comunidades Campesinas de Langaico y Atcas - Distritos de Laraos y Huantan- Provincia de Yauyos, Huanca W., AGRORURAL (2011)

Management and Conservation of Relict Forests in Jequetepeque						
Description	**Area**	**Unit**	**Unit Cost**	**Source**	**Detailed description**	**Estimated Cost**
Revegetation	185	ha	12916	own	input provision (e.g. seedlings and dung)	12916
Tree nursery	na	na	2331	own	support input	2331
Technical assistance and training related costs	na	week	258	own	12 weeks	3098
Invigilation	na	man day	15	Agrorural p.43	40 days in PY2 and PY3	603
Subproject cost						18948
Subprojects quantity	**8**					
Total subprojects of community management of relict forests						151582
Total area (ha)	**1479**					

Source: Proyecto Recuperación y Manejo de Pastos Nativos de la Zona Altoandina de las Comunidades Campesinas de Langaico y Atcas - Distritos de Laraos y Huantan- Provincia de Yauyos, Huanca W., AGRORURAL (2011)

Grasslands Management Subprojects in Jequetepeque						
Description	**Area**	**Unit**	**Unit Cost**	**Source**	**Detailed description**	**Estimated Cost**
Closures	186	ha	10476	Agrorural p.3	poles every 5 m	10476
Revegetation	na	global	3814	Agrorural p.3		3814
Infiltration works	4.26	ha	5527	Agrorural p.3	width 0.40 to 0.60 m depth 0.40 m distance between 15 - 30 m	5527
Technical assistance and training related costs	na	week	139	own	30 weeks in field in PY2	4156
Subproject cost						23973
Subprojects quantity	**35**					
Total subprojects of grasslands land use change						839054
Total area (ha)	**6521**					
Source: ibid						

ANNEX 10. ECONOMIC AND FINANCIAL ANALYSIS

A. Cost Effectiveness

1. The following exercise has been carried out to establish the cost effectiveness of the proposed project. Three scenarios: (a) the project as is; (b) a "stand alone" project; (c) a project without trust funds. They were projected on a five year horizon and discounted at 12% as common practice.

2. The exercise included GEF Grant costs only. The reason being for this procedure is that IFAD and Government costs have already undergone an economic and financial evaluation.

3. The following are the specifications of the scenarios.

a) *The project as is.* They include recurrent costs at 4.7% of total costs; subprojects under component 1 are 43.3% of total costs which represents the major conservation investment; and the funds for component 2 are 52% of total costs.
b) A *stand alone project.* Under this scenario, current costs are increased to amounting to 16% of total projects costs. Conservation subproject costs under component 1 remain at 43.2% of total costs. The costs of component 2 are reduced to 40.7%.
c) *A project without trust funds.* Under this scenario, current costs increase to 16% of total costs. Conservation subproject costs increase to 79.8% of total cost under component 1. Component 2, however, suffers a great deal and reaches 4.2%.

4. The following table indicates the major targets under the three scenarios envisioned.

Table 1. Scenario Targets and Narrative

Scenario	Targets	Narrative
Project as it is	2,164 beneficiary families 23,866 ha conserved 2 PES/CES schemes operational 2 Trust Funds 2 Watershed committees operational	The Project relies on DELOSI host project. It takes on the AGRORURAL expertise and locally available agencies. It promotes wide consultation and beneficiary involvement for the PES scheme to take place. It promotes two operational Trust Funds for long term sustainability.
Stand Alone Project	2,164 beneficiary families 23,866 ha conserved 1 PES/CES scheme operational 2 Trust Funds 2 Watershed committees operational	The Project will open local agencies to have ends met. The recurrent costs simulated allocation will only establish 1 PES/CES scheme. The Trust Funds will be operational by PY1.
Project Without Trust Funds	2,164 beneficiary families 30,000 ha conserved 2 PES/CES schemes operational	The Project will open local agencies to have ends met. By PY5 non compliance takes place under PES/CES schemes. No trust funds to cover recurrent costs of the watersheds after PY5.

5. The Project, as is, has a number of advantages unobserved in the other two scenarios envisioned. When Net Present Values are calculated, it beats the “Stand Alone” scenario by US$ 241,000. Also, it is more cost effective than the “No Trust Fund” project by USD 158,000.

6. One thing that stands out in this last scenario is that having no Trust Fund means having no provision for current costs when the Project ends. This is a real advantage when one is to consider projects in the long run. Also, the Project as is shows funds allocation, for component 2, which may look superfluous at first sight. However, scenario three makes it clear that, under component 2, all the consultative and preparation activities for the PES effort are worthwhile.

Table 2. Three Scenarios Cost Effectiveness Analysis

	Totals Including Contingencies						
	2014	2015	2016	2017	2018	Total	Percentage
THE PROJECT AS IT IS							
Conservation and Sustainable Management of High Andes Ecosystems	27,622	751,750	751,750	832,878	-	2,364,000	43.3
Improvement of the Institutional Framew ork for Environmental Services for Implementation of PES/CES schemes	297,265	2,131,359	135,159	121,909	152,409	2,838,100	52.0
GEF Project Management	50,984	50,984	50,984	50,984	50,984	254,920	4.7
Total PROJECT COSTS	375,871	2,934,093	937,893	1,005,771	203,393	5,457,020	100.0
STAND ALONE PROJECT							
Conservation and Sustainable Management of High Andes Ecosystems	27,622	751,750	751,750	832,878	-	2,364,000	43.2
Improvement of the Institutional Framew ork for Environmental Services for Implementation of PES/CES schemes	2,036,500	45,500	54,500	47,750	43,250	2,227,500	40.7
GEF Project Management	511,906	86,863	86,584	86,084	104,084	875,520	16.0
Total PROJECT COSTS	2,576,028	884,113	892,834	966,712	147,334	5,467,020	100.0
Conservation and Sustainable Management of High Andes Ecosystems	1,427,622	1,051,750	1,051,750	832,878	-	4,364,000	79.8
Improvement of the Institutional Framew ork for Environmental Services for Implementation of PES/CES schemes	36,500	45,500	54,500	47,750	43,250	227,500	4.2
GEF Project Management	511,906	86,863	86,584	86,084	104,084	875,520	16.0
Total PROJECT COSTS	1,976,028	1,184,113	1,192,834	966,712	147,334	5,467,020	100.0

NPV OF PROJECT AS IT IS (@12%) $4,096,809.52
NPV OF STAND ALONE PROJECT (@12%) $4,338,299.59
NPV OF NO TRUST FUND PROJECT (@ 12%) $4,255,277.55

B. The Proceeds of the Trust Funds

7. In order to assess the potential for continues funding of conservation efforts in selected watersheds three scenarios of regarding proceeds of the Trust Fund were developed.

(a) **Base case.** At present, it has been estimated that under PROFONAMPE's management, trust funds proceeds yield around 7%. Such a gross average is subject to a number of oscillations (Stock Exchange mood, exchange rates variation, Peruvian financial market development and regulations, among others).
(b) **Higher Case.** Trust fund proceeds may eventually reach 9%. This case willl imply a long and sustainable growth period, overwhelming entrepreneurial confidence and Peruvian public debt well under control, among other factors.
(c) **Lower Case.** Trust Fund proceeds reach a lower average of 2%. This is the worst case scenario in which all economic agents willl be under "bear markets", large financial uncertainty, and huge yield downward oscillations.

8. Estimated co-financing scenarios in which the actual GEF funded Trust Fund, currently at US$ 2 million, leverages other amounts. The base case scenario is US$ 300,000 leverage, and the upper case is US$ 2,000,000 leverage. Two shapes of the yields over a twenty year period have been envisaged. One is a U-shaped yield curve indicating a fast downside followed by a bottom, of approximately two years, and then an upward swing. Another shape is the L-shape curve indicating a downside turn to remain at a low yield for a prolonged period of time. For comparison purposes, estimated present values of the yield over a ten year period ere considered.

9. The results of the estimation are as follows.

Table 3. Yield Scenarios Over a Twenty Year Period

					Yield range		
	Start up Capital	Leverage	Total Capital	Present Value	Maximum	Minimum	Minimum starts in Year
Lower case L shape	2000000	300000	2300000	$537,950	161000	46000	3
Upper case L shape	2000000	2000000	4000000	$935,566	280000	280000	3
Lower case U shape	2000000	300000	2300000	$833,880	161000	46000	5
Upper case U shape	2000000	2000000	4000000	$1,450,227	280000	80000	6

10. This table highlights the need to leverage additional funds, particularly under the more likely lower case U shape scenario. Leveraging remains in MINAMs negotiating power, and it is dependent on the social interest policy of two key stakeholders; the hydro electrical firms CELEPSA on the one hand, and the Regional Authority of Cajamarca, on the other.

11. The minimum proceeds of US$ 46,000 willl cover an estimated number of recurrent costs. The estimates of those costs are as follows.

Table 4. Lower Proceeds from Trust Funds

Description	Area (ha)	Unit	Unit Cost	Detailed Description	Estimated Cost
Hydrological evaluation of peat bogs	6000	global	4394	global technical assistance	4394
Wetlands keepers		man day	13	30 man days	390
Training		week	814	3 weeks	2443
Revegetation of relict forests			12916	inputs provision	12916
Invigilation of relict forests		man day	15	40 days in PY2 and PY3	603
Revegetation of grasslands		global	3814		3814
Management of watersheds		week	357	60 weeks	21439
Total cost					**46000**

12. It can be inferred that the Trust Fund proposed has a number of advantages; one of them is that, being at perpetuity, it covers recurrent costs for a number of years. In the lower case scenario the yields help cover only too limited efforts yet it will be a cost worth taking.

ANNEX 11. DRAFT PROJECT IMPLEMENTATION MANUAL

1. A draft Project implementation manual (PIM) has been prepared and is available in the Project Life File (PLF) in Spanish.

2. The PIM has been prepared based on PROFONANPE documentation concerning the operation of sub projects or sub grants under the PRONANP project and PROFONANPE's investment policy. The Operational Manual for sub project has been approved by the World Bank and its operational modalities have been included with some adjustments. Notwithstanding, it will be necessary to prepare a definitive Manual as a condition for first disbursement of the grant. The guidelines for the implementation of sub projects constitutes Part A of the document and Part B contains elements of PROFONANPE's investment policy and endowment management directives which should guide the establishment and operations of the two Trust Funds considered by the Project. The PIM establishes procedures for the identification, implementation of activities and mechanisms for allocating project resources in financing sub-projects, defining eligibility of beneficiaries, organizational structure for implementation, selection criteria of the sub projects, guidelines for monitoring and administrative aspects, emphasizing the roles and responsibilities of those involved.

3. **Implementation of sub projects.** In general terms sub projects must meet Project objectives contributing to the achievement of some of the results identified in the Project's logical framework and in turn, with their own logical framework and respective indicators facilitate monitoring and evaluation. Sub projects should be seen within the Project's overall strategy of establishing participatory mechanisms for identification, formulation, implementation and monitoring and evaluation of local initiatives in conservation of natural resources in the highlands in order to ensure their sustainability. A transfer plan willl be an essential part of the operational modalities for sub projects specifying actions that willl continue after sub project completion, including the organizations and / or institutions that willl be responsible for implementing such actions, and the resources required. The sub-project cycle consists of: (a) competition and selection of sub-projects, (b) implementation, monitoring and evaluation, and (c) transfer and closure plan. The selection of sub-projects willl be held following the principles of competition and transparency. The call for the competition willl primarily include: (i) the objective of the competition, (ii) the priority issues and geographic areas, (iii) the eligibility of applicants, (iv) the basic guidelines for the design of the sub projects, (v) the criteria for evaluating proposals, (vi) the maximum duration of the sub projects, (vii) the total amount allocated to the financing of sub projects, the amount of each sub project, disbursements and (viii) the required documentation.

4. The implementation of the sub projects willl be the responsibility of the beneficiary institutions; being MINAM through the Project Coordinator responsible for monitoring and evaluation. Prior to the start of the execution of a sub project beneficiary organizations willl prepare a sub project proposal and operational plan for approval by a Project Approval Committee constituted under the a*d hoc* Basin Committees. Once approved beneficiary organizations willl sign a Sub-Grant Agreement with PROFONANPE who willl transfer to the beneficiary organizations approved funds, according to the approved work plan to be attached to the agreement. To this end, each sub project and the beneficiary organizations willl have a specific account in a recognized bank.

5. The PIM provides general principles for the sub-projects to be implemented concretely in the two watersheds selected.

6. The PIM indicates that the following general principles willl guide the Project's intervention including: (i) prioritizing interventions based on the evaluation of expected results indicators for conservation in selected areas, (ii) providing financial resources including contracting of technical assistance services, (iii) furthering strategies for conservation and / or strengthening productive activities with respect to the environment, (iv) searching for concerted efforts with local and regional governments and other public and private sector bodies and, related to the task of contributing to the conservation of natural resources in watersheds linked to sustainable use of productive resources and poverty alleviation with the populations involved.

7. The Project willl provide financial assistance, on a priority basis to initiatives of local actors to implement activities aimed at conservation and sustainable use of natural resources and objectives identified in each basin.

8. **Investment policies.** The PIM further describes PROFONANPE investment policies that willl frame the Trust Funds to be established indicating that the diversification of the portfolio must be maintained at all times. Based on experience and knowledge gained so far by PROFONANPE, the asset management strategy for the endowments of the Project willl be guided by the strategic investment policy approved by the Board of PROFONANPE for diversified moderate risk. The current investment policy establishes a minimum of 65% of the portfolio should consist of debt instruments, a maximum of 30% in equities, and a maximum of 5% in alternative instruments. Depending on market conditions PROFONANPE may make investments in the local market and / or in the foreign markets. The Investment Policy also defines specific guidelines for PROFONANPE indicating that debt instruments (including bonds, commercial paper and bank certificates) must be at least "A" according to local risk ratings, while equity instruments shall be exclusively blue-chips. Other elements of the strategy determine that no more than 15% of the portfolio should be invested in financial instruments of the same issuer or economic group. Investments can be made in securities denominated in Soles, United States Dollars or Euros while investments in securities may be made at the London Stock Exchange (LSE), New York or in the top 5 European markets as trading volume. Total investment through funds shall not exceed 20% of the portfolio value while local investments in fixed income and long term securities should have a risk rating of not less than A, and fixed income investments abroad must have a rating of not less than BB, fixed income short-term investments should have a risk rating of CP1 or CP2.

9. **Portfolio Management.** PROFONANPE willl appoint an Asset Manager following a call among the top five banks in Peru, ranked by the size of the capital, deposits and liabilities according to the National Superintendency of Banking and Insurance (SBS). After the bank is selected, a Services Agreement willl be signed, by which the Asset Manager willl make the investment decisions of portfolio assets on behalf of PROFONANPE. The Asset Manager willl record and maintain separate accounts for portfolio transactions and yields.

ANNEX 12. COMPLIANCE WITH IFAD POLICIES

I. INTRODUCTION

1. This Annex briefly describes a number of IFAD policies more specifically related to environmental issues. As required information is also provided on compliance with targeting and gender policies. This document includes a full environmental and social review note (ESRN).

II. COMPLIANCE WITH RELEVANT POLICIES

2. **Targeting.**[44] The policy outlines a number of guiding principles framing IFAD operations on rural people who live in poverty and food insecurity and are able to take advantage of the opportunities to be offered; expand outreach to proactively include those who have fewer assets and opportunities and in particular, marginalized groups such as minorities and indigenous peoples with a special focus on women. The policy defines "targeting" as a set of purposefully designed, demand-driven and mutually agreed upon actions and measures that ensure, or at least significantly increase the likelihood, that specific group of people will take advantage of a development initiative. At the same time, these actions and measures aim at preventing disproportionate benefit capture by other groups.

3. The targeting strategy involves the following measures that are applicable to this Project: **Geographic targeting** bearing in mind that direct interventions are not national in coverage these will be focused on geographic areas with high concentrations of poor people under difficult environmental conditions; **Direct targeting** as Project support willl be channelled to households using community-based targeting approaches. This is inherent in Project design which encompasses eligibility criteria which allows for communities to identify potential direct beneficiaries.

4. **Gender.** The recently approved policy [45]aims at increasing IFAD's impact on gender equality and strengthen women's empowerment in poor rural areas. This project directly supports Strategic Objective 2 to do with increasing equal participation in institutional decision making.

5. Although the policy does not specifically addresses gender issues in the context of the environment in general, it provides some guidance indicating that IFAD should support and promote (i) government recognition of women's rights to the benefits from and control over natural resources; (ii) understanding of sustainable natural resource management in a local context;(iii) provide equal access to new technologies and training for enhanced conservation and use of animal/plant genetic resources and food production for both women and men; (v) gender-differentiated knowledge systems to enhance learning on, and raise awareness of, sustainable uses, management and conservation of natural resources; (vi) strengthened capacity for governance of integrated natural resource management through inclusive approaches such as participatory mapping, decision-making and governance; (vii) learning on, and awareness of, gender-differentiated management of natural resources; (viii) reduction in gender inequalities in community-based users' groups through training

[44] http://www.ifad.org/pub/policy/target/targeting_e.pdf.

[45] EB 2012/105/R.2/Rev.1

and positive actions; and (ix) measures to increase women's voices, alongside men's, in the planning and running of community water schemes. The project also meets all minimum requirements of the GEF Policy on Gender Mainstreaming (May 2012):

- In order to implement GEF-financed projects, GEF Partner Agencies are be required to have established either a policy or policies (this may include relevant laws, regulations, and guidelines), a strategy, or an action plan that requires the Agency to design and implement projects in such a way that both women and men (a) receive culturally compatible social and economic benefits; (b) do not suffer adverse effects during the development process; and that (c) fosters full respect for their dignity and human rights (Yes, this is in place);
- The Agency has instituted measures to strengthen its institutional framework for gender mainstreaming, for example, by having a focal point for gender, or other staff, to support the development, implementation, monitoring, and provision of guidance on gender mainstreaming (Yes, IFAD has these systems in place).
- The Agency's criteria for project review and project design require it to pay attention to socio-economic aspects in its projects, including gender elements. (In the context of GEF projects, since gender elements are important drivers and incentives for achieving global environmental benefits.) (Yes, this is a central feature of this project)
- The Agency is required to undertake social assessment, including gender analysis, or to use similar methods to assess the potential roles, benefits, impacts and risks for women and men of different ages, ethnicities, and social structure and status. These studies may be used, along with other types of studies to inform project formulation, implementation and monitoring and evaluation (Yes, some initial gender analysis is provided in Annex 2 and all project studies, monitoring, consultations and related activities will explicitly consider gender impacts).
- The Agency is required to identify measures to avoid, minimize and/or mitigate adverse gender impacts (Yes, this will a focus of project activities and studies throughout).
- The Agency's policies, strategy, or action plan address gender sensitive activities while recognizing and respecting the different roles that women and men play in resource management and in society (Yes, see new IFAD Gender Policy).
- The Agency has a system for monitoring and evaluating progress in gender mainstreaming, including the use of gender disaggregated monitoring indicators (Yes, relevant indicators included in the RIMS).
- The Agency monitors and provides necessary support for implementation of its policies, strategy, or action plan by experienced social/gender experts on gender mainstreaming in projects (Yes, regional and HQ gender experts on hand).[46]

6. Concerning **Climate Change Adaptation and Mitigation** the policy indicates that IFAD should support and promote: (i) project design and implementation based on an understanding of how climate change affects different categories of poor rural people, and women as compared with men;(ii) provision of training to women and men on key adaptation topics, including adjusting cropping patterns based on climate variability, sustainable agricultural systems for nutrition and high-value-added products, sustainable land management, early warning systems and disaster risk reduction; (iii) gender equality in access to climate change mitigation funds

[46] See http://www.thegef.org/gef/policy/gender

7. **Environment and Natural Resource Management Policy**: Resilient livelihoods through the sustainable use of natural assets. For the purposes of this policy, the term 'environment and natural resource management' (ENRM) focuses on the use and management of the natural environment, including natural resources defined as raw materials used for socio-economic and cultural purposes, and ecosystems and biodiversity with the goods and services they provide.

8. The goal of the policy is to enable poor rural people to escape from and remain out of poverty through more-productive and resilient livelihoods and ecosystems. Its main purpose is to integrate the sustainable management of natural assets across the activities of IFAD and its partners. The policy sets out 9 core principles to guide IFAD's operations including: (1) Scaling-up investment in multiple-benefit approaches for sustainable agricultural intensification; (2) Recognizing and deepening greater awareness of the economic, social and cultural value of natural assets; (3) Furthering 'climate-smart' approaches to rural development; (4) Attaching greater attention to risk and resilience in order to manage environment and natural-resource-related shocks; (5) Engaging in value chains to drive green growth; (6) Improving governance of natural assets for poor rural people by strengthening land tenure and community-led empowerment; (7) Pursuing livelihood diversification to reduce vulnerability and build resilience for sustainable natural resource management; (8) Ensuring equality and empowerment for women and indigenous peoples in managing natural resources and; (9) Increasing access by poor rural communities to environment and climate finance.

9. **Climate Change Strategy**[47] to ensure a systematic focus on the implications of climate change for its activities at the country level. The strategy aims to maximize IFAD's impact on rural poverty in a changing climate. It has three purposes: (a) to support innovative approaches to helping smallholder producers build their resilience to climate change, (b) to enable smallholder farmers to take advantage of available mitigation incentives and funding and,(c) to inform a more cogent dialogue on climate change, rural development, agriculture and food security.

10. **Procedures for environmental and social assessments,** reviewed by the Executive Board in April 2009[48] setting out key environmental and social principles. Adopted principles commit IFAD to: a) address the vulnerability and adaptation needs for the rural poor, b) promote the sustainable use of natural resources and protection of key ecosystems, c) focus on partnership-oriented initiatives for improved social and environmental quality, d) address environmental and social impact assessments of agricultural and non-agricultural activities in an integrated manner, e). incorporate externalities and minimize social costs, f) implement participatory approaches, with special emphasis on the role of women, g) promote the development of indigenous peoples and other marginalised groups (pastoralists, hunters and gatherers) while enhancing their livelihoods: securing ownership /access to ancestral land and territories; strengthening their institutions, promoting Free Prior Informed Consent (FPIC), and valuing indigenous knowledge systems, h) promote environmentally sound agricultural and manufacturing processes, i) ensure systematic environmental and social monitoring and, j) undertake Strategic Environmental Assessments; where appropriate;(iv) increased research on gender-sensitive technologies that are energy and water efficient, and promote resilience to changing climatic events and other risks; and (v) solutions to the specific challenges faced by women, men and children in climate change-related policy dialogue, and mainstreaming effective responses into policies, programmes and projects.

[47] EB 2010/99/R.2/Rev.1
[48] EB 2009/96/R.7 IFAD Climate Change Strategy, 2010, www.ifad.org/climate/strategy/e.pdf.

Table 1. Compliance with IFAD Policies

Policy / Strategy	Project measures
Targeting	Concentrating activities in favour of rural populations living in poverty conditions and food insecurity in the highlands based on criteria under IFADs geographic and direct targeting
Gender	Promoting empowerment to further participation of rural women heads of household to increase their decision making power in rural organizations and improving their natural resources. Supporting clearer understanding of the different needs and contributions of men and women to the project outcomes through mainstreaming a gender lens into key analyses. Aiming for men and women to participate in and benefit from project activities.
Environment and Natural Resource Management Policy	Recognizing and deepening greater awareness of the economic, social and cultural value of natural assets and attaching greater attention to risk and resilience in order to manage environment and natural-resource-related shocks
Climate Change Strategy	Increasing access by poor and rural communities to environment and climate finance support while furthering innovative approaches to help smallholder producers build their resilience to climate change
Procedures for environmental and social assessments	Promoting the sustainable use of natural resources and protection of key ecosystems focusing on partnership-oriented initiatives for improved social and environmental quality

III. ENVIRONMENTAL AND SOCIAL REVIEW NOTE

A. Brief Project Description and Site Characteristics

11. **Project description.** The objective of the Project to be implemented over a five-year period is to manage and protect High Andes ecosystems of Peru in order to assure their continuous provision of environmental services, especially those related to water and biodiversity. Project implementation includes two main components in addition to Project management: a) Conservation and Sustainable Management of High Andes ecosystems and b) Improvement of the Institutional Framework for ES in Peru for Implementation of PES/CES schemes. It is expected that as a result of Project interventions conservation and/or sustainable use of at least 25,000 hectares of high Andean ecosystems and landscapes will be ensured and that PES/CES schemes will be designed and operational, contributing to conservation of High Andean ecosystems

12. **Site characteristics**. The Project will be implemented in two basins: Jequetepeque and Cañete. **The Jequetepeque river basin** covers 9 districts of 6 provinces of the department of Cajamarca: Cajamarca, San Pablo, San Miguel and Contumaza; and Pacasmayo and Chepén in the department of La Libertad. The total basin area is 393.545[49] ha. **The Cañete River basin** covers 29 districts, 5 in the province of Cañete, one in the province of Huarochiri and 23 in the province of Yauyos of the department of Lima. The total basin area is approximately 601.734[50] ha.

B. Issues in Natural Resources Management

13. The basin criterion has been considered based on the fact that what is being proposed is provision of hydrological services. However, the more active and direct project interventions willl be implemented in the headwaters and upper basin zones. At these wet and high Andean elevations over 2500-3000 m, the main natural and man-made landscape features are: glaciers, lagoons, peat lands, rangelands or prairies, and relict native forests; as well as ancient agricultural terraces. Critical field work willl be focused in assuring continuous retention, infiltration, soil storage and sub-surface clean and regular water flow for provision to the lower basin. Action willl fundamentally aim at managing and keeping a dense and vigorous natural vegetation cover. Andean terraces, mainly at the Cañete river basin, could also contribute to this purpose

14. The wet high Andean ecosystems or vegetation cover types which provide hydrological services are peat lands (*bofedales* or *turberas*), natural rangelands (*paramo, jalca* and *puna*) and relict forests

Peat lands are water saturated ecosystems with specially adapted and diverse vegetation dominated by cushion plants growing on anoxic soils at very cold temperatures. Located downhill glaciers and surrounded by lagoons and ponds, they regulate important volumes of water flows. Climate has a strong control on vegetation types and peat productivity; climate change and global warming are threats faced by cushion plants. However, recent excess of water supply from glacier melt has helped in proliferating cushion plant ecosystems. Human disturbances, peat land cutting and mining, are the most pressing threats since these ecosystems react swiftly to changes in vegetation cover and water chemistry. Overgrazing is sometimes also a localized problem.

[49] Source: Recursos Hídricos en el Perú. Autoridad Nacional de Agua, 2012.
[50] Source: Recursos Hídricos en el Perú. Autoridad Nacional de Agua, 2012.

15. **High Andean rangelands** present variations mainly depending on their annual and seasonal precipitation regimes, which is related to their latitudinal range location; and vegetation cover. *Paramos* and *jalcas* are located in the higher rainfall zones of Northern Peru (Jequetepeque) and *punas* in the Central (Cañete) and Southern areas. When they are well conserved, these very extensive natural High Andean prairies infiltrate and yield very high volumes of water downhill, feeding springs, streams and rivers. They are also a very important grazing resource for cattle, sheep and South American camelids. The main threats to the hydrological function and biodiversity of High Andean rangelands are soil cover degradation and compaction, and loss of infiltration capacity, as a consequence of overgrazing and burning. Some local potential problems such as forestation with exotic tree species have been also observed.

16. ***Paramos*** are characterised by low temperatures, pronounced climatic variation during the day and a relative humidity of more than 80%. Their soils are usually rich in organic matter and have a high capacity for water storage. *Paramo* vegetation consists of high diverse grasslands or scrublands including disperse clusters of shrubs, small trees and bamboo, and moss cushions. Water is found in the form of ponds, marshland, lakes and streams emerging from underground. Due to *paramo* soils and vegetation retaining such enormous quantities of water, in practical terms, the majority of these wetlands could be classed as extensive semi-aquatic ecosystems.

17. ***Jalca*** is considered in Northern Peru as a transitional bioregion between *paramo* and *puna,* due to its location at the southern extreme of the typical and extensive *paramo* formations in the Andean regions of Venezuela, Colombia and Ecuador. They are very similar in structure and function to those *paramos*, given that they have a high relative humidity and precipitation, as well as marked daily climatic fluctuations. As opposed to *paramos*, a much more marked seasonal climatic fluctuation exists in *jalca* ecosystems due to their latitudinal location.

18. ***Puna*** ecosystems are the most extensive at high elevation Andean prairies and are characterised by an intense cold, seasonal aridity and marked daily fluctuations in temperature. Due to their latitude they are also subject to drastic seasonal climatic changes. *Puna* vegetation is made up of small grasslands and disperse dwarf shrubs and small trees. Many of the rivers flowing towards the *puna* often have patches of vegetation in their lower reaches which are characteristic of other altitudes, forming a type of oasis in a predominantly very dry grassland landscape.

19. **High Andean forests** are remnant dense or semi-dense tree dominated ecosystem mostly composed by small endemic trees like *quinual, quishuar, chachacomo, tara, aliso* and other species of trees and shrubs. One important and almost extinted species found in the Jequetepeque basin headwaters and its upper hillsides, is *romerillo*, the only native Peruvian conifer tree. Besides collecting, regulating and providing clean and continuous water flux from the rainfall through its porous forest soils, to lower elevations, these forests play an important role capturing and condensing atmospheric water from the permanent Andean fog and low cloud cover, and dropping it to soil increasing its water content for longer periods which keeps springs and streams flowing during the dryer season..

C. Potential social and environmental impacts and risks

20. The proposed area of direct Project intervention in the High Andean of the selected river basins as a whole presents similar vegetation, soil, and water conditions and baselines including well conserved, affected and degraded natural vegetation cover, soils, and water resources. The exact field situation in each area of direct intervention needs to be properly

evaluated as a first step for system management. Present available information mainly by satellite maps only provides general data on ecosystem surfaces and their general characteristics

21. Main issues include:

- Degradation of natural vegetation, soils and water is mostly due to overgrazing, grass burning, inadequate cultivation practices, deforestation, erosion, and water pollution. These impacts are due to livestock raising, peat land degradation, local agriculture, timber and fuel wood demand, and mining (formal and informal), compact soils reduce infiltration capacity, generate runoff, supply sediments to streams, and alter the fragile ground structure as well as its water retention capacity and quality.
- Global warming, which causes the continued retreat of glaciers from the mountain hillsides, reducing the glacier water input to the High Andean wetlands (Cañete only). Infrastructure construction, such as water intakes, damming, irrigation systems, affirmed roads, and high transit paths.
- Anthropic burning of grazing lands.
- Demographic pressure due to increased population of human settlements.

22. Underlying causes include:

- Incipient social organization and conflict of interests among various territorial actors.
- Insufficient policies and unclear and poorly regulated and implemented legislation.
- Unsuitable agricultural policies and sector policies in general.
- Governance and institutional conflicts, lack of local, regional and national coordination and land use planning.
- Institutional weakness and serious lack of resources of governmental agents responsible for management of head waters and the upper basin ecosystems.
- Unsuitable land tenure systems and land fragmentation.
- Poor human development and quality of life conditions

D. Environmental category

23. As the Project willl implement direct interventions focused on the conservation and restoration of ecosystems and the achievement of global environmental benefits, it has been characterized as **Category C**.

E. Further information required to complete screening and scoping

24. No further information is required.

F. Recommended features of project design and implementation to improve NRM and mitigate environmental concerns

25. Project design has considered the need to implement activities in the selected basins in a phased manner to include initially: (a) local consultations and coordination, (b) baseline definition and prioritization of key areas according to their conservation status and hydrological functioning and, (c) identification of intervention areas.

26. A second phase includes implementation of the actual measures for conservation which in essence willl consist in measures destined to ensure controlling land use. A third phase includes vegetation monitoring and control and hydrological function monitoring. Finally design includes the use of communications and information in order to ensure local,

regional and national diffusion of advances and findings including the issuing of relevant publications.

G. Monitoring aspects

27. **Hydrological monitoring.** Working on hydrological services under the basin criteria implies checking at least the basic water balance looking closely at precipitation (P) and discharge (Q) data, and, because of the nature of the Project, also at infiltration capacity (Ic), soil moisture, and soil erosion data. To this end a set of automatic meteorological and hydrological stations for continuous precipitation and discharge measurements, infiltration rings for biweekly control of infiltration capacity, a digital soil moisture meter, and 30 cm steel erosion pins will be acquired to perform such measurements at each basin.

28. Hydrological monitoring could be also considered as and indirect indicator of the soil vegetation cover conservation status on the intervened High Andean ecosystems. If these ecosystems are in well shape the soil infiltration and water storage capacity and thus the regular and clean water flow will be assured.

29. **Biodiversity monitoring.** In order to directly assess the proper recovery and conservation of the high bio diverse Andean vegetation on the intervention areas of peat lands, grasslands and forests, species composition and the ecosystems integrity will be additionally monitored using rapid flora and fauna evaluation systems adapted to the Andean conditions.

H. Components requiring Environmental and Social Assessment (ESA) and scope of assessment

30. No components require an ESA,

I. Record of consultations with beneficiaries, civil society, general public

31. In order to consult and discuss the nature of the Project with stakeholders several meetings were held in both watersheds. The Project formulation team visited the Cañete River Basin area on 4 July and the Jequetepeque River Basin area on 5 and 6 July 2012. A more detailed description of these consultations is provided in Annex 2.

32. During the Cañete river basin consultations, participants indicated that the main environmental and social problems were: limited availability of water for irrigation; poor maintenance of reservoirs and canals; low technological working levels and lack of technical assistance; melting of glaziers; presence of invasive grasslands*;* illegal mining activities; water use for hydropower generation; and abandonment of land parcels and agricultural terraces. They outlined a number of proposals to improve the present situation such as provision of technical support and use of new irrigation technologies; crop diversification, promotion of ecotourism taking advantage of the Nor Yauyos Cochas Landscape Reserve; recovery of canals and wetlands; improved livestock and pasture management; reforestation and soil protection; utilization of about 200 lagoons; preservation of approximately 10 000 ha of *queñuales;* generation and use of mining royalties; compliance with environmental impact studies by mining and hydroelectric companies; develop added value and productive value chains; application and improvement of existing land use planning; and strengthen the North Yauyos Development Committee (CODENI) that supports SERNANP activities in the Nor Yauyos Cochas Landscape Reserve.

33. In the Jequetepeque basin consultations and more specifically during a meeting held in the upper basin in the city of San Miguel participants expressed their interest and main

needs, limitations, and expectations for their organizations and communities. Among the main environmental and social problems and concerns pointed out were: lack of resources for technical assistance and effective extension programs; protection and recovery measures needed to address degraded and overgrazed grasslands using wire fences; forestation and reforestation; land use planning improvement and practical implementation; implementation of more inclusive projects; and means and resources to add value to their agricultural and forestry products.

ANNEX 13. DOCUMENTS IN THE PROJECT LIFE FILE AND REFERENCES

I. Project design documents

II. Working documents

WD 1: PROJECT AREA, POPULATION AND INSTITUTIONAL FRAMEWORK (SPANISH)
WD 2: ANALYSIS OF ENVIRONMENTAL SERVICES IN PERU (IN SPANISH)
WD 3: DRAFT IMPLEMENTATION MANUAL (IN SPANISH)
WD 4: COSTS AND FINANCING
WD 5: PES MARKET ANALYSIS (IN SPANISH)

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