PROJECT TARGET AREAS

Resilient Puna: Ecosystem based approaches for sustainable high Andean communities and ecosystems in Peru

FINAL REPORT

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1 INTRODUCTION

Due to the extent of the Peruvian Andes and limited project funds, areas where interventions could have the greatest potential were prioritized following two stages. In the first stage, the scope of analysis was defined according to a set of criteria including vulnerable communities, high Andean areas with the highest agricultural and livestock climate risk that have the potential to implement ecosystem-based adaptation measures (EbA), due to the presence of key ecosystems. In the second stage, priority was given to districts with the best enabling conditions for initiating interventions.

The first stage considered the following criteria: **a) vulnerable communities:** i) altitude higher than 3500 masl, including a buffer zone down to 2800 masl); **b) ecosystems:** i) presence of puna key ecosystems (peatlands, grasslands and wetlands) and ii) distance to degraded lands; c) **climate:** i) distance to areas that have undergone deglaciation and ii) presence of agriculture and husbandry lands with high or very high risks of droughts and high climate vulnerability.

Based on the results of this first stage, in a participatory process, project partners focused actions on the largest block of priority areas in the southern Andes where it is possible to achieve greater impact. Thus, priority was given to 91 districts in the regions of Arequipa, Cusco, Apurimac, and Puno. In addition to the target areas in the south resulting from the methodology presented, the partners have decided to include the Landscape Reserve of Nor Yauyos Cochas[1] (NYC) to the project because this site has extensive experience in the implementation of EbA measures together with local stakeholders, international cooperation and the development of payment for ecosystem services that can serve as a best practice to scale and replicate in the other areas of the project.

During the development of the funding proposal, a second phase has been carried out, focusing on the enabling conditions to implement the project according to social, economic, and environmental factors. In this phase, the area was focused from the 91 districts benefiting from capability building from the project on 58 districts located in the departments of Lima, Arequipa, Cusco, Apurímac, and Puno which will be eligible for the Puna Facility. The other 33 districts will be only beneficiaries of capacity building activities.

Finally, the development of this methodology and the process of areas identification and prioritization had the participation and validation of the project partners: Ministry of Agriculture (MIDAGRI), Ministry of Environment (MINAM) where the National Service for Natural Protected Areas belongs, GIZ, Instituto de Montaña (IdM) and The Environmental Trust Fund for Natural Protected Areas (Profonanpe). The methodology and areas identified in this document will define where the implementation of the Resilient Puna project interventions will be prioritized.

2 OBJETIVE

The objective is to identify areas of intervention for the project in the Andean ecosystems of Peru taking into account the ecosystems that present the greatest impacts of climate change, considering future climate scenarios, as well as other drivers of change that negatively affect

[1] See for example Global Mountain EbA project implemented by UNDP, UNEP and IUCN.

these ecosystems, high Andean population livelihoods and the enabling conditions that allow a successful implementation.

3 METHODOLOGY

3.1 First stage: Vulnerable communities and ecosystems

In the first stage, the method developed was based on a three-step process:

3.1.1 Area of focus: Communities vulnerability

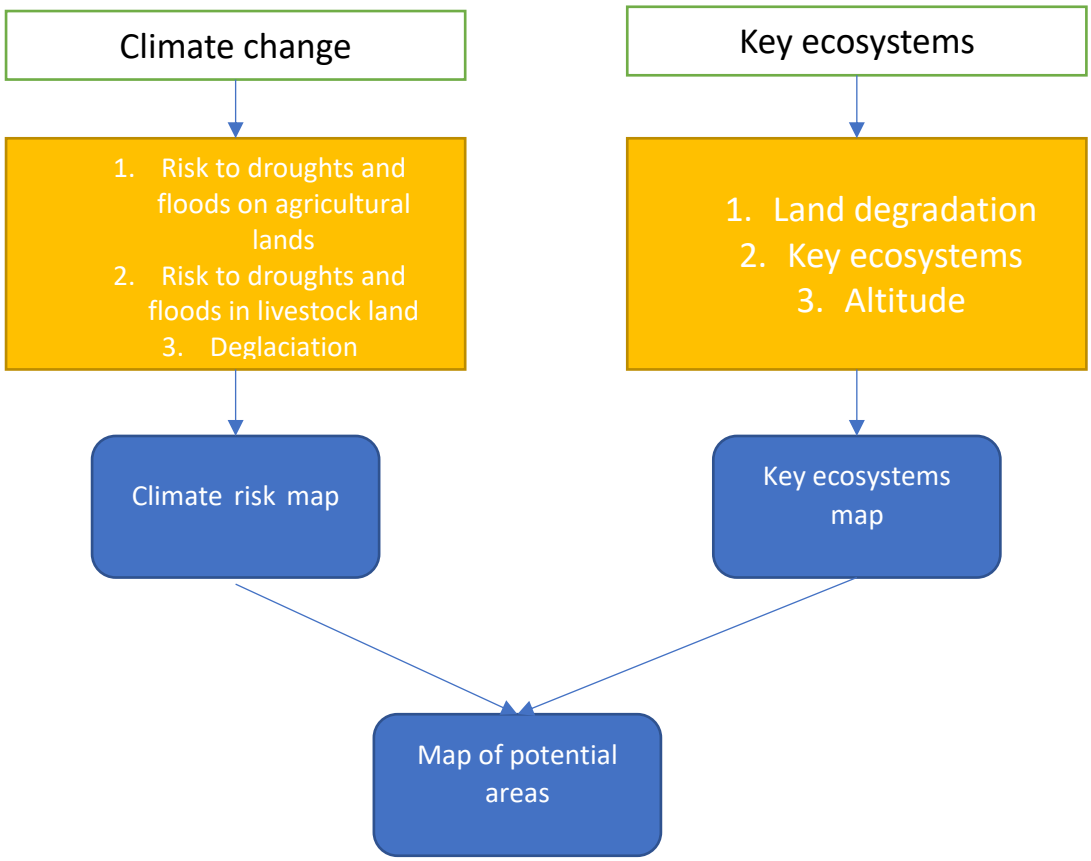
The project focuses on vulnerable communities -mainly small holder farmers and *alpaqueros*[2] - dependent on high Andes ecosystems, located above 3500 meters above sea level. Priority is given to the higher areas.

GCF relevance: *Special emphasis to the most vulnerable people (result area on most vulnerable people and communities)*

3.1.2 A spatial multi-criteria analysis: climate and ecosystem

A set of priority districts were identified using a spatial multi-criteria analysis method that integrated climate and ecosystem criteria. In this step, all the variables were considered with the same weight. The criteria and variables used are presented in Figure 1[3].

Figure 1. Criteria and variables used to prioritize potential areas for intervention



[2] People that breed alpacas.
[3] For more information, see Ricardo Mendoza report, (2021).

The climate change analysis integrates (i) Climate risk to drought and floods on agriculture land, (ii) Climate risk to drought and floods in livestock land, and (iii) deglaciation risk, see description of the criteria in table 1 below:

Table 1. Criteria for prioritizing climate risk.

CRITERIA	DESCRIPTION	PRIORITIZATION
1. Climate risk to droughts and floods on agricultural lands	Climate risk is the estimation and evaluation of possible damages, losses and impacts that may occur in the agricultural activity due to the presence of climate-related hazards. Climate risk considers the following variables: 1- hazard level: drought and floods hazards. 2- Agricultural vulnerability: population vulnerable to food insecurity, human development index, dryland index, technological development index and capital investment index.	Areas with agricultural land at high climatic risk will have higher potential for intervention.
2. Climate risk to droughts and floods in livestock land	Climate risk in the livestock activity due to the presence of climate-based hazards. *1- hazard level: hazards to* droughts. 2- livestock *vulnerability:* population vulnerable to food insecurity, human development index, animal load index (sheep, cattle and camelids), livestock practices index and capital investment index.	Areas with livestock lands with high climatic risk will have higher potential for intervention.
3. Deglaciation	The process of deglaciation exposes the population to hydrological changes over time. In the short term, increase flows overs the year can be observed but in the long term water supply has been reduced, causing water stress, and generating negative effects on development activities, particularly in agriculture and ecosystems. According to the National Research Institute on Glaciers and Mountain Ecosystems (Inaigem), Peru glaciers have been reduced by 43% over the last 40 years because of global warming. In the Andean glaciers, at least seven watersheds have already crossed peak flow; once the glaciers feeding these rivers are gone, dry season average discharge may decrease by up to 30 per cent causing actually water stress. (Baraer et al., 2012 cited by Bergmann et al 2021[4]).	The degree of influence of the glacial retreat is spatially distributed: the closer an area to the glacial retreat (between 1989 to 2018) the greater is the priority. The analysis was made inside the basins with glaciers. Basins without glaciers under this criterion were classified as zero because they do not have the influence of this effect. The hydrological impact will be lower at greater distance to the glacial (less priority).

[4] Bergmann, J., K. Vinke, C.A. Fernández Palomino, C. Gornott, S. Gleixner, R. Laudien, A. Lobanova, J. Ludescher and H.J. Schellnhuber, 2021. Assessing the Evidence: Climate Change and Migration in Peru. Potsdam Institute for Climate Impact Research (PIK) and International Organization for Migration (IOM). Potsdam and Geneva

CRITERIA	DESCRIPTION	PRIORITIZATION
	Evidence from the field shows that in recent years the scarcity of water resources has impact local livelihoods in areas closer to glaciers melted because of the Andean community's vulnerability. The variable used was the Euclidean distance to the area with glacier retreat, as an area where the impacts of these changes are already being felt.	

The ecosystem analysis integrates two criteria: (i) the current state of degradation and (ii) key ecosystems and their climate services. A description and prioritization criteria are given in the table below:

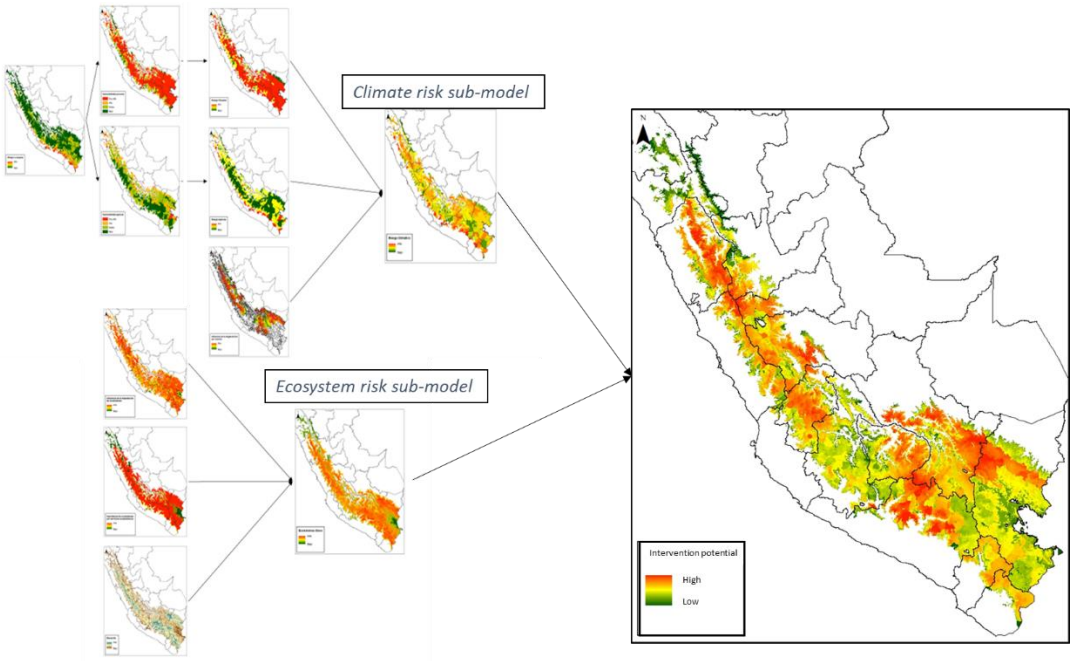
Table 2. Criteria for prioritizing key ecosystems

CRITERIA	DESCRIPTION	PRIORITIZATION
4. Land degradation	Land degradation is the long-term loss of ecosystem function and services caused by disturbances from which the system cannot recover on its own. Local activities that contribute to land degradation include mining, unsustainable agricultural practices, overgrazing, pollution from industrial and non-industrial sources, as well as modification of the landscape.	The closer to the degraded areas, the greater the effect on the ecosystem balance, therefore, the higher the priority.
5. Key ecosystems	Ecosystems such as wetlands, grasslands and forests fulfill fundamental ecological functions in the high Andean areas, as regulators of hydrological regimes and as a habitat for biodiversity. They also provide a series of products for the subsistence of the rural population, especially linked to the production of natural pastures for livestock activity.	Areas with higher ecosystem service valuation (i.e. as bofedales[5], grasslands, and forests) will have higher priority.
6. Altitude	With this variable It is assumed that the ecosystems in the higher parts of the study area should be identified with greater importance for intervention because they are key in the generation and regulation of resources such as water.	The higher the elevation, the higher the importance of ecosystems, the higher the priority.

GCF relevance: At this stage, special emphasis is mainly given to the climate impact on the livelihoods – through agriculture and livestock's practices - *of relevance to GCF* focal area on ***vulnerable people and communities*** and to the climate value of the ecosystems, from its potential perspective (key ecosystem) but also from the risk of losing their services (degradation) – *of relevance to GCF* focal area of ***ecosystems services for adaptation*** but also to ***forestry and Land use mitigation focal areas.***

[5] It is a kind of wetland present in the high Andes. It is considered a small native meadow with permanent humidity.

Figure 2. Spatial multi-criteria analysis scheme worked to identify potential areas for intervention



3.1.3 Focused target areas for enhanced impact

Widely dispersed areas with a few limited interventions creates risks of fragmentation, inefficiency, insufficient focus on scaling up and limited impact and attribution. Based on the results of the highly potential intervention areas resulting from the above multi-criteria analysis and taking into consideration the need for connectivity and focalization, the two biggest hotspots areas marked by green ellipses in Figure 3 have been selected and agreed as part of a consultation process with the project partners: Ministry of Agriculture (MIDAGRI), Ministry of Environment (MINAM), Profonanpe, GIZ and Instituto de Montaña .

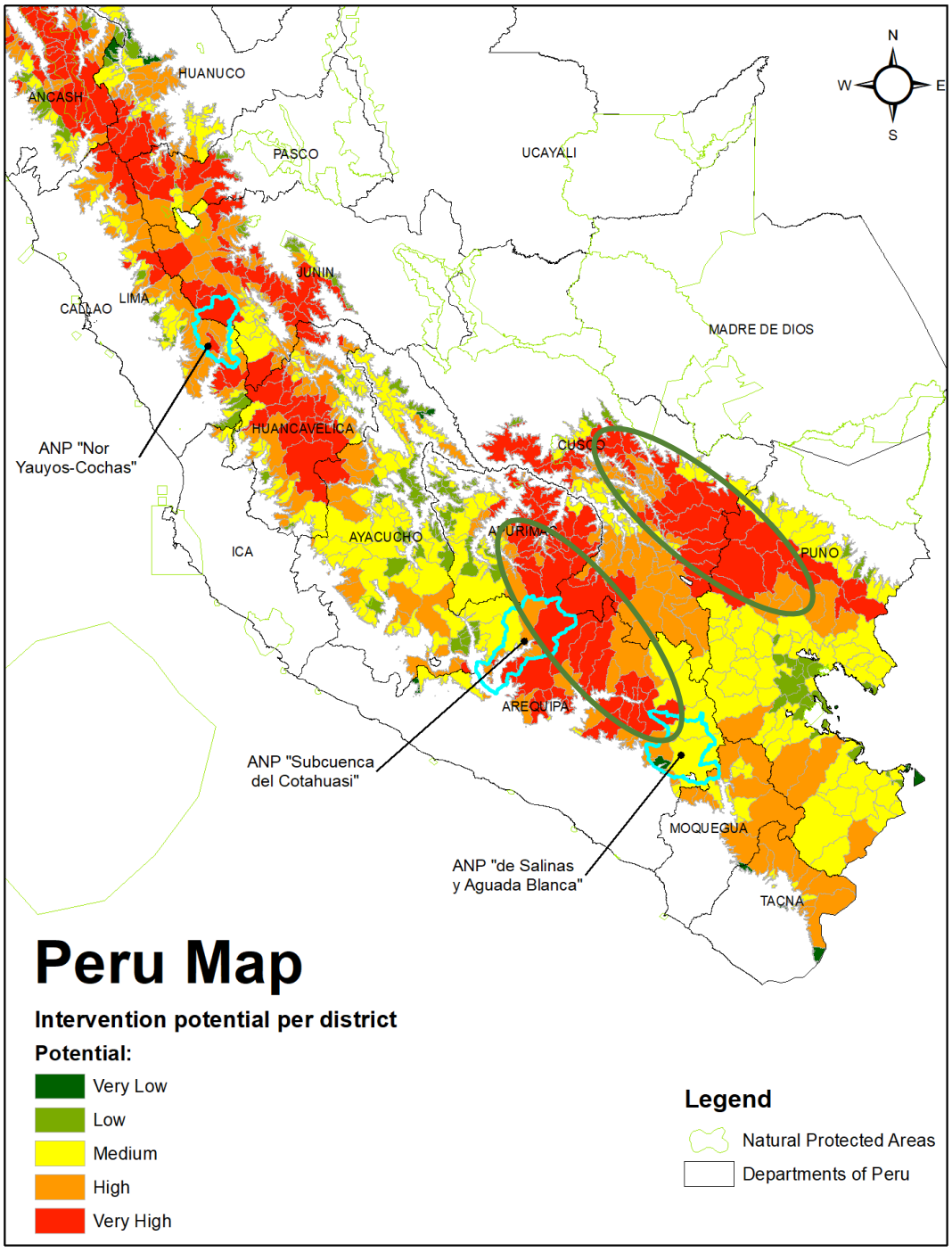
Participants in the consultation process agreed to prioritize the nearest and largest continuous two blocks with the highest priority. These criteria take into consideration the continuity of the ecosystems that could be conserved and the road connectivity of the territory that would allow during implementation to have areas of exchange of experiences nearby. In the case of Huancavelica, the hot spot area was far from the continuous in the south Andean.

In addition, the partners agreed that we should concentrate in the districts that had at least 40% of their area prioritized in the first stage. These focused hotspots with the higher intervention potential cover 86 districts in the regions of Arequipa, Cusco, Apurimac, and Puno. Additionally, four (04) districts were considered in the Nor Yauyos Cochas national protected area (NYC) and one (01) adjacent district with a water utility that implements compensation mechanisms for ecosystem services (MERESE for its acronym in Spanish). The NYC is located at the headwaters of the Cañete watershed, in the Department of Lima, it was represented in the Figure 3 framed in light turquoise color and labelled with the name. Knowledge, methods, and experience on enhancing natural capital and maintaining ecosystem services via EbA solutions will be transferred from the NYC to support replication in other national protected areas. Two of those

identified protected areas are Cotahuasi lanscape Reserve and Salinas y Aguada Blanca National Reserve in the Department of Arequipa, framed in a light turquoise color and labelled with the respective name in the Figure 3.

GCF relevance: Efficiency, effectiveness and enhanced impact are the drivers.

Figure 3. Hot spot areas for intervention



3.2 Second stage: Enabling conditions

In this stage, social and economic factors that could favor or hinder the fulfillment of the objectives of the project were considered. The objective of this stage is to identify an area of intervention with the best enabling conditions to reach the expected impacts of the project. Specially, to identify districts that have the enabling conditions to carry out the processes for the grant of funds for Local initiatives through the Puna facility.

In order to identify the criteria that represent these factors and their variables, we worked in a participatory manner in a working session with the project's partners committee[6] (See Figure 4). The information for each variable was processed at the district level in an Excel file based on information provided by MIDAGRI, (the Peruvian National Forest and Wildlife Service) SERFOR and public (the Peruvian National Service of Natural Protected Areas) SERNANP and the National Superintendency of Sanitation Services (SUNASS) databases. Data for each variable were standardized on a scale of 1 to 10, considering the distribution of data (see details in Annex 2).

The initial rating of the variables, their weighting and the results of the initial prioritization were reviewed with all partners[7], making a proposal for adjustments of weights to the criteria considered. A second review of the results was then made with the MIDAGRI team

Figure 4. Factors, criteria and variables used to prioritize districts for intervention

[6] Meeting held on August 17, 2022.
[7] Meeting held on September 13, 2022

The factors, criteria and variables used in this stage are described below:

3.2.1 Social factors

The social stakeholders in the territory are those who will actively participate in the implementation of the project. Priority has been given to working with producers organized either in peasant communities, producer associations or other small producer organizations such as cooperatives.

Table 3 describes the criteria and variables identified according to this factor.

Table 3. Social factors criteria and variables

CRITERIA	VARIABLE	DESCRIPTION	PRIORITIZATION
1. Potential to work with "local partners"	Number of local organizations (communities, cooperatives registered by the Ministry of Agriculture that are present in the district)	The presence of producer organization in the district indicates the potential to develop businesses, to have access to markets and apply for call for proposals.	The more registered organizations the better rated the district.
2. Governance	Presence of social conflicts in each district.	The presence of social conflicts in the territory could delay the implementation of the activities.	Highest rates are assigned to conflict-free districts.
3. Government institutionalism	Presence of MIDAGRI programs or /and presence of SERNANP officials in districts.	The presence of government programs in the intervention districts ensures the co-financing and country ownership.	The greater the presence of the State in the district, the more qualified.

3.2.2 Economic factors

The project proposes to contribute to ecosystem-based adaptation and community's livelihoods in the High Andean area. In this sense, the presence of livelihoods that can be compatible with the conservation and/or restoration of ecosystems and the potential to contribute to the sustainability of initiatives such as MERESE is considered. Table 4 describes the criteria and variables identified for prioritization according to this factor.

Table 4. Economic factors criteria and variables

CRITERIA	VARIABLE	DESCRIPTION	PRIORITIZATION
1. **PRESENCE OF LIVELIHOODS WITH POTENTIAL TO IMPROVE CLIