



GEF-6 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project
TYPE OF TRUST FUND: GEF Trust Fund

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Project Title:	Sustainable management of agro-biodiversity and vulnerable ecosystems recuperation in Peruvian Andean regions through Globally Important Agricultural Heritage Systems (GIAHS) approach.		
Country(ies):	Peru	GEF Project ID: ¹	9092
GEF Agency(ies):	FAO	GEF Agency Project ID:	635627
Other Executing Partner(s):	Ministry of Environment (MINAM)	Submission Date:	10 April 2015 15 July 2015 13 August 2015 17 Nov 2015
GEF Focal Area(s):	Multi-focal area	Project Duration (Months)	48
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Corporate Program: SGP	<input type="checkbox"/>
Name of parent program:	[if applicable]	Agency Fee (\$)	890,136

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES²

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
BD-3 Program 7	GEFTF	2,144,293	5,560,000
BD-4 Program 9	GEFTF	3,216,438	29,175,000
LD-3 Program 4	GEFTF	885,845	24,350,000
SFM-3 Program 8	GEFTF	3,123,288	9,765,000
Total Project Cost		9,369,864	68,850,000

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objectives: To conserve <i>in-situ</i> and to sustainably use globally-important agro-biodiversity through the preservation of traditional agricultural systems, the integrated management of forests, water, and land resources, and the maintenance of the ecosystem services in selected Andean regions.						
Project Components	Financing Type ³	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
1. Integrated landscape management and agrobiodiversity conservation in Andean regions of Peru	INV	<p>Outcome 1.1: Agro-biodiversity is conserved <i>in-situ</i> and sustainably used through integrated natural resource management and the payment for the environmental services (PES) generated in functional ecosystems.</p> <p><i>Target Indicator:</i> 300,000 hectares of production</p>	<p>Output 1.1.1: Sustainable practices and resource use management guidelines are articulated in an integrated manner at different governmental levels and implemented by smallholder farmers and indigenous groups in target production landscapes in the Peruvian Andes.</p> <p>Output 1.1.2: Ecosystem goods and services in the productive landscape are valued and payments are agreed upon with relevant buyers and sellers as per the Law 30215 on "Compensation Mechanisms for Ecosystem</p>	GEFTF	4,446,937	46,798,690

¹ Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

² When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCE and SCCE](#).

³ Financing type can be either investment or technical assistance.

		<p><i>landscapes under sustainable land management that have Globally and Nationally Significant Landraces (Traditional Varieties)</i></p> <p><u>Indicator LD-3.2:</u> <i>Integrated management practices adopted by local communities based on gender-sensitive needs: number of communities⁴, at least 40 % of women beneficiaries.</i></p> <p><u>Indicator BD 7.1:</u> <i>Diversity status of targeted agro-biodiversity species (Target: To be measured with the BD Tracking tool)</i></p> <p>Outcome 1.2: Andean forests in productive landscapes are sustainably managed and/or naturally restored and provide ecosystem services</p>	<p>Services".</p> <p>Output 1.1.3: Local development plans and land-use planning frameworks at district and provincial levels incorporate agro-biodiversity zoning frameworks in selected project sites.</p> <p>Output 1.1.4: Conservation and sustainable production methods are defined with smallholder farmers for the restoration of fragile degraded areas within productive landscapes.</p> <p>Output 1.1.5: Conservation model systems (GIAHS and NIAHS⁵ sites) are implemented in selected project sites along with the monitoring tools to evaluate their impact on targeted agro-biodiversity resources.</p> <p>Output 1.1.6: Traditional productive practices and agro-biodiversity know-how (family farmers, indigenous communities) are complemented with conservation-minded technological advances⁶</p> <p>Output 1.1.7: Communication and knowledge-sharing strategies on agro-biodiversity services and benefits, traditional production practices, and the NIAHS concept are available to a wide variety of audiences for awareness raising, dissemination, and replication purposes.</p> <p>Output 1.2.1: Forest-based ecosystem services associated with the maintenance, genetic evolution, and functionality of agro-biodiversity, are detailed and valued to facilitate their inclusion into policy and regulatory frameworks, whilst recognizing</p>			
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⁴ Indicator to be defined during full Project Preparation.

⁵ Nationally Important Heritage Systems.

⁶ MINAM is promoting the following pro-conservation technologies: i) pressurized irrigation systems and methods (sprinkler and drip); ii) Some elements of integrated pest management (ethological, biological, cultural and legal); iii) Organizing the communal crop rotation schemes; iv) Methods of organic fertilization with products based on local resources; v) Modern methods of planting, harvesting, with equipment that is applicable to the project intervention areas; vi) Processing and post-harvest preservation techniques for avoiding losses and deterioration of products used as feed, food and for planting.

		<p>for agro-biodiversity conservation.</p> <p><i>Indicator SFM 5:</i> 83,000 hectares of total forest resources restored in the landscape, stratified by forest management actors</p>	<p>their economic contribution to the productivity and functionality of productive landscapes through payments for their services.</p> <p>Output 1.2.2: Management Plans for Andean forests are prepared with local communities and gender specific groups, defining sustainable use limits, identifying alternatives to unsustainable practices, articulating corresponding guidelines for conservation, and payment mechanisms for ecosystem services.</p> <p>Output 1.2.3: Technical assistance is delivered to local communities, indigenous groups, farmer's organizations and local governments on the principles of sustainable forest management, degraded land recovery, and the combination of technological innovations with traditional practices to maintain the provision of ecological services related to agro-biodiversity conservation.</p> <p>Output 1.2.4: Community-based land zoning programs are developed for conducting reforestation activities with native species in proximity to high agro-biodiversity areas within the productive landscape to maximize ecosystem service provision.</p>			
<p>2. Development of markets for agro-biodiversity products to support conservation and sustainable use and local rural livelihoods.</p>	INV	<p>Outcome 2.1: The marketing of agro-BD products has been enhanced to support the sustainable use of agroBD and rural livelihoods.</p> <p><i>Indicator:</i> BD-9 4.1: Production landscapes that integrate biodiversity conservation and sustainable use into</p>	<p>Output 2.1.1: Strengthened market linkages between the small-scale farmers (family farmers and indigenous communities) and local and regional markets, to support the conservation through sustainable production of food and goods based on agroBD present in the Andes.</p> <p>Output 2.1.2: Value chain Strategy – including farm input value-chain⁷- tested and implemented to enhance the marketing of food and goods based on agroBD that are produced by</p>	GEF TF	2,924,560	9,300,000

⁷ This is to ensure the availability and exchanges of farm inputs produced and exchanged (or marketed) in a sustainable manner, especially traditional seeds that are the basis of agrobiodiversity conservation.

		<i>their management demonstrated by meeting national third-party certification that incorporates biodiversity considerations, or supported by other objective data.</i>	<p>medium-scale farmers in the Andes⁸.</p> <p>Output 2.1.3: Compendium of successful marketing experiences that highlight best practices to guide and promote the commercialization of selected agroBD products⁹.</p> <p>Output 2.1.4: Handbook for practitioners on how to promote market linkages and value chain strategies aimed at stakeholder groups in the Andes¹⁰.</p> <p>Output 2.1.5: Multi-stakeholder partnerships and networks¹¹ established to promote the commercialization and export¹² of agroBD-based products, increase market access¹³ and improve livelihoods.</p> <p>Output 2.1.6: Geographical indication (GI), GIAHS labelling or certification standards developed for agroBD-based products in the Andes of Peru.</p>			
3. Institutional and policy strengthening to mainstream agro-biodiversity conservation and sustainable use into operational frameworks	TA	<p>Outcome 3.1: Existing sectorial policies, regulatory frameworks, financing mechanisms and assistance programs¹⁴ have mainstreamed agroBD conservation and sustainable use in a harmonized manner.</p> <p><i>Indicator:</i></p>	<p>Output 3.1.1: Targeted existing policies, regulatory frameworks and assistance programs¹⁵, revised by incorporating agroBD conservation principles and integrated landscape management in the 7 project regions.</p> <p>Output 3.1.2 : Revised specific regulations and legal aspects are in place to allow the development and marketing of agroBD products (among others: exchanges/market of seeds and other inputs, labelling strategies, certification systems, intellectual property and traditional</p>	GEF TF	1,302,183	8,472,739

⁸ This output is complementary to output 2.1.1. This may include nationally-wide and international markets while output 2.1.1 does not include them. Kindly see the explanation under section 3&4 of the PIF below.

⁹ This will be done in close coordination with institutions present in Peru like PromPeru and Biotrade, among others that may be invited to participate during full project preparation.

¹⁰ The Handbook will include training modules and will be adapted to context-specific needs. A capacity needs assessment will be conducted by the Social Analyst during full project preparation in project intervention sites. FAO will disseminate the Handbook in other projects in the Andean region, and will adapt it to be an applicable tool in other GIAHS/NIAHS projects worldwide.

¹¹ Number to be defined during full project preparation.

¹² This output is linked to output 2.1.2 – medium-scale farmer production. Stakeholders include, among others: private sector, entrepreneurs, consumers, producer organizations, cooperatives, regional and national government. This will be further defined during full project preparation. Kindly see the explanation under section 3&4 of the PIF below.

¹³ This is linked to output 2.1.1. Kindly see the explanation under section 3&4 of the PIF below.

¹⁴ Ministries involved: agriculture and forestry, planning, finance and economy.

¹⁵ This refers to the resource-based productive sector in the Andean regions of Peru.

		<p><i>Indirect coverage in hectares of globally significant traditional varieties - i.e. hectares influenced beyond the direct sites where the project is active through policy changes, regulatory frameworks, training, learning exchanges, etc.</i></p> <p>Outcome 3.2: Information on natural resource and agroBD management in Andean productive landscapes, including GIAHS, has been systematized to support decision-making and planning in Peru</p>	<p>knowledge protection).</p> <p>Output 3.1.3: Practical financing mechanisms of PES and conservation agreements within productive sectors¹⁶ defined and at least one pilot implemented in a participatory manner in each of the seven project regions¹⁷.</p> <p>Output 3.1.4: An inter-institutional¹⁸ coordination mechanism to ensure alignment and consistency in the management of agro-ecosystems based on agro-biodiversity principles; with emphasis on the seven project regions.</p> <p>Output 3.1.5: Enhanced institutional capacities at regional and local level to support permissible natural resource uses according to land use zoning frameworks¹⁹.</p> <p>Output 3.2.1: AgroBD information collected, systematized and disseminated among the involved institutions for enhanced decision-making, monitoring and evaluation of agroBD conservation programs.</p> <p>Output 3.2.2: Capacity development program to improve the analysis and application of available data in planning and conservation efforts in agroBD productive landscapes in the Andes. <i>Target: national, regional and local government staff and CSOs</i>²⁰.</p>			
4. Monitoring, evaluation and dissemination of project information	TA	Outcome 4.1: Project implementation based on RBM and lessons learned/good practices documented and disseminated	Output 4.1.1 Monitoring system project operating and providing systematic information on progress in reaching expected outcomes and targets <i>Target: Project results matrix with</i>	GEFTF	250,000	1,000,000

¹⁶ This refers mainly to forestry and agriculture sectors.

¹⁷ This output is related to Law of Compensation for Ecosystem Services (see output 1.1.2). Kindly see the explanation under section 3&4 of the PIF below.

¹⁸ Ministries involved: agriculture and forestry, planning, finance and economy. Kindly see the explanation under section 3&4 of the PIF below.

¹⁹ This is related to outputs 1.1.3 and 1.2.4. Kindly see more under section 3&4 of the PIF below.

²⁰ Numbers will be defined during full project preparation.

			<i>outcomes and outputs indicators, baseline and targets</i> Output 4.1.2 One midterm and one final evaluation; implementation and sustainability strategy adjusted to recommendations. Output 4.1.3: Project-related best practices and lessons learned systematized and published for a variety of audiences and stakeholder groups. Output 4.1.4: Project website updated to disseminate project findings and facilitate replication.			
			Subtotal		8,923,680	65,571,429
			Project-Management Cost (PMC) ²¹	GEFTF	446,184	3,278,571
			Total Project Cost		9,369,864	68,850,000

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: ()

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

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
National Government	Ministry of Environment	Cash	6,700,000
National Government	Ministry of Agriculture and Irrigation	Cash	39,950,000
National Government	National Agrarian Innovation Institute	In kind	3,000,000
Regional Government	Regional Governments of Puno, Cusco, Apurímac, Arequipa, Huancavelica, Junín and Ancash	In kind	10,500,000
Local Government	Local Governments in Puno, Cusco, Apurímac, Arequipa, Huancavelica, Junín y Ancash	In kind	7,000,000
Private Sector	Peruvian Agro-ecologic Consortium (CAP)	In kind	400,000
Private Sector	PROFONANPE ²²	In kind	1,000,000
CSO	CCTA, PRATEC, ARARIWA, CESA ²³	In kind	300,000
Total Co-financing			68,850,000

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS^{a)}

GEF Agency	Trust Fund	Country/Regional/Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) ^{b)}	Total (c)=a+b
FAO	GEFTF	Peru	Biodiversity	(select as applicable)	5,360,731	509,269	5,870,000

²¹ For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

²² Peruvian Protected Natural Area Promotion Fund.

²³ These acronyms refer to: Andean Science and Technology Coordination Unit (CCTA); Andean Project of Peasant Technologies (PRATEC); the ARARIWA Association which is a non-profit institution; and the Centre of Agricultural Services (CESA).

FAO	GEFTF	Peru	Land Degradation	(select as applicable)	885,845	84,155	970,000
FAO	GEFTF	Peru		SFM	3,123,288	296,712	3,420,000
Total GEF Resources					9,369,864	890,136	10,260,000

a) Refer to the Fee Policy for GEF Partner Agencies.

E. Project preparation grant (ppg)²⁴

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

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

Project Preparation Grant amount requested: \$182,648 PPG Agency Fee: \$ 17,352							
GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee ²⁵ (b)	Total c = a + b
FAO	GEFTF	Country	Biodiversity	(select as applicable)	118,721	11,279	130,000
FAO	GEFTF	Country	Land Degradation	(select as applicable)	27,397	2,603	30,000
FAO	GEFTF	Country	Sustainable Forest Management	SFM	36,530	3,470	40,000
Total PPG Amount					182,648	17,352	200,000

F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS²⁶

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	300,000 hectares (minimum total)
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	83,000 hectares (with GEF funds) 300,000 hectares (minimum total)
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	Number of freshwater basins
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	Percent of fisheries, by volume
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO _{2e} mitigated (include both direct and indirect)	173,000 metric tons (with GEF funds) 1,690,000 metric tons (minimum total)
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	metric tons

²⁴ PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$100k for PF up to \$3 mil; \$150k for PF up to \$6 mil; \$200k for PF up to \$10 mil; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

²⁵ PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

²⁶ Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the *GEF-6 Programming Directions*, will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and/or SCCC.

chemicals of global concern	Reduction of 1000 tons of Mercury	<i>metric tons</i>
	Phase-out of 303.44 tons of ODP (HCFC)	<i>ODP tons</i>
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	<i>Number of Countries:</i>
	Functional environmental information systems are established to support decision-making in at least 10 countries	<i>Number of Countries:</i>

PART II: PROJECT JUSTIFICATION

1. Project Description.

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

Agro-biodiversity: Peru is recognized among the five most mega diverse countries in the world. In addition, it is one of the most important global centres of agricultural biodiversity, wild relatives and wild species adaptation. Peruvian farmers have achieved, through thousands of years of experimentation and knowledge accumulation, the production and adaptation of agricultural species and varieties that constitute an invaluable genetic heritage for all humankind. The country hosts about 184 native domesticated plant species with hundreds of cultivated varieties and species including two of the most important food crops in the world, potatoes and maize. Likewise, Peru preserves wild relatives of globally relevant crops. These crop wild relatives (CWR) are plants that are ancestors or close relatives to existing crops that have a direct socio-economical relevance for all humankind.

The Peruvian Andean region encompasses 84 of the existing 103 life zones in the planet. The bio-physical conditions in the Andean mountain range, extending from north to south and with altitudes up to 6990 masl, have created conditions for a wide climatic variability that has fostered different landscapes and ecosystems with high biodiversity and endemism. These unique landscapes constitute one of the most important reservoirs of genetic varieties and wild relatives. The natural diversity due to marked variations in elevation and micro-climates on one hand, and the dynamic efforts of farmers over thousands of years on the other, have made the Peruvian Andean region one of the most important centres of plant domestication in the world²⁷. Indeed, Peru is in the middle of the Vavilov South American Center of Origin for cultivate plants, including root tubers, grains and legumes, vegetable crops and fruits – one of eight Vavilov Centers worldwide. Potato is the most important food security crop that originated here with over 4000 different known varieties. In addition, ullucos, cassava, sweet potato, lima beans, oca, pepper, pumpkin, squash, caigua, lucuma, quinoa, and other Andean grains, cotton, maize, llama, alpaca and Guinea pigs represent other important species, which have originated in this centre. In addition, Peru is home to priority crop wild relative genetic reserve locations for food crops such as potato and barley and likely others.²⁸

Socio-economic context: Today, rural Andean inhabitants continue to live in mainly indigenous communities utilizing the same agricultural practices their ancestors used to grow many of the same crops. Agro-biodiversity genetic resources are thus intrinsically linked to ancestral traditional practices and their conservation intertwined with their cultural affirmation. Most of these communities, however, live below the poverty line and represent the poorest segments of the Peruvian population. Dedicated to smallholder farming, and struggling to grow enough food for their families, native communities are increasingly faced with severe land and water degradation problems, which steadily undermine their productivity and livelihoods. Progressive and often indiscriminate land use changes and deforestation, forest degradation and fragmentation, unsustainable wood extraction for construction and firewood, as well as clearings of vast tracks of land to establish pasture and farming areas, are all taking an expected toll on: (i) fragile Andean forest ecosystems, (ii) the indispensable ecological services and functions these provide, and by extension, (iii) the adjacent production landscapes they sustain, including the domestic and wild agro-genetic varieties they preserve. Given that agriculture is the main sustenance and livelihood of Andean communities, the on-

²⁷ http://www.mtnforum.org/sites/default/files/forum_topic/files/01_introduccion_-_agro biodiversidad_en_los_andes_-_enfoques_de_investigacion.pdf

²⁸ The Second Report on the State of the World's Plant Genetic Resources for Food and Agriculture. FAO. Rome, 2010.

going erosion of the productive landscape and its supportive ecosystem has triggered serious socio-economic and environmental problems. At present, integrated landscape management practices in priority agro-ecosystems are either absent or ineffectual, resulting in faulty natural resource management, scarce food security gains, and limited livelihood contributions.

Climate risks: Peru is one of the most vulnerable countries to climate change. Increased climate variability due to climate change is expected to have serious consequences on the resilience of existing species and varieties for food production. According to the Intergovernmental Panel on Climate Change (IPCC), around 25-30% of the plant species could be extinguished or endangered in the next century. Amongst the existing varieties of potatoes (*Solanum*), *S. Demissum*, which is resistant to the late potato blight, would only be able to survive in 33-90% of its current areas due to a potential rise in temperatures. *S. Chacoense* and *S. berthaultii*, resistant to the potato beetle (*Leptinotarsa decemlineata*) would lose 40-53% and 2-65% of their distribution area, respectively. The actual distribution area of the *S. microdontum*, which can be used in genetic enhancement for calcium content increase, could either extend up to a 28% or be reduced by 9%²⁹. In this unpredictable climatic context, degraded natural systems, combined with the genetic erosion and/or losses of agro-biodiversity would translate into less resilience and a loss of options for the adaptation of agriculture to climate change and the assurance of food security not only in Peru but worldwide.

Forests: Currently, highland and inter-Andean relic forests (representing the highest altitude forests in the world - between 2000 and 4000 masl) are being affected and transformed at an unprecedented rate. These forests not only provide refuge to globally significant animal and plant species but also deliver invaluable ecosystem services including the maintenance and conservation of crop and animal genetic diversity. At present, national projections indicate that Andean forest cover has been reduced to 305,000 ha. and the original Andean Keuna and Kolli forests coverage, estimated at about 3,000,000 ha, reduced to approximately 90,000 ha. This continuous decrease in forest cover further threatens the maintenance of agro-genetic diversity which relies on functioning forests ecosystems and the services they confer to agricultural productivity and ultimately food security at local, national and global levels.

Ecosystem services provided by forests in the Andes are: i) the maintenance and regulation of hydrological cycles (water infiltration rates and storage, as well as replenishment of aquifers) essential in times of drought or pronounced seasonal variations; ii) soil conservation and erosion control, including the maintenance of water quality; iii) continuance of nutrient cycles, carbon storage, nitrogen and organic matter, critical for the preservation of species variety and diversity within species, including levels of productivity; iv) regulating climate, including humidity levels, thereby lessening the impact of climate change, such as prolonged droughts and/or frosts, both of which can severely affect Andean crops in both domestic and wild varieties; v) pollination, particularly in the case of wild relatives, ensuring their perpetuity in the wild and their genetic contribution to domesticated varieties in terms of gene flow.

Institutional framework: For decades, public policies in Peru have sought to address environmental concerns. Short-term economic gains (achieved through deforestation, the introduction of commercial crops, excessive pesticide and fertilizer use) led to severe social and environmental consequences. The Andes area was very exposed to poverty and marginalization. After decades of ill-suited policies in Peru, substantive reforms are finally materializing. Looking to a long-term solution, the GoP intends to integrate agriculture, forestry, and land-use planning policies and incentive mechanisms to address what were in the past, and still to a certain extent, the major drivers behind agro-biodiversity loss: i.e. deforestation, land clearing, monocultures.

However, many **barriers** still prevent stakeholders from addressing these key drivers and securing a long-term solution for agro-biodiversity conservation in Peru:

(a) Limited institutional recognition and valuation of the multiple benefits of agro-biodiversity conservation. While the intrinsic as well as the socio-economic, environmental and cultural value of agro-biodiversity resources is becoming progressively evident, the prevailing disparity in dealing with agro-biodiversity among sectors has long

²⁹ JARVIS, A.; LANE, A. & HIJMANS, R.J. (2008). The effect of climate change on crop wild relatives. *Agriculture Ecosystem and Environment*, 126 (1-2):13-23.

constituted a significant and persistent barrier to conservation efforts. It is now clear that agro-biodiversity's importance needs to also be measured, presented and discussed in economic and financial terms, including the losses and gains it can result in depending on the development path and strategy employed. This will not only entail presenting and articulating agro-biodiversity goods and services in a different light, context and perspective, but assigning a monetary value to its conservation, including devising the appropriate compensation mechanisms for the goods and services it delivers. The more this barrier can be addressed, the more effective and sustainable conservation efforts will be.

(b) Incipient experience in compensatory mechanisms/payment for environmental services related to agro-biodiversity hampers full appreciation for agro-biodiversity's contribution to national development and as global public goods. This barrier, closely related to (a), has also acted in detriment of appreciating agro-biodiversity's contribution to development and as global public goods. These compensatory mechanisms or payments for ecosystem services could provide an alternative to support ancestral traditional production practices, in particular for agro-biodiversity products that given their low-scale production are not marketable³⁰ in national and international markets (see more under Component 2 in section 3 below).

(c) Limited public awareness regarding the importance of agro-biodiversity conservation. As mentioned above agro-biodiversity remains a rather unclear concept to most (particularly in urban areas) where the majority of the population remains uninformed of its vast cultural heritage, but most importantly the vital link between agro-biodiversity and food security through the adaptation and resilience it confers to a wide variety of crops and animal species. National recognition, awareness and improved understanding of the threats that such traditional and sustainable agricultural systems face, the socio-economic and environmental implications resulting from agro-biodiversity loss, including its global importance, and the benefits it provides at all levels, is fundamental for its conservation and the institutional support required for its maintenance.³¹

(d) Limited capacities and know-how regarding the economic profitability and marketing potential of agro-biodiversity thereby limiting its promotion and the potential of its future uses³². This is particularly the case in relation to the alternative, specialized, or niche markets for some specific agro-biodiversity products which have the potential to fill market opportunities. Given the great genetic diversity of most of the crops under consideration and because not all genetic resources within a conservation portfolio will have market potential complementary incentive mechanisms as described above in (b) are needed. Capacities related to the marketing cycle, at local, regional, national levels are low among small- and medium-scale producers in the Andes. Skills and competencies should be strengthened for adding value in local markets associated with agro-biodiversity production and conservation.

³⁰ Drucker, A.G. and Appels, J. Value chain development: a silver bullet for agrobiodiversity conservation and use? In: Maxted, N., Dulloo, E. and Ford-Lloyd (eds). In Press. Enhancing Crop Genepool Use: Capturing wild relative and landrace diversity for crop improvement. CABI. Narloch, U., Drucker A.G. and Pascual, U. 2011. Payments for agrobiodiversity conservation services (PACS) for sustained on-farm utilization of plant and animal genetic resources. *Ecological Economics* 70(11): 1837-1845.

Narloch, U., Pascual, U. and Drucker A.G. 2011. Cost-effectiveness targeting under multiple conservation goals and equity considerations in the Andes. *Environmental Conservation* 38(4): 417-425.

³¹ Parviz Koohafkan and Miguel A. Altieri. *Globally Important Agricultural Heritage Systems: A legacy for the Future* - GIAHS, FAO, Rome, 2011.

³² The PIF is based on the following market studies:

- i. *Guía de oportunidades de mercado para los ajíes nativos de Perú*. Compilation of market studies developed within the framework of the project: "Rescate y Promoción de Ajíes Nativos en su Centro de Origen" for Perú. Matthias Jäger, Alejandra Jiménez, Karen Amaya, compiladores Bioversity International, 2013
- ii. *Estudio de Mercados y Clientes Internacionales de la Quinua*. Elaborated by: Myperuglobal - Consultora de Comercio Exterior, 2014. Available at: <http://quinua.pe/wp-content/uploads/2014/09/Quinua-Recetario.pdf>.
- iii. *Informe de Estructura y Tendencias del Mercado de Quinua*. Maximixe Consult S.A. 2011. Available at: <http://quinua.pe/wp-content/uploads/2014/09/Quinua-Recetario.pdf>
- iv. *Mercado de yacón en Estados Unidos. Perfil del producto*. Oficina Comercial de Perú en Miami. 2012. Available at: <http://www.siicex.gob.pe/siicex/documentosportal/alertas/documento/doc/747142775rad08B8C.pdf>
- v. *Bioenergía y seguridad alimentaria. El análisis de BEFS para el Perú. Vol. 1. Resultados y conclusiones*. FAO, 2010. 315 pp. Rome.
- vi. *Reportes de exportación para el sector biocomercio del Sistema Integrado de Información de Comercio Exterior (SIICEX)*: <http://www.siicex.gob.pe/siicex/portal5ES.asp?page=480.47900>

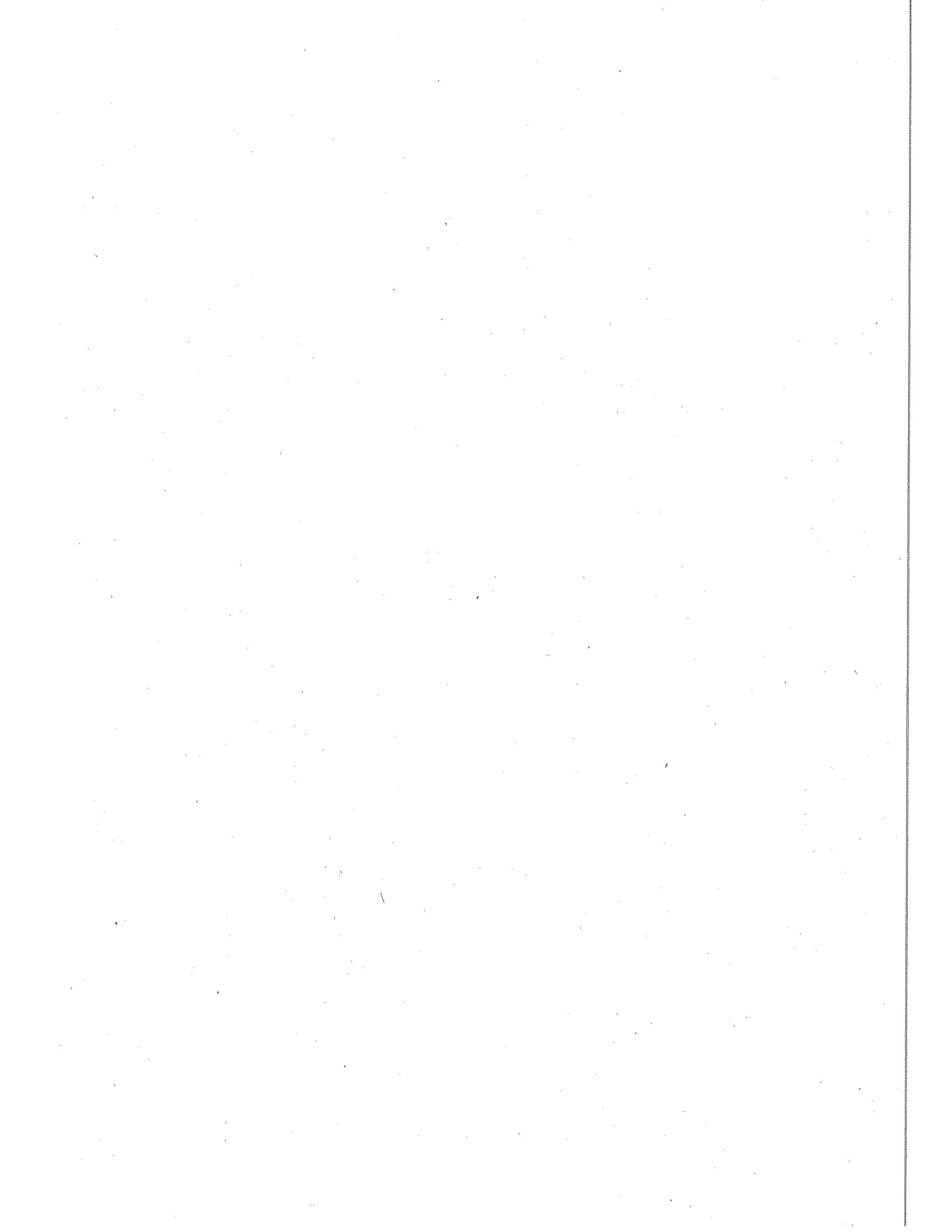
(e) Inadequate understanding of the interdependence between agro-biodiversity conservation and the associated landscapes on which it fully depends. The role of native relic forests and their provision of ecosystem services are indispensable to support genetic diversity. In parallel, high levels of biodiversity play key roles in regulating ecosystem functioning and also provide ecosystem services of local and global significance (carbon sequestration, biodiversity conservation, soil enrichment, critical watershed functions, water quality maintenance, water flow regulation, recharging underground aquifers, mitigating flood risks and moderating sediment flows). In this regard, GIAHS-type sites have high degrees of plant diversity in the forms of rotations, polycultures, and agroforestry patterns³³. The diversification generated by integrating multiple production system is reliant on functioning ecological systems. The predatory use of forests in the form of deforestation, degradation and unsustainable use will irreversibly alter the provision of ecosystems services indispensable for maintaining the plant and animal genetic diversity, which underpins local and traditional productive systems. One is simply reliant on the other through dynamic and self-supporting processes. Any strategy to successfully preserve agro-genetic diversity in-situ in the Peruvian Andes would need to concomitantly address deforestation trends and ensure that land use planning and resource management efforts duly incorporate sustainability and conservation concerns within their goals and programming frameworks.

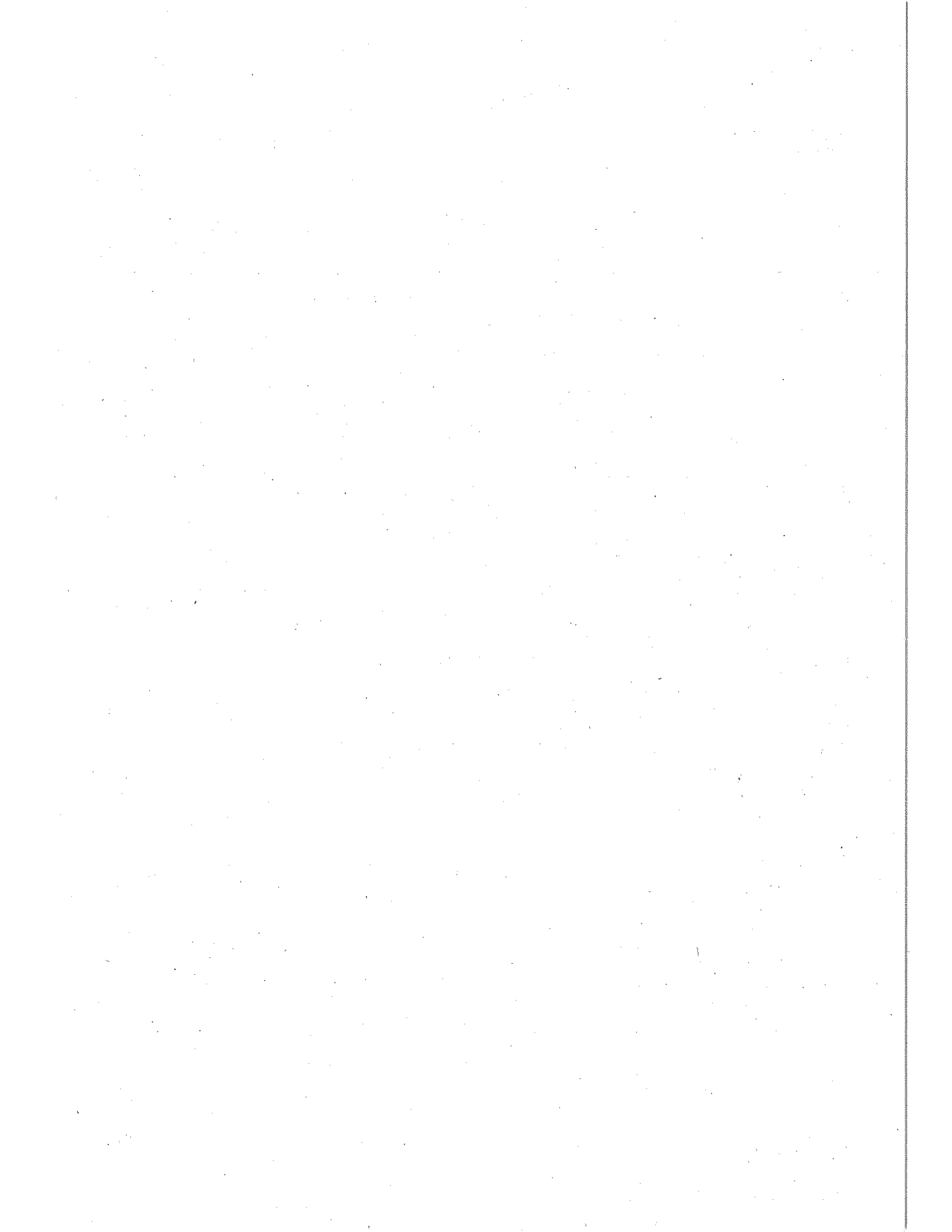
(f) Limited and/or inconsistent coordination in the implementation of guidelines, plans and regulatory frameworks for the sustainable management of agro-biodiversity-rich landscapes between national, regional and local levels. Planning has been often uncoordinated in the three government levels. In the past, public initiatives and reforestation programmes have tended to favour quick fixes by promoting competitive, fast growing commercial varieties at the risk of inadvertently displacing agro-biodiversity products. The short-term gains derived from commodity driven markets often placed local producers and native farming communities at an economic disadvantage, creating growing disincentives for the maintenance of ancestral agricultural practices consistent with GIAHS principles. In other cases, outdated subsidies pertaining to the application of fertilizers and pesticides, or simply supportive of other unsustainable approaches, degraded the productive landscapes harbouring globally important plant and animal genetic diversity. Consequently, a combination of greater coherence, coordination, and information management amongst relevant institutions at corresponding government levels needs to materialize and further develop to ensure that any progressive policies and institutional advances supporting ecosystem integrity, agro-biodiversity conservation, and integrated landscape management is not compromised but rather promoted and enhanced.

(g) Insufficient policies and regulatory frameworks supporting the development of traditional agricultural systems and family farming, at national, provincial and local government levels. Family farming and the unique social structures and knowledge systems deeply connected with agro-biodiverse production models have been threatened in the last decades by alternatives associated with commodity-driven markets. Recognizing and safeguarding the organizational structures inextricably linked to these sustainable and integrated production models, needs to be part of any successful agro-biodiversity conservation strategy. Currently, the GoP through the combined efforts of the Ministry of the Environment and the Ministry of Agriculture is promoting such a strategy via a series of baseline operations efforts detailed in section 2 below. The implementation of the Law of Compensation for Environmental Services is still starting.

(h) Sub-optimal information management and dissemination for policy formulation and reform. Sector policies remain inconsistently informed regarding sustainable natural resource use. Existing information on the functional characteristics of a dynamic productive landscape and its elements remains scattered and ineffectively interpreted in practical terms to act as guiding frameworks for policy reform, innovative approaches, or the application of more sustainable alternatives. In addition, while some institutions may receive relevant resource based data, others may not. Availability also differs among government levels and the operational capacities of the institutions receiving this information, all leading to disparities and resulting in uncoordinated approaches in the application of policies and the potential benefits they may generate when properly developed in a complementary coordinated manner.

³³ Ibid.





(i) Absence of incentives for the application of conservation practices. This has systematically impeded the definition of resource use limits and the provision of viable alternatives, including ecologically sound production methods for the recuperation of fragile ecosystems in the productive landscape. While the political will for sustainably managing the country's resource base, particularly in fragile Andean ecosystems exists, the necessary tools and associated capacities to achieve it, at varying government levels, remains insufficient.

(j) Absence of integrated monitoring and evaluation system for productive ecosystems and the agro-biodiversity they harbour at local, regional levels and national levels. Currently, the benefits and services provided by land, water and forest resources, including their attendant agro-biodiversity are not effectively valued, monitored, nor collectively evaluated. This has not only hindered their effective estimation, validation and contribution to development strategies, but also limited their integrated management and that of agro-biodiversity into national agricultural and forest policies, including the definition of strategies for its promotion and sustainable use. This, coupled with fragmented information channels regarding sustainable resource use level, and the benefits of the goods and services they provide, has also further hampered effective policy formulation and/or reform in favour of more sustainable approaches. The absence of monitoring frameworks or protocols for development strategies or assistance programmes has limited their ability to effectively measure their impact and on agro-biodiversity resources.

(k) Deficient complementation between traditional/ancestral practices and modern technologies for conservation. Traditional systems of agriculture embody a cumulative legacy comprised of a wealth of accumulated knowledge in the management and use of agro-biodiverse resources which holds invaluable insights to the challenges of agricultural production and natural resource management. However, by definition these globally significant agro-biodiverse systems are not static and are characterized by their dynamic nature which needs to be recognized and supported. The combination of new techniques with traditional practices may represent an alternative to support agro-biodiversity-based knowledge systems without compromising their resilience, sustainability and integrity.

The above-mentioned barriers and root causes will be further analysed during full project preparation.

2) The baseline scenario and associated baseline projects

The GoP is cognizant of the above-mentioned challenges, the prevailing inconsistencies across government levels, the need to further develop skills and capacities to conserve agro-biodiversity in an evolving modernization context, and the urgency to identify the necessary economic incentives and mechanisms to make conservation a viable and sustainable proposition. Providing an effective response to these challenges is a top priority for the GoP who is directing its programming efforts and resources towards sustainable agricultural production, increasing its commercial added value in the Andean region, as well as developing agro-biodiversity related incentive mechanisms, as detailed in the baseline described below.

a) Legal framework related to Payment for Environmental Services (PES)

In 2014, the Law 30215 *Compensation Mechanisms for Ecosystem Services*³⁴ was approved by the Peruvian Congress. This new Law calls for compensating producers (public or private) engaging in sustainable production practices, sustainable land uses, and/or conservation oriented resource management, thereby generating through their deliberate actions ecosystem goods and services.

The Law is consistent with STAP's guidance on payment for environmental services (PES) and ensures: (i) the voluntary nature of any contractual arrangement, (ii) contingent transactions between (a) at least one seller; and (b) one buyer, and (iii) a well-defined environmental service, or a land use likely to secure that service. The Law equally addresses the potential threats to the sustainability of payments for environmental services. Issues pertaining to: (i)

³⁴ Ley de Mecanismos de Retribución por Servicios Ecosistémicos (No. 30215). In Spanish "retribuciones" is equivalent to the words "repayment", "reimbursement", "compensation", "remuneration" for a service or good rendered. During the nation-wide consultative process for the drafting the Law, stakeholders unanimously favoured the term "retribuciones", rather than using the reference to "payments".

non-compliance with contractual obligations are contemplated in Articles #7-8-9-10 and #12 of the Law; (ii) effective administrative selection in terms of areas or contracting parties, including their ability to effectively deliver the proposed services cost-effectively, are considered in Articles # 6-7-12 and 13; (iii) ensuring that the protection of a resource in a given area does not inadvertently stress or compromise another elsewhere, is secured in Articles # 1-6-12; and (iv) the ineffective selection of an area and corresponding stakeholder group where the intended service(s) would have been provided anyway without the incentive of compensation, is overseen in Articles 10-11-12-13. Kindly see Annex II of this PIF for a summary brief of the Law.

MINAM is working with the MEF along with the technical support of Bioersivity International (formally IPGRI - International Plant Genetic Resources Institute) to identify the indicators and parameters to assess public sector initiatives and investments that could receive the incentives foreseen in the Law 30215.

The Law 30215 is approved and enforced, but not yet implemented through policies. The Project will support the implementation of this compensation mechanism in targeted GIAHS sites (see Section 2 of the PIF below).

b) Baseline initiatives led by the Ministry of Environment (MINAM)

MINAM is the entity responsible for assigning and designating land uses in Peru, including conservation and sustainable use categories.

Recognizing the interdependence between the conservation of genetic resources, and the ecological integrity of the landscape from which it evolves, the *National Conservation and Mitigation Forest Programme* is led by the MINAM³⁵ by USD 19.95 million and financed by the national budget. This Programme has identified an estimated of 7 million ha. of land deemed suitable for reforestation in the Andean region. It promotes the incorporation of sustainable production systems based on native species and their wild relatives to generate new economic opportunities for the local population whilst strengthening forest conservation capacities in local governments and communities. Some of the activities will be implemented in the Cusco, Puno and Junín regions, although the Program is mainly focused on the Amazon.

The MINAM is also implementing the *Sustainable Economic Development and Strategic Management of Natural Resources Programme (PRODERN)*, which was established through a bilateral agreement between Peru and Belgium in 2011. In alignment with the GoP's strategy, which emphasizes economic growth through social inclusion to alleviate poverty in rural areas, the objective of the programme is to support the management of natural resources and biodiversity through landscape management approaches in Apurímac, Ayacucho, Huancavelica, Junín and Pasco. The key areas of work focus on land use management, valuation of ecosystems goods and services, and the incorporation of biodiversity conservation in value chains. The programme works closely with national, regional and local governments to ensure consistency in the strategic management of natural resources and the implementation of Peru's National Environmental Policy. MINAM is also working with INIA in the elaboration of a results based national budget program to assess 17 native crops and adapted breeds, including close relatives to wild crops in Andean areas. The specific objectives of this program are: (i) conservation and access to alternative markets; (ii) promotion of alternative conservation practices based on biotechnology; and (iii) Biosafety and implementation of the Cartagena Protocol. The national budget associated with this project is estimated at USD 6.7 million³⁶ with a 2015-2021 implementation horizon.

c) Baseline initiatives led by the Ministry of Agriculture and Irrigation (MINAGRI)

The mandate of the MINAGRI is to reduce poverty and improve living conditions in rural areas by integrating small-scale and subsistence farmers to markets. More recently, efforts have focused on promoting family agriculture and resulted in the preparation of a *National Strategy on Family Farming*, with a corresponding budget and legal framework currently under development. Interventions are focused on strengthening the competitiveness and profitability of small producers, paying particular attention to: (i) Andean and Amazonian indigenous communities; (ii) increasing the profitability of available resources; (iii) contributing to household food security and nutrition; and

³⁵ <http://www.bosques.gob.pe/>

³⁶ 20 million *nuevos soles* (PEN)

(iv) building smallholder capacities to take advantage of nascent market opportunities. Similarly to the above scenario, this baseline programme illustrates a radical shift from past agricultural policy by now focussing on small-scale farmers and their insertion into local, regional and national economies by enhancing their productive, entrepreneurial and technical skills, including the promotion of new native local products the majority of which originate from agro-biodiversity resources.

The Agricultural Development Programme (**AGRORURAL**) directed by MINAGRI is implementing from 2014 to 2018 the *Andean Agricultural Recovery Project* with the Inter-American Development Bank (USD 40 million). Its objective is to improve the productivity of main native crops through the rehabilitation and recovery of traditional/ancestral terraces in 11 regions of the country (Junín, Lima, Huancavelica, Ayacucho, Apurímac, Cusco, Puno, Arequipa, Moquegua, Tacna and Amazonas). It is aimed at increasing productivity by returning to tested ingenious ancestral methods and the native crops which through generations have evolved as opposed to introduced commercial varieties ill-suited for the climatic and rigors of the Andean landscape. This would ensure that farmers produce enough food to satisfy family needs and may derive a surplus to be sold in local and regional markets. This project is implemented at watershed level in 47 provinces of the 11 regions of intervention, out of which 6 are included in the proposed FAO/GEF project. The *Andean Agricultural Project* activities are mainly directed towards improvements in irrigation infrastructure, efficient use of water resources, capacity building of small-scale farmers to support their insertion into markets, promotion of sustainable management of prairies, and artisanal practices in pond management. Reforestation activities associated to the rehabilitation of ancestral terraces will also be implemented at watershed level. The *Andean Agricultural Recovery Project* will plant native forest clump plantations in six of the seven regions³⁷ identified by the proposed FAO/GEF project. That project reforestation efforts will help stabilize steep slopes while also contributing to climate change mitigation, absorbing up to 2 tons of carbon/ha per year³⁸. It will also create new economic opportunities for small-scale farmers through the exploitation of non-timber products, while reducing unsustainable practices. The *Andean Agricultural Project* reflects the significant shift in the GoP's agricultural policy and rural assistance programmes towards sustainable productive practices, and the promotion of native crops in the Andes.

Mi Riego Fund was approved by the GoP in 2013, equivalent to about USD 323 million³⁹ for the promotion of irrigation in Andean zones. This Fund is executed by MINAGRI and provides public financing for the preparation of upstream technical and economic feasibility studies, as well as the implementation of irrigation civil works. The areas of intervention are primarily poor rural areas and include Ayacucho, Huancavelica, Junín, Apurímac, Huánuco and Cajamarca. To date, *Mi Riego* Fund has supported the expansion and improvement of irrigation systems in 70,500 ha and has benefited between 100,000 to 120,000 families. These initiatives are being implemented in close collaboration with regional and local governments, communities, and farmers families, once again with the aim of improving the livelihoods of impoverished rural communities through sustainable resource use and conservation considerations in the productive landscape.

d) Baseline activities led by the Ministry of Trade and Tourism

The Peruvian Commission for the Promotion of Exports and Tourism (**PromPeru**), which depends upon the Ministry of Trade and Tourism, is the technical entity in charge of promoting exports, tourism and national image. Prom-Peru promotes the "exports route"⁴⁰, and provides with technical assistance and quality control to the export sector, including agriculture. PromPeru is promoting the export of natural products (grains, fruits, almonds, roots, herbs⁴¹), and has a stand-alone program to support the export of quinoa⁴² (highly demanded in the US and the EU).

e) Baseline activities related to certification and denomination of origin

³⁷ Puno, Cusco, Apurímac, Arequipa, Huancavelica, Junín and Ancash.

³⁸ Calculated using table 3A.6 (p. 163) in the ANNEX 3A.1 Biomass Default Tables for Section 3.2 Forest Land. Available at <http://www.ipcc.ch/meetings/session21/doc5to8/chapter3a1.pdf>. The calculation was made as follows: Value: 4tn of dry material/ha/year of increase, which corresponds to America, Montane Moist, other broadleaved. Carbon fraction: 0.47. The value was estimated for 23,000 has, as follows: 23,000 ha x 4tn of dry material/ha/year x 4 project years x 0.47 = 172,960 tons of Carbon, using IPCC values.

³⁹ One billion *nuevos soles* (Peruvian currency).

⁴⁰ http://www.siicex.gob.pe/siicex/portal5es.asp?_page_=791.00000

⁴¹ <http://www.siicex.gob.pe/siicex/recursos/sectoresproductivos/Catalogo%20productos.pdf>

⁴² <http://www.siicex.gob.pe/siicex/recursos/sectoresproductivos/final%20quinua%20referencia.pdf>

The National Institute for the Defense of Competition and Protection of Intellectual Property (INDECOPI) is a specialized autonomous public agency, created in 1992 and ascribed to the Presidency of the Council of Ministers. It is endowed with legal authority in domestic public law and has functional, technical, economic, budgetary and administrative autonomy. Its principal functions are market promotion and the oversight and protection of consumers' rights. In addition, it promotes fair and honest competition in the Peruvian economy, safeguarding all forms of intellectual property: from trademarks and copyrights to patents and biotechnology. Within this mandate INDECOPI also confers *certificates of origin* confirming the particular attributes, production methods, geographical location, and socio-economic factors linked to a given product of a specific region. To date INDECOPI has conferred eight certificates of origin, all to agricultural products sustainably produced in various regions of Peru. INDECOPI's reliability, transparency, and the services it provides to producers and consumers alike, have consolidated its relevance and the importance of its mandate. Its certification standards and guarantees have also greatly assisted the insertion of various agricultural products in the market place by informing consumers of a products' values, properties and features.

f) Baseline initiatives led by the Civil Society

The *Peruvian Agro-ecological Consortium (CAP)*⁴³, through its civil society member organizations, has worked for more than 25 years on designing strategies to support organic production. CAP has been promoting the development of inclusive organic value chains as an alternative to support small producers in increasing their productivity and linking them to markets. Insofar, the steady growth and increasing demand for organic produce has benefited small producers supplying additional income to improve their livelihoods.

g) Baseline initiatives led by the Ministry of Economy and Finance (MEF)

The MEF is currently in the process of devising a system of incentives for the development of public investment projects incorporating agro-biodiversity considerations and sustainable resource use in the productive landscape. The MEF is planning provide additional non-monetary incentives (technical assistance, capacity building) to rural producers. The MEF is also exploring similar incentives with the private sector involving tax exemptions and/or reductions based on private investments supportive of conservation goals, including the maintenance of agro-biodiversity resources. This set of MEF incentives is expected to be finally designed by the time of CEO endorsement and will be further analysed in coordination with the project activities during full project preparation.

h) Baseline scenario in the marketing of agroBD products

A development priority for the GoP is promoting inclusive economic development to address poverty reduction particularly in the Andean region, where many rural poor live. Baseline agricultural and forest programmes are aligned with this goal to respond to the complex and unique socio-economic and cultural demands of Andean communities. The GoP'S objective is to improve productivity, facilitate the integration of small-scale and subsistence farmers into the market and improve their living conditions.

The GoP has worked with FAO in supporting the access of subsistence and small-scale farmers to local markets. These farmers are organized in Andean communities, apply traditional knowledge, and have been central in the conservation of agroBD crops over the centuries (see the list in Annex I).

Access of small-scale farmers to markets

FAO and the GoP have been working together to connect family farmers and rural communities in the Andean areas to relevant markets. FAO's findings indicate that although some family farmers can be linked to value chains for national or export market, many of them could better benefit from local markets by valorizing their local and agrobiodiversity values in a more direct contact with end consumers, through short value chains and direct selling,

⁴³ <http://www.ideas.org.pe/index.php/videos/item/28-centro-ideas-y-los-10-hitos-agroecologicos-de-peru>

(e.g. farmers markets and community-supported agriculture). The value chain approach⁴⁴ in its complete description may not fit to all smallholders, since many of these farmers do not have access to the five stages of a full value chain. In this case the concept of "market linkages" may be more appropriate than "value chain". This is the approach adopted for output 2.1.1. The value chain approach is adopted under output 2.1.2 for small- and medium-scale farmers that can access the national and export markets (for both see Table B and section 3&4 of the PIF).

FAO has identified that not all agroBD products are suitable for export markets, depending upon market requirements and production characteristics. Therefore it is important to consider two strategies: export and local markets, with the related suitable labeling and certifications approaches. While third-party certification is usually necessary on export markets, a set of alternative forms of certification exists for local markets, such as the self-certification, participative guarantee system (PGS) and governmental license, can be developed and adapted to local conditions in project sites. PGS are well developed in America Latina for agro-ecological (organic, ecological) products and could be developed for other types of standards and labels such as geographical indications (GI) and GIAHS labels. Descriptions of these concepts are provided below.

Participative Guarantee System(s) (PGS) are locally focused assurance systems. PGS allow farmers to have certification based upon active participation of stakeholders and built on a foundation of trusts, social networks and knowledge exchanges. PGS represent an alternative to third party certification, especially adapted to local markets and short supply chains. They enable the direct participation of producers, consumers and other stakeholders [(as public authorities in some cases)] in: i) The choice and definition of the standard; ii) The development and implementation of verification procedures; iii) The review and decision-making process to certify product/farmer plots. PGS integrate capacity building and allow farmers and reviewers to help solve practical problems [and meet consumers specific expectations], while encouraging more responsibility and active involvement of stakeholders⁴⁵.

GI is an intellectual property tool defined in the TRIPs agreement of WTO, which are names referred to the specific place where they are produced, providing the goods some unique characteristics due to the local resources involved. The national and local authorities play an important role in GI scheme management by promoting consumer awareness-raising through national campaigns regarding food heritage, links to gastronomy, visibility of products; and ii) GIs are intrinsically based on a multisector approach (agriculture, intellectual property, environment). FAO has a long experience in supporting member countries in developing sustainable GIs. FAO has implemented a Latin-American project with the GoP through INDECOPI (see above), developing new GIs that focus on agrobiodiversity⁴⁶. The findings of that learning process and pilot are being considered for other cases in Peru and in other countries on similar interesting approaches.

GIAHS: GIAHS are national specific labels which being developed in the frame of GIAHS areas in some countries (Chile, China⁴⁷) by the national committees so producers. The objective is that goods and services localized in these GIAHS areas can add value while preserving agrobiodiversity. GIAHS label will make visible to consumers the existence of a specific biodiversity area and guarantee the contribution to biodiversity of the goods containing this label. Although there has not been a specific market analysis in Peru for GIAHS labelling, FAO-led projects and other territorial branding experiences, as referred above, confirm the suitability of GI schemes for Peru.

⁴⁴ Value chain as per FAO's definition: "long chain that include the coordination of input, production, aggregating, processing and distribution stages".

⁴⁵ The Peru PGS case is described in: http://www.ifoam-eu.org/sites/default/files/pgs_study_report_brief.pdf. The proposed project could implement this approach in collaboration with ANPE (national association of organic producers) for organic products from the project areas and extend it to other standards (GI, GIAHS). These options will be further explored and defined in a participatory manner during full project preparation. Note that in Latin America, PGS are quite developed.

⁴⁶ More information about project outputs in Latin America and Peru (with potential GI products identified): <http://www.fao.org/food-quality-origin/technical-assistance/it/>

⁴⁷ See the example of GIAHS in Chiloe (Chile), and specifically about the label specification. The scheme for Peru will be adapted to local conditions as will depend on the local needs and objectives. Chiloe: specification of the GIHAS label: https://www.feedingknowledge.net/02-search/-/bsdpl/6750/en_GB

One product benefiting from the Chiloe label, with now market development in Europe:
<http://puntachilen.es.tl/Cooperativa-de-Ajos-de-Punta-Chilen.htm>
<https://www.facebook.com/chiloe gourmet>

Both GIs and GIAHS labels are based on territorial branding strategy linked to local products that can contribute to agrobiodiversity conservation. Indeed the GIs and GIAHS specifications are built upon participatory approaches with local stakeholders, and allow designing specifications that best fit to the local situation (i.e. values and needs to be addressed) and objectives (i.e. biodiversity typicality, and preservation and promotion of traditions), ensuring sustainability. The specific GI and GIAHS standard(s) (or specification) usually recognize traditional and agro-ecological practices already existing. Therefore no additional cost is generally foreseen at production level, and PGS or self-certification systems could also reduce, or even cancel, the certification cost⁴⁸. GIs support public-private partnerships and thanks to protected geographical indication, which links the region and traditional knowledge with the product, producers are able to add value to their products, which can be sold to customers who are willing to pay a premium, and in turn bring in higher prices and improve producers' livelihoods⁴⁹.

GI and GIAHS labels and certifications are not additional but complementary to organic label/certification. For those farmers who can afford organic third-part certification - necessary for export markets-, the GI or GIAHS territorial branding will add value in relation to their place of production (i.e. specific globally important agriculture heritage systems). For the other farmers who cannot afford such third party certification scheme, GI/GIAHS labels offer new opportunities for agro-ecological/typical producers to inform consumers about their specific values (agro-ecological, typicality), and to guarantee these values. Urban consumers in developing countries represent an important market for these territorial-branded products as they look for local, identity-based and sustainable food products (see FAO guidelines⁴⁶ and forthcoming assessment of economic impacts which will support the project strategy of the full project document in 2016)⁵⁰.

Lessons learned from related projects

The proposed project is based on lessons learned from:

- 1) The Project "*In-situ conservation of native cultivars and wild relatives*" (UNDP/GEF). This GEF-1 project represented a shift from the prevailing ex-situ conservation approach by working locally with small-scale farmers to promote *in situ* conservation. It generated important knowledge and baseline information on Andean agriculture systems (i.e. production of *camu camu*, sweet granadilla, *kiwicha*, maize, quinoa, Lima beans, *arracacha*, *maca*, manioc, sweet potato and potato). Data generated by this project still represents an important contribution to Peru's agro-biodiversity, in particular, the list of traditional practices and social structures that sustain agroBD. The proposed Project will start from existing analyses while ensuring that data from a variety of sources and new actors is updated and systematized (see outcome 3.2, Table B) for: (i) decision-making, (ii) local and regional planning, and (iii) the evaluation and monitoring of development initiatives and their effects on agro-ecosystems and fragile Andean production landscapes.
- 2) The global project "*Globally Important Agricultural Heritage Systems (GIAHS)*" (FAO/GEF). Peru was a pilot country. The GIAHS global project produced valuable information and lessons from micro pilot sites of Lamay and Lares (Cusco) that will be replicated in selected Andean areas through this proposed FAO/GEF project. The Peru pilot country component of the global project had an operational budget of approximately USD 600,000 in 5 years. Its impact was positive considering the scale, available resources, scope and coverage. One major project outcome has been the political will and commitment that generated at ministerial levels in the MINAM, MINAGRI and MEF.

Replicable experiences tested by the global GIAHS project in Peru include: (i) the integration of GIAHS principles and operational guidelines in the preparation of local development plans, as was the case in Lamay and Lares, including: (i) the participatory processes to assign local government representatives to consolidate

⁴⁸ See FAO guidelines on GIs: <http://www.fao.org/docrep/013/i1760s/i1760s00.htm>

⁴⁹ http://www.wipo.int/geo_indications/en/. For instance, in Cameroon, sale prices per kilogram of traditional Oku white honey increased 40% only a few years after the GI was registered. In China, following the GI registration of the traditional indigenous Pinggu peach the price of a Pinggu peach rose to a level 35% higher than other peach varieties.

⁵⁰ Regarding economic impacts on GIs, FAO is carrying a global study based on 10 cases: the first results demonstrate premium price and better income with differences in the redistribution along the value chain according to the type of value chain governance.

activities with communal and local civil society organizations; (ii) best practices resulting from the implementation of agro-biodiversity zoning by the Regional Government of Cusco aimed at increasing the protection and sustainable use of agro-biodiversity in seven Departments; and (iii) experiences with local governments supporting livestock activities initiated by the project in the Puno Region.

The global GIAHS project (Peru component) has provided valuable insights for designing this proposed project. These include the importance of fostering systematic coordination between MINAGRI and MINAM, and other institutions, to ensure that: (i) mainstreaming objectives are realized into existing programmes and policy development, (ii) considerations regarding the commercialization and marketability of agro-biodiversity are conducted on the basis of existing and successful experiences about bio-trade, certification and geographical indication (GI); (iii) that agro-biodiversity management is effectively inserted into multifocal national strategies related to natural resource use, food security, agriculture and family farming, and (iv) that an effective and reliable information mechanism is devised to systematically inform policy-making, evaluate programmes, and the development of sector-based policies.

A key recommendation emanating from the independent final evaluation refers to the need to establish *Nationally Important Agricultural Heritage System (NIAHS)* to facilitate the mainstreaming of GIAHS principles into national policies, strategies and plans and to strengthen the ownership and alignment of GIAHS at the local, national and global levels. It is also recommended that lessons learnt from China, where this approach has already been adopted, be taken into account. In response to this and as evidence of the high level political commitment towards this initiative, MINAM and MINAGRI are supporting the consolidation of the GIAHS initiative in Cusco and Puno, by establishing a National Steering Committee for the incorporation of other GIAHS sites, and exploring the necessary requirements for the establishment of a NIAHS Coordinating Mechanism at national level. The MINAM is also working on a new Action Plan to support the implementation of the National Environment Strategy, in which the conservation and sustainable use of agricultural biodiversity will represent a prevalent feature. MINAGRI is working on a new Strategic Plan for national agriculture, in which GIAHS sites would be considered as an integral component in support of family farming. The INIA is also actively committed to the GIAHS initiative, as it represents a practical and sustainable way of conserving national genetic resources and reintroducing native Andean crops and livestock for rural development.

3) The proposed alternative scenario, with a brief description of expected outcomes and components of the project / 4) incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCE, SCCF, and co-financing.

In view of the above, the proposed project adopts a multi-focal landscape approach (BD-SLM-SFM) for the conservation of globally significant genetic resources and the recuperation of the fragile Andean ecosystems these depend on. Integrated landscape management is indispensable for delivering the multiple environmental benefits required for maintaining a multi-functional and biodiversity-rich productive landscape. Within this integrated approach, sustainable forest management becomes a strategic element for the reduction and stabilization of deforestation and fragmentation, both of which are major drivers of biodiversity loss and the variables most affecting the delivery of the goods, services, and multiple benefits characteristic of a functional ecosystem. The maintenance of domestic varieties and wild relatives demands a functional ecosystem in which sustainable forest and landscape management are inextricable parts. Without these elements any strategy towards the conservation of domestic and wild genetic resources would prove unsuccessful.

The **project overall objective** is to conserve in-situ and to sustainably use globally-important agro-biodiversity through the preservation of traditional agricultural systems, the integrated management of forests, water, and land resources, and the maintenance of the ecosystem services in selected Andean regions.

The **project specific objectives** are: (i) to support the sustainable use, management, and regeneration of the natural resources on which agro-biodiversity depends, i.e. forests, land/soil and water; (ii) to develop, test and consolidate incentives to ensure the sustainable use of agro-biodiversity and associated rural livelihoods; (iii) to strengthen planning, policy and regulatory frameworks for its agroBD conservation, commercialization and sustainable use; and (iv) to mainstream agroBD in the agriculture, forestry, and land-use planning policies.

The **project strategy** is two-pronged and aims to maximize the sustainability of agro-biodiversity conservation efforts. The project will combine market-based and public sector-based incentives. The first will focus on the marketability of agro-biodiversity products at local, national or international markets (see differences between GI and organic products above in section 1 and below under Component 2). The second will support the implementation of the Law 30215 through conservation agreements and compensation for environmental services. The pre-identified buyer is the State, and the sellers are communities and individuals living in the project targeted areas. The land use that will be supported is agriculture, livestock or forestry production or forest conservation. The ecosystem services are the conservation of agroBD species (see Annex I), the protection of native relict forests, carbon storage and sequestration, watershed protection, biodiversity conservation, and the protection of landscape beauty. This mechanism will be further defined during full project preparation in coordination with MINAM, MINAGRI, MEF and FAO.

Annex I provides the specific details per region, province and district including the corresponding principal crops associated with each selected site.

The project's strategy has been designed in response to identified threats and barriers (see barriers above) affecting the conservation of agro-biodiversity. The unit of intervention will be the watershed basin and/or micro basin selected on the basis of the following criteria: (i) high concentrations of biodiversity (in different ecological zones, where possible); (ii) vulnerability risk; (iii) existence of producer organizations and/or conservationists farmer families actively involved in agro-biodiversity conservation and sustainable uses; and (iv) the presence of engaged and committed environmental institutions. The project will join efforts and establish partnerships with the institutions and initiatives detailed in section 2 of the PIF above.

Project intervention sites include 300,000 hectares. The compensation mechanism (Law 30215) will be applied for: i) areas dedicated to forest conservation (set-asides, this will cover the opportunity costs of farmers for not producing crops or livestock in their lands, as per STAP's guidance); ii) areas in which farmers or communities are of subsistence-type and cannot access the local market, but preserve agroBD species which is the ES in this case (see Annex I). The exact amount of hectares within the 300,000 hectares that fall under these two categories will be further defined during full project preparation, in coordination with MINAGRI, MINAM, the regional governments and the local communities / beneficiaries.

The project will help ensure secure price/market access to Andean family farmers. Markets include local and national ones. The project will not create high premiums that could prevent local consumers from buying local products. The quality of products will be assured through PGS, which are being supported by FAO and the European Union in many developing countries. The development objective is to link family / agro-ecological / traditional farmers to appropriate markets⁵¹.

In order to remove the barriers detailed under section 1 and achieve global environmental benefits, the financial resources of GEF will be invested in an incremental way to the aforementioned baseline initiatives; as detailed below:

Component 1: Integrated Landscape Management and agrobiodiversity conservation in Andean regions of Peru

Component 1 will address barriers b), c), h), e), f) g) h) and j) (see section 1 of the PIF). GEF incremental financing will support Component 1 aimed at achieving the following outcomes:

Outcome 1.1: Agro-biodiversity is conserved in-situ and sustainably used through integrated natural resource management and the payment for the environmental services (PES) generated in functional ecosystems.

⁵¹ For more details: *Agro-ecological labels in Peru certified through a participatory guarantee system (PGS)*, FAO. FAO has studied this approach in neighbor countries (Bolivia, Columbia, Ecuador), and will soon publish the results demonstrating their efficiency in linking small holders to market. Other studies from IFOAM about PGS: http://www.ifoam-eu.org/sites/default/files/pgs_study_report_brief.pdf

Target Indicator: 300,000 hectares of production landscapes under sustainable land management that have Globally and Nationally Significant Landraces (Traditional Varieties)

Indicator LD-3.2: Integrated management practices adopted by local communities based on gender-sensitive needs: number of communities⁵², at least 40 % of women beneficiaries.

Indicator BD 7.1: Diversity status of targeted agro-biodiversity species (Target: To be measured with the BD Tracking tool).

Outcome 1.1 will be achieved through 7 outputs: **1.1.1)** Sustainable practices and resource use management guidelines are articulated in an integrated manner at different governmental levels and implemented by smallholder farmers and indigenous groups in target production landscapes in the Peruvian Andes; **1.1.2)** Ecosystem goods and services in the productive landscape are valued and payments are agreed upon with relevant buyers and sellers as per the 2014 Law on "Compensation Mechanisms for Ecosystem Services"; **1.1.3)** Local development plans and land-use planning frameworks at district and provincial levels incorporate agro-biodiversity zoning frameworks in selected project sites; **1.1.4)** Conservation and sustainable production methods are defined with smallholder farmers for the restoration of fragile degraded areas within productive landscapes; **1.1.5)** Conservation model systems (GIAHS and NIAHS⁵³ sites) are implemented in selected project sites along with the monitoring tools to evaluate their impact on targeted agro-biodiversity resources; **1.1.6)** Traditional productive practices and agro-biodiversity know-how (family farmers, indigenous communities) are complemented with conservation-minded technological advances; **1.1.7)** Communication and knowledge-sharing strategies on agro-biodiversity services and benefits, traditional production practices, and the NIAHS concept are available to a wide variety of audiences for awareness raising, dissemination, and replication purposes.

The project is aligned with the STAP's guidance. GEF incremental financing will be used to set up and finance short-term pilot payments, given the case: a pre-identified ES user (the State) is seriously considering long-term payments (enforced under the Law 30215), and needs to demonstrate the effectiveness of payments in a pilot program to support agroBD and forest conservation in the Andean regions. Alignment of Law 30215 and STAP's guidance on PES is described under section 2 of the PIF.

Outcome 1.2: Andean forests in productive landscapes are sustainably managed and/or naturally restored and provide ecosystem services for agro-biodiversity conservation.

Indicator SFM 5: 83,000 hectares of total forest resources restored in the landscape, stratified by forest management actors

Outcome 1.2 will be achieved through 4 outputs: **1.2.1)** Forest-based ecosystem services associated with the maintenance, genetic evolution, and functionality of agro-biodiversity, are detailed and valued to facilitate their inclusion into policy and regulatory frameworks, whilst recognizing their economic contribution to the productivity and functionality of productive landscapes through payments for their services; **1.2.2)** Management Plans for Andean forests are prepared with local communities and gender specific groups, defining sustainable use limits, identifying mitigation alternatives to unsustainable practices, articulating corresponding guidelines for conservation and payment mechanisms for ecosystem services; **1.2.3)** Technical assistance is delivered to local communities, indigenous groups, farmer's organizations and local governments on the principles of sustainable forest management, degraded land recovery, and the combination of technological innovations with traditional practices to maintain the provision of ecological services related to agro-biodiversity conservation; and **1.2.4)** Community-based land zoning programs are developed for conducting reforestation activities with native species in proximity to high agro-biodiversity areas within the productive landscape to maximize ecosystem service provision.

⁵² Indicator to be defined during full Project Preparation.

⁵³ Nationally Important Heritage Systems.

Baseline and targets will be further during full project preparation. The MINAM and MINAGRI will provide co-financing through Programmes such as the *Andean Recovery Programme* (USD 40 million) and the *National Conservation and Mitigation Forest Programme* (USD 19.95 million) respectively. Local and regional governments of Puno, Cusco, Apurímac, Arequipa, Huancavelica, Junín and Ancash will provide in-kind co-financing totalling 17,500,000 USD. Further co-financing prospects will be explored during full project preparation.

Regarding GEF Directions, **Component 1** will contribute to objective **LD-3 program 4 Outcome 3.2**, with GEF funding supporting the establishment of multi-sectoral resource management measures in biodiverse landscapes through: **i)** at least seven integrated resource management plans institutionalized by multi-stakeholder groups, including local governments; the incorporation of agro-biodiversity conservation principles into these local development plans and land use zoning frameworks with special designations (i.e. conservation and use categories as NIAHS sites), along with the establishment of production models and conservation systems illustrating Globally Significant Agricultural Heritage Systems. Moreover, **Component 1** will also contribute to **BD-4 outcome 9.1**, by: **i)** also establishing agro-biodiversity zones in communal territories; **ii)** defining and implementing pilots with conservationist families to manage selected sites as GIAHS/NIAHS; and **iii)** the promotion of exchanges, training programmes and knowledge sharing networks amongst conservationist families.

Outcome 1.2 is aligned with objective **SFM-3 Program 8, outcome 5**, by closely partnering with on-going baseline reforestation programmes to promote: **i)** the restoration of deforested zones with forest aptitude through native species; **ii)** defining sustainable forest management plans and conservation guidelines with local communities and gender specific stakeholder groups with specific emphasis on NIAHS sites; and **iii)** articulating and valuing the ecosystem goods and services derived from functional forests, and the corresponding compensatory payment mechanisms acting as sustainable incentives within productive and multi-functional landscapes.

Component 2: Development of markets for agro-biodiversity products to support conservation and sustainable use and local rural livelihoods

Component 2 will address barriers c) d) and g) (see subsection 1 [threats and barriers] above). GEF incremental financing will support Component 2, which is aimed at achieving the following outcome:

Outcome 2.1: The marketing of agro-BD products has been enhanced to support the sustainable use of agroBD and rural livelihoods.

Indicator:

BD-9 4.1: Production landscapes that integrate biodiversity conservation and sustainable use into their management demonstrated by meeting national third-party certification that incorporates biodiversity considerations, or supported by other objective data.

Outcome 2.1 will be achieved through 6 outputs: **2.1.1)** Strengthened market linkages between the small-scale farmers and local and regional markets, to support conservation through the sustainable production of food and goods based on agroBD present in the Andes; **2.1.2)** Value chain Strategy tested and implemented to enhance the marketing of food and goods based on agroBD that are produced by medium-scale farmers in the Andes. This is complementary to output 2.1.1. This may include nationally-wide and international markets while output 2.1.1 does not include them; **2.1.3:** Compendium of successful marketing experiences that highlight best practices to guide and promote the commercialization of selected agroBD products in Peru. This will be done in close coordination with institutions present in Peru like PromPeru and Biotrade, among others that may be invited to participate during full project preparation; **2.1.4)** Handbook for practitioners on how to promote market linkages and value chain strategies aimed at stakeholder groups in the Andes. The Handbook will include training modules and will be adapted to context-specific needs. A capacity needs assessment will be conducted by the Social Analyst during full project preparation in project intervention sites. FAO will disseminate the Handbook in other projects in the Andean region, and will adapt it to be an applicable tool in other GIAHS/NIAHS projects worldwide. The Handbook will be used to disseminate the market linkage and value chain approaches during trainings. It will be also useful for other

projects; **2.1.5**) Multi-stakeholder partnerships and networks⁵⁴ established to promote the commercialization and export of agroBD-based products, increase market access⁵⁵ and improve livelihoods. This output is linked to output 2.1.2 – medium-scale farmer production. Stakeholders include, among others: private sector, entrepreneurs, consumers, producer organizations, cooperatives, regional and national government. This will be further defined during full project preparation; **2.1.6**) Geographical indication (GI), GIAHS labelling or certification standards developed for agroBD-based products in the Andes of Peru. This is linked to output 2.1.1.

During full project preparation the inclusion of indicator(s) relating to the number of market linkages, number of products sold in new markets, and/or improved revenues will be discussed and agreed with project partners and beneficiaries.

FAO's approach to organic certification and GI/GIAHS labelling has been extensively described in section 2 of the PIF (see above). This approach will guide the project strategy.

Project activities under **Component 2** will include: (i) a compendium of successful marketing experiences, lessons learned, and best practices prepared by experienced and well established national institutions and producer communities with proven experience in biodiversity supportive ventures (Prom-Peru, Bio-trade, CAP, etc); (ii) the preparation of training modules in a variety of skills and capacities associated with value chain marketing requirements, including tailoring their content to the functions and gender of the stakeholder groups participating in the various stages of the supply chain (i.e. producer organizations, local communities, indigenous groups, etc); (iii) promoting networks and partnerships amongst these diverse stakeholder groups, from producers, private sector companies, individual entrepreneurs, CSOs, indigenous community producers, family farmers, to government counterparts, etc, in order to strengthen the organizational and collaborative arrangements promoted by value chains, including the equitable sharing of resulting benefits amongst stakeholders; (iv) establishment of funding mechanisms to develop value added products derived from agro-biodiversity in close collaboration with financial counterparts and promotional government programmes; (v) development of specific labels (GIAHS, NIAHS, or territorial bands), including the preparation of market studies and business plans for agro-biodiversity products in each of the 7 regions, training of local producer, actors and producer's organizations on label management, standards and requirements, as well as the elaboration of label specifications, certifications and control systems adapted to the local context.

Baseline and target indicators will be further elaborated during full project preparation. Co-financing will be provided by MINAM and MINAGRI through Programmes such as PRODERN entitled "*Sustainable Economic Development and Strategic Management of Natural Resources*" (USD 6.7 million), and MINAGRI's support to *Family Farming Programme* whose corresponding budget is being defined. Local and regional governments of Puno, Cusco, Apurímac, Arequipa, Huancavelica, Junín and Ancash will provide in-kind co-financing of USD 17.8 million. Further co-financing initiatives will be explored during full project preparation.

Regarding GEF programming directions, **Component 2** is aligned with **BD 4 Programme 9, Outcome 9.1** by working in mixed-use productive landscapes in which sustainable resource use requires innovative approaches to support ecosystem integrity and ecological services. Specifically, providing incentives for biodiversity-friendly productive practices, testing financial mechanisms and marketing instruments such as branding or certification, including the necessary skills to implement these programmes will be addressed by Component 2.

Component 3: Institutional and policy strengthening to mainstream agro-biodiversity conservation and sustainable use into operational frameworks

Component 3 will address barriers a), d), f) and h) (see subsection 1 [threats and barriers] above). GEF incremental financing will support Component 3, which is aimed at achieving the following outcomes:

⁵⁴ Number to be defined during full project preparation.

Outcome 3.1: Existing sectorial policies, regulatory frameworks, financing mechanisms and assistance programs have mainstreamed agroBD conservation and sustainable use in a harmonized manner.

Outcome 3.1 refers to the resource-based productive sector policies/programs in the Andean regions. It aims at increasing the complementarity among policies and mechanisms to strengthening *in-situ* agroBD conservation and sustainable use. Ministries involved will be MINAM, MINAGRI, Ministry of Planning, and MEF. This outcome will work at local, regional and national scale in Peru. Regulatory and enforcement capacities of local and regional governments will be strengthened with regards to permissible resource use in designated agroBD areas. Intervention will take place in each of the 7 regions, as set in the zoning frameworks.

Indicator:

Indirect coverage in hectares of globally significant traditional varieties - i.e. hectares influenced beyond the direct sites where the project is active through policy changes, regulatory frameworks, training, learning exchanges, etc.

Outcome 3.1 will be achieved through 5 outputs: **3.1.1)** Targeted existing policies, regulatory frameworks and assistance programs⁵⁶, revised by incorporating agroBD conservation principles and integrated landscape management in the 7 selected project regions; **3.1.2)** Revised specific regulations and legal aspects are in place to allow the development and marketing of agroBD products (among others: exchanges/market of seeds and other inputs, labelling strategies, certification systems, intellectual property and traditional knowledge protection); **3.1.3)** Practical financing mechanisms of PES and conservation agreements within productive sectors⁵⁷ defined and at least one pilot implemented in a participatory manner in each of the seven project regions. This output is related to Law of Compensation for Environmental Services (see output 1.1.2); **3.1.4)** An inter-institutional coordination mechanism to ensure alignment and consistency in the management of agro-ecosystems based on agro-biodiversity principles, with emphasis on the seven project regions. This will involve the ministries of agriculture and forestry, planning, finance and economy; **3.1.5)** Enhanced institutional capacities at regional and local level to support permissible natural resource uses according to land use zoning frameworks. This is related to outputs 1.1.3 and 1.2.4.

Outcome 3.2: Information on natural resource and agroBD management in Andean productive landscapes, including GIAHS, has been systematized to support decision-making and planning in Peru

This outcome will focus on generating information related to natural resource use in productive landscapes, as well as sustainability and conservation requirements, that serve to inform policy-making in a regular and systematic manner. This comprises also decision-making at regional level and planning at local sites. Emphasis will be given to productive activities that (may) have an impact on the ecosystem functionality of the Andean regions.

Outcome 3.2 will be achieved through 2 outputs: **3.2.1)** AgroBD information collected, systematized and disseminated among the involved institutions for enhanced decision-making, monitoring and evaluation of agroBD conservation programs, including GIAHS; **3.2.2)** Capacity development program to improve the analysis and application of available data in planning and conservation efforts in agroBD productive landscapes in the Andes. *Target: national, regional and local government staff and CSOs*⁵⁸.

Baseline and target indicators will be further elaborated and adjusted during full project preparation. MINAM and MINAGRI will bring co-financing through *The National Strategy of Family Farming* and PRODERN. Local and regional governments of Puno, Cusco, Apurímac, Arequipa, Huancavelica, Junín y Ancash will provide in-kind co-financing in the order of USD 17.8 million. Further co-financing initiatives will be explored during full project preparation.

Regarding GEF programming directions, **Component 3** will contribute to **objective BD-4 outcome 9.2 and LD-3, outcome 3.2**. GEF funding of USD 1,302,183 will support: i) the revision, operational alignment and integration of

⁵⁶ This refers to the resource-based productive sector in the Andean regions of Peru.

⁵⁷ This refers mainly to forestry and agriculture sectors.

⁵⁸ Numbers will be defined during full project preparation.

agro-biodiversity conservation in policy agendas, development plans and strategies at the local, regional and national level; ii) inter-institutional coordination, at regional and local levels, for the implementation of policies and regulations related to agro-biodiversity conservation and climate-change resilience; iv) local organizations and farmer participation in the development and preparation of agro-biodiversity conservation and sustainable use plans; v) support to participatory institutional frameworks for the active involvement of small scale farmers organizations, indigenous communities, gender based groups, and their functional enhancement as agro-biodiversity based producer organizations; and (vi) incentive frameworks and promotional mechanisms, including micro-credits, are defined in each of the project sites to encourage family farmers and indigenous community groups in their commitment to agro-biodiversity conservation and sustainable use (vii) Financing mechanisms from Governmental budget and private sector.

In addition, GEF incremental financing of USD 350,000 will support **Component 4: Monitoring, evaluation and dissemination of project information**, which includes: i) systematic information on progress achieved in meeting project outcomes and output targets on a yearly basis; ii) mid-term and final evaluations; iii) adaptive management in project implementation and sustainability strategy, as needed, or as per mid-term evaluation recommendations; iv) project-related best-practices and lessons-learned captured and detailed through the project website, in order to share experiences and disseminate key information at local, regional and national levels including with the GIAHS community worldwide. Kindly see detailed outputs in Table B. Government in-kind co-financing will be provided for USD 1,000,000.

5) Global benefits (GEFTE, NPTF) and adaptation benefits (LDCF / SCCF)

The project will contribute to deliver the following GEBs⁵⁹: i) conservation and sustainable uses of agro-biodiversity species, associated traditional knowledge and ancestral heritage systems; ii) increased genetic diversity of globally significant cultivated plants (final list of target species will be defined during project preparation); (iii) incorporation of 300,000 hectares of productive landscapes under sustainable land management; iv) integrated resource management and sustainable productive practices adopted by local communities in the productive landscapes of 7 departments, with women representing 30% of beneficiaries (in those hectares); v) 83,000 hectares of forest resources are restored in the productive landscape including the services these confer to agro-production, agro-forestry and agro-biodiversity; vi) incorporation of 300,000 hectares of productive landscape integrating biodiversity conservation and sustainable use unto their management plans by meeting national or third party certification, or supported by other objective data ; vii) mainstreaming of conservation and sustainable use of biodiversity, sustainable forest and land management into regional plans, zoning frameworks and watershed management plans of 7 departments (see Table B), including the active participation of involved producer communities (see Table B).

As mentioned in section 3&4 of the PIF, the total project area is 300,000 hectares. The integrated landscape management will be promoted through a two-pronged strategy. First, market-based incentives including: i) organic certification, and ii) GI with participatory guarantee systems, where GIAHS/NIAHS is a territorial label. Second, one-buyer PES mechanism (the State) which will buy ES from: iii) farmers and communities that set aside forests for conservation; and iv) subsistence agriculture farmers or families that cannot access the market, but protect agroBD with their traditional practices. The exact amount of hectares covered under i), ii), iii) and iv) will be defined in a participatory manner during full project preparation, with the technical support of the Division of Agro-industries and the Senior Forestry Officer of FAO, in coordination with MINAM, MINAGRI, MEF, and regional governments.

This proposed project will also generate GEBs by contributing to Aichi Targets #1, 5, 7, and 14 through the following outputs:

⁵⁹ It should be specified that the amount of hectares calculated in terms of GEBs (i.e. 30,000 ha with sustainable land management; 23,000 ha forest restoration; 30,000 ha production landscape with sustainable use of biodiversity) are strictly limited to what is expected to be achieved through GEF funding alone. If counterpart co-financing is considered, the benefits accrued by the alternative as a whole would increase these figures by at least tenfold.

Aichi Biodiversity Target	Project Outputs	Selected SMART Indicators ⁶⁰
<i>Target 1 - By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.</i>	1.1.1. 1.1.2. 1.1.3. 1.1.4. 1.1.5. 1.1.6. 1.1.7.	<ul style="list-style-type: none"> Trends in awareness, attitudes and public engagement in support of biodiversity Trends in identification, assessment and establishment and strengthening of incentives that reward positive contribution to biodiversity and ecosystem services penalize adverse impacts
<i>Target 2- By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.</i>	3.1.1. 3.1.2. 3.1.3. 3.1.4. 3.1.5.	<ul style="list-style-type: none"> Trends in integration of biodiversity and ecosystem service values into integrated in sector and development policies
<i>Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.</i>	1.1.1 2.1.2	<ul style="list-style-type: none"> Trends in pressures from unsustainable agriculture, forestry, fisheries and aquaculture⁶¹ Trends in proportion of products derived from sustainable sources⁶²
<i>Target 14 - By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.</i>	2.2.2. 2.2.3	<ul style="list-style-type: none"> Trends in area of degraded ecosystems restored or being restored Trends in benefits that humans derive from selected ecosystem services

6) Innovation, sustainability and potential for scaling up

Peru is one of the six pioneering countries of the GEF-funded global project “*Conservation and Adaptive Management of Globally Important Agricultural Heritage Systems (GIAHS)*” implemented by FAO in conjunction with other international and national partners. FAO defines GIAHS as “*remarkable land use systems and landscapes which are rich in globally significant biological diversity evolving from the co-adaptation of a community with its environment and its needs and aspirations for sustainable development*”. Within this context, the overall goal of the global GIAHS project was designed to “*protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements*” (cf. CBD Article 10c, specifically within agricultural systems). To implement this objective, the GIAHS project launched a multi-level, multi-sectorial and multi-stakeholder approach to develop comprehensive criteria⁶³ for selection, recognition and safeguarding of traditional agricultural systems that continue to provide valuable ecosystem goods and services. This approach was piloted in Peru in Cusco and Puno with an operational budget of less than USD 600,000.

The long term solution for agrobiodiversity conservation and sustainable use is: a) to reverse the loss of ecosystem integrity in key agrobiodiversity regions in order to ensure healthy agro-ecosystems in which agrobiodiversity can be sustained and; b) to incentivize the dynamic process of agrobiodiversity creation and use through farmer-effort incentive structures such as PES and Geographical Indication labelling and improved access to markets.

This proposed FAO/GEF project envisages the scaling up of the GIAHS approach at a broader scale based on the valuable information and lessons learned from the previous pilot. The current project will thus expand its coverage and programmatic scope to include the Departments of Puno, Cusco, but also Apurimac, Arequipa, Huancavelica,

⁶⁰ The intermediate milestones to be achieved during project implementation will be established in the full project formulation phase.

⁶¹ In the proposed project, this SMART indicator will be measured through 1 operative indicator: (i) Trends in areas of forest, agricultural and aquaculture ecosystems under sustainable management.

⁶² In the proposed project, this SMART indicator will be measured through 2 operative indicators: (i) number and quantity of certified products commercialized under certification schemes; and (ii) number of producers which have adapted sustainable production systems.

⁶³ The full information on selecting and designating GIAHS criteria are available at: <http://www.fao.org/giahs/giahs/features-and-criteria/en/>

Junín and Ancash. As per the observations made by the terminal evaluation of the Peru pilot initiative, local District and Provincial support was particularly significant in the Pilot initiative as was the engagement and momentum of producer groups, women cooperatives and indigenous groups in supporting agro-biodiversity conservation objectives, their socio-cultural ramifications, and the economic potential of many of these traditional crops. The pilot project served to consolidate the requisite socio-political commitment for this multi-sectorial, multi-stakeholder initiative, which was recently re-confirmed by both the *Ministries of Agriculture and Environment* at the highest levels through programmatic accords, including the insertion of agro-biodiversity conservation as a strategic element in national development plans and sectorial agendas as they pertain to land, forest, and agricultural resources.

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

Institution	Role	Responsibilities in the project
Ministry of Environment (MINAM)	GEF Operational Focal Point and National Environmental Authority	Responsible for project execution and overall coordination.
Ministry of Agriculture and Irrigation (MINAGRI) through the AGRORURAL programme and INIA.	Implementing partner	<u>Component 1:</u> AGRORURAL will coordinate at the basin level and will also provide co-financing resources or execute projects to complement GEF project activities. INIA will collaborate on innovation and technology adoption, through its experimental stations and national level organization.
Regional Governments through the Directorates for Agriculture	Regional authorities	<u>Components 1 and 3</u> regional coordination ensures integration of conservation and sustainable use of biodiversity, land and forest management in regional strategies, plans, and zoning frameworks, including the necessary allocation of resources to support these activities.
Local Governments in Project intervention areas through PROCOMPITE ⁶⁴	Local authorities	<u>Component 1 and 2:</u> Value chain related activities will be coordinated through the Local Development Management Departments in the prioritized watersheds. They will also provide support in the organization of producers on activities related to sustainable use of agricultural biodiversity, including funding for agro-biodiversity, conservation and sustainable use of land and forest.
FAO	GEF Implementing Agency	Provision of technical assistance on sustainable natural resource management, rural development, biodiversity preservation, land degradation, and sustainable forest management. Support of methodologies according to international standards. Support and monitoring of project implementation.
Peruvian Agro-ecological Consortium (CAP): ⁶⁵	Implementing partner	<u>Component 2:</u> The CAP will cooperate in the implementation of activities supporting improvement in the management of the production system and developing value chains based on agro-biodiversity resources.
CCTA, PRATEC, ARARIWA, CESA ⁶⁶	Implementing partner	<u>Component 1 and 2:</u> These institutions will support implementation of activities linked to traditional knowledge recognition and related activities.
Regional Universities ⁶⁷	Contributors	<u>Component 1:</u> Regional universities will help prepare studies and support training actions related to sustainable use of biodiversity, land

⁶⁴ Law No. 29337 establishes a framework to allow regional and local governments to assign up to 10% of their Budget to support actions to improve competitiveness of productive systems.

⁶⁵ This includes the following organizations: Agro-Ecology Network (RAE); Alternative Agriculture Action Network (RAAA); National Association of Ecological Products (ANPE); Peruvian Association of Consumers and Users (ASPEC); Environment and Development Institute (IDMA).

⁶⁶ CCTA – Science and Technology Andean Coordinator; PRATEC - Andean Farmers Technology Project; ARARIWA Association; CESA -

⁶⁷ University of Altiplano, University of Cusco, University of San Agustín, University of *Centro del Perú*, University of Huancavelica, University Santiago Antúnez de Mayolo

		and forest resources. <u>Component 1:</u> Student support will also be encouraged in project implementation activities through pre-professional training programmes or thesis-related work.
Local communities including indigenous communities	Beneficiaries	<u>Component 1 and 2:</u> Models of sustainable production on biodiversity, forest, land. Biodiversity Conservationist pilots and GIAHs systems. <u>Component 3:</u> mechanisms to strengthen and consolidate the participation in and for policy decision making processes.

During project preparation and implementation, the project will involve the active participation and support of organizations, institutions and key actors in the basins prioritized in the following seven target regions (Puno, Cusco, Apurimac, Arequipa, Huancavelica, Junín and Ancash).

3. Gender Considerations. Are gender considerations taken into account? (yes /no). If yes, briefly describe how gender considerations will be mainstreamed into project preparation, taken into account the differences, needs, roles and priorities of men and women.

The role of women is crucial in any agro-biodiversity conservation project as they bear a direct responsibility in the conservation and selection of crop seeds and the maintenance of traditional knowledge systems. Women run about 33% of the agricultural productive units.⁶⁸ Given this fact, gender considerations are fundamental in the project's participatory strategy which incorporates them through the following actions: 1) the family unit is the focus of the project highlighting the predominant role of women and their unique know-how; 2) women will be actively involved in all project activities, aiming at a 40% minimum participation quota (higher depending on the specific project activities in question); 3) specific mechanisms will be established and existing ones strengthened (depending on the project sites in question) to incorporate the views, guidance and recommendations of women with regards to agro-biodiversity conservation goals, including the use of resources in the productive landscape (i.e. forest, water, land); 4) gender equality will also prevail in the design of training activities, workshops, and capacity building programmes; 5) the project will ensure the equitable sharing of conservation benefits for all stakeholder groups; 6) mechanisms at the local level will also be established to identify vulnerable and/or disenfranchised groups (landless people, individuals with low-formal education, as well as the young and the elderly) to guarantee their perspective on project objectives and implementation arrangements. Gender-sensitive indicators and disaggregated data will be collected and confirmed during the preparation phase of the full project.

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

Probability	Potential risks	Mitigation measures provided
Medium - Low	Environmental: Governments prioritizes the promotion of large scale agro-export crops, biofuels, etc. instead of sustainable use of biodiversity resources	Commitments based on strategic plans from institutions involved (MINAGRI, INIA, AGRORURAL and local and regional governments)
Medium	Accelerated impacts of climate change in Peruvian Andes Regions affects agro-biodiversity and causes losses to farming families.	Implementation of existing adaptation strategies to climate change. Attention to changes affecting biodiversity resources, land and forests.
Low	Social: Local and regional authorities fail to assume their role in ensuring the participatory management of resources at the productive landscape level and the regulatory support required for agro-biodiversity conservation.	Project design, development, and implementation is based on the premise and commitment of multi-stakeholder participation. It is the essence of the project. As such, structures and mechanisms to ensure the active involvement and feedback of stakeholder groups will either be established (where they may be lacking) or strengthened where they exist. Furthermore commitments to contribute to the implementation of the project.
Low	Lack of interest of grassroots producer	In the formulation stage, participatory and gender sensitive workshops

⁶⁸ This estimate is based on IV CENAGRO Report.

	organizations to actively participate in the project design and implementation.	will be organized in the project areas based on the successful experiences from the Pilot Project.
Low	Political/institutional: A flexible regulatory framework facilitates the entry of genetically modified crops for research and to be released in experimental fields before completion of the Moratorium Act.	Commitment of competent authorities and regional governments so that the areas where the project would take place are not affected by this research.
Medium-High	Regional level institutional weaknesses limit the project development and do not allow the achievement of objectives.	National, regional and local institution capacity building for efficient management of biodiversity resources and sustainable forest management will be conducted and further supported by alliances to ensure effective project implementation. Furthermore, skill enhancing programmes and training modules will be fully tailored to local/regional needs and conditions.
Low	Political/institutional: Policies for sustainable natural resource management and agroBD conservation are implemented in an ineffective manner.	The project's components 1 and 3 include measures to help implement existing policies in a practical and effective manner. The Project Steering Committee will be composed of high-level representatives of MEF, MINAGRI, MINAM to ensure that resource-based sector policies are in place, are harmonized and are revised if needed, to achieve the objectives of Component 1 and 3.
Medium	Economic / financial: Changes in investment priorities due to reduced availability of resources, despite interest shown to co-finance the GEF project	Ensure that the co-financing amounts are included in the annual budgets of the baseline programs and project as defined in the previous section.
Medium - Low	Loss of consumer interest for foods derived from agricultural biodiversity, organic agriculture and sustainable forest management products due to high consumer prices.	Promotion and awareness raising of local and global benefits of agrobiodiversity and forest resources and their global importance for food security and environment. Furthermore, market evidence, particularly with regards to exports point to rising demand of these native products due to their nutritional, organic and medicinal properties.

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

MINAM, through the DGBD⁶⁹ (General Directorate for Biological Diversity) will establish communication and coordination mechanisms with other relevant GEF and donor projects under development or implementation with thematic links with the project objectives. Among the on-going GEF projects of relevance for this initiative, is the IFAD initiative entitled "*Conservation and Sustainable Use of High-Andean Ecosystems through Compensation of Environmental Services for Rural Poverty Alleviation and Social Inclusion*" (2013-2018) particularly as it addresses compensation mechanisms with rural communities for ecosystem goods and services, and potentially the UNEP project entitled "*Knowledge for Action: Promoting Innovation Among Environmental Funds*" (2015-2018) as it will necessarily address incentives, and financial mechanisms to promote conservation, some of which could be explored by this particular project, especially when considering its scaling up.

MINAM will also establish a *Multi-sectorial Directive Committee* comprised of representatives from the General Direction for Biological Diversity (GDBD), the General Direction for Land Zoning (DGOT), Agrorural, and SERFOR (Forest Division in the Ministry of Agriculture), the Ministry of Economy and Finance (MEF), and representatives from the participating regional governments. While specific Terms of Reference will be jointly agreed upon by the aforementioned representatives, the principal function of this Committee will be to ensure policy alignment, operational consistencies, intra-institutional coordination, and maximum complementarities among relevant actors, programmes and Ministry based operations.

Furthermore, during the initial project design stage a series of preliminary meetings will be conducted with these agencies representatives, project proponents and relevant donors, and baseline partners, to collectively identify areas of complementarity, and/or joint collaboration, but most importantly, to agree and define, in a collective and

⁶⁹ General Directorate of Biological Diversity (MINAM)

practical manner, the optimal bi-monthly coordination arrangements between this project and relevant on-going initiatives as detailed in outcome 3.1. Ultimately arrangements will depend on the degree of existing synergies, areas of complementarity, targeted stakeholder groups and collaborative partners.

Financing requirements to ensure coordination success will also be defined in a participatory manner with the relevant parties. It is expected that at the first of these preliminary meetings, MINAM will duly present the project concept and further detail the steps and time-frame for refining project components, outputs, and activities. This presentation of next steps in project design and development will provide the first opportunity for the project to define areas of common interest with potential programming partners, elicit valuable guidance, identify complementarities and if appropriate, begin to incorporate lessons learned and practical guidance from these partner initiatives, including insights on potential project implementation arrangements.

In addition it is expected that a *Project Advisory Management Council* will be established to guide project implementation from a technical standpoint. It will be comprised of outstanding professionals/individuals with extensive experience in managing Andean biodiversity resources as well as private and public institutions involved in agro-biodiversity conservation.

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

The 5th National Peru Report to the CBD reports that in 2011 the National Strategy on Biodiversity, originally prepared in 2001, was updated along with the formulation of a corresponding Action Plan. The new National Biodiversity Strategy for 2021⁷⁰ and Action Plan, (Vision 2021) delineates activities to be implemented during the 2014 to 2018 period and establishes targets for 2021. It comprises six strategic objectives which specifically mention the integration of sustainable use of biodiversity in natural resource management; strengthening biodiversity management capacity in local, regional and national governments; improving knowledge of biodiversity, specifically as it pertains to the revalorization (re-valuation) of the traditional knowledge linked to indigenous communities; and increase biodiversity's contribution to improve the country's competitiveness and equitable distribution of benefits. The objectives planned for the proposed project are fully aligned and consistent with *Vision 2021*. More specifically, the project proposal will contribute with information mechanisms essential for regularly assessing the status of agro-biodiversity, the economic, and social and environmental values offered by this genetic diversity. In the same vein, the project will highlight the relevance of associated traditional knowledge and practices for biodiversity conservation and sustainable management, and the importance of building the necessary management and planning capacities at the civil service level. In addition, the project will seek to improve the management, inclusiveness, and participation of local producers in value chains so as to increase competitiveness and links to niche or alternative markets whilst maintaining equitable benefit sharing mechanisms.

In addition, the project is consistent and supportive of the *National Strategy for Family Agriculture*, which promotes the recovery and valuation of ancestral traditional productive practices, the social and organizational structures associated with these production systems, and the development and encouragement of technical assistance programmes tailored to the specificities of these cultural heritage systems. Concomitantly, the *National Strategy for Food and Nutritional Security* with an implementation horizon until 2021, recognizes and supports the maintenance and dissemination of traditional production models, not only as a means to ensure food security but also the conservation and sustainable use of resources in productive landscapes, including the provision of the goods and services they deliver.

⁷⁰ <http://www.minam.gob.pe/consultaspublicas/wp-content/uploads/sites/52/2014/02/RM-N%C2%B0-050-2014-MINAM.pdf>

Law 28611. More specifically it is directly link to Strategic Objectives (SO) and goal 3 on *in situ* conservation of biodiversity; SO2 and goal 4 identifying the need to increase benefits derived from biodiversity; SO3 and goals 6 and 7 aim to reduce the pressures on biodiversity; SO4 and goal 9 aim at strengthening the capacities; SO5 and goals 10, 11 and 12 are directed to promoting the improvement of traditional knowledge for sustainable use of biodiversity; SO6 and target 13 aim at strengthening governance on biodiversity.

It is equally important to note that the 4th communication of Peru to the UNCCD highlighted that soil erosion due to insufficient water resources is a major cause of degradation in the Andean region. The report also includes a section emphasizing the relevance and contribution of indigenous practices to manage soil and water in a sustainable manner. It specifically makes reference to Andean terraces, corresponding to one of the baseline supporting the proposed project. Finally, the report also mentions the effects of climate change on land degradation, indicating the unique importance of agro-biodiversity resources for adaptation strategies. Peru's National Action Programme to combat desertification (NAP) has five action lines, including conservation of ecosystems, as well as economic and cultural considerations. Peru has equally submitted a *Performance Review and Assessment of Implementation System* (PRAIS), which indicates that the approval of an aligned national strategy and the preparation of the NAP will take place during the 2014-2015 period. Furthermore, the PRAIS also reports on ongoing activities related to biodiversity conservation in relation to agro-biodiversity as well as well as traditional knowledge and practices.

At the national level the project can be associated with the *General Environmental Law*,⁷¹ which prioritizes the preservation of ecosystem diversity, species and genes, as well as the maintenance of essential ecological processes that depend on the survival of the species.⁷² Article 26 sets as national priority the scientific research on plant and animal species, microorganisms and ecosystems through the elaboration of inventories, biological and environmental monitoring studies, as well as their management and conservation. Similarly, the proposed GEF project responds to Law 28477, which declares native crops, breeds and wild species as "National Heritage". It is also associated to the above mentioned *Vision 2021* and would be related to the forthcoming *National Agro-biodiversity Program*, which aims at contributing to the conservation and participatory management of agricultural biodiversity, including its identification, assessment and characterization, on the ground of respect for local cultures, especially user and conservationist communities. Finally, it also consistent to the *Law on the Conservation and Sustainable Use of Biodiversity*,⁷³ which recognizes that native species are grown by indigenous peoples who apply knowledge, practices and techniques aimed at its conservation and sustainable use.

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

The project will ensure that an appropriate knowledge management platform is developed by the Government Framework on Knowledge Management and shared with all relevant actors. The platform will bring together both existing knowledge, as well as that which has been generated in previous projects (*In Situ* conservation of Andean crops and GIAHS, including other GEF financed initiatives). Existing information generated from development institutions and public and private sector institutions (knowledge management for the project) and traditional organizations (traditional knowledge management) will be systematized to ensure consistency and compatibility. This information, together with the outputs generated by the project will be made available to relevant stakeholders, including decision-makers at local, regional and national levels. Additional consultations will take place during the project preparation phase to examine and evaluate: (i) successful knowledge management experiences in other projects, (ii) obtain current feedback from stakeholder groups and intended users as to the content and presentation of an optimal knowledge management platform, and (iii) determine how to best link the knowledge generated by other institutions and projects to the findings emanating from this specific initiative. An appropriate mechanism to disseminate and manage this information will be further developed in the project preparation phase.

⁷¹ <http://www.minam.gob.pe/wp-content/uploads/2013/06/ley-general-del-ambiente.pdf>

Particularly in relation to articles 14, 15, 61 and 62 on environmental management systems, and Title III Chapter I, on the use of natural resources (articles 89, 91, 92, 93 and 94) and Chapter II, which regulates the conservation of biodiversity and establishes policy guidelines for sustainable use of biodiversity (articles 97 to 104, 106 and 112).

⁷² http://www.congreso.gob.pe/dgp/ciac/carpeta-informativa/derecho_cons_puebl_indige/compj_norma_legal_nacio/Lev_N-26839.pdf

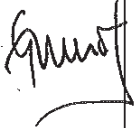
⁷³ <https://www.cbd.int/doc/measures/abs/msr-abs-pe1-es.pdf>

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Points endorsement letter(s) with this template. For SGP, use this OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE (MM/DD/YYYY)
Antonio González Norris	Director, International Cooperation and Negotiations Office	MINISTRY OF ENVIRONMENT	13 MARCH 2015

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for project identification and preparation under GEF-6.					
Agency Coordinator, Agency name	Signature	Date (MM/DD/YYYY)	Project Contact Person	Telephone	Email Address
Gustavo Merino Director, Investment Centre Division Technical Cooperation Department FAO Viale delle Terme di Caracalla (00153) Rome, Italy TCI-Director@fao.org		10 April 2015 Re-submission: 15 July 2015 Re-submission: 13 August 2015 Re-submission: 17 November 2015	Aitor Las FAO Peru & Jorge Meza Senior Forestry Officer FAO Regional Office for Latin America and the Caribbean		aitor.las@fao.org Jorge.Meza@fao.org
Jeffrey Griffin Senior Coordinator GEF FAO Email: jeffrey.griffin@fao.org					GEF-Coordination-Unit@fao.org

ANNEX I: Agro-biodiversity Crops per Department, Province and District in Peru

Crop	Department		Puno	Arequipa	Ancash	Apurimac	Cusco	Huancavelica	Junin
	Province		Puno	Caraveli	Huaylas	Andahuaylas	Calca	Huancavelica	Huancayo
	District		Ácora	Anquipa	Caraz	Huayana	Lares	Laria	Pariahuanca
Scientific Name									
Achira				X	X	X	X		X
Aji (Peppers) ⁷⁴				X	X	X	X		X
Arracacha				X		X	X		X
Calabaza				X	X	X	X		X
Camote				X		X	X		X
Cañihua			X						
Cayhua					X	X	X		X
Chirimoya					X				X
Frijol				X	X	X	X		X
Granadilla					X	X	X		X
Kiwicha					X	X			
Lucuma					X				X
Maíz					X	X	X		X
Maní									X
Mashua			X		X	X	X	X	X
Oca			X		X	X	X	X	X
Olluco			X		X	X	X	X	X
Pallar									X
Papa			X		X	X	X	X	X
Potatoes ⁷⁵			X		X	X	X	X	X
Quinoa ⁷⁶			X		X	X			
Sachatomate					X	X	X		X
Tarhui			X		X	X	X	X	X
Tomate				X		X			X
Tumbo					X	X	X		X

⁷⁴ Peru has one of the highest levels of cultivated capsicum diversity.

⁷⁵ Potatoes are indigenous to the Andes. Genetic testing of cultivars and wild species points to a single source area in S. Peru/N. Bolivia.

⁷⁶ Quinoa is indigenous to the Andean region.

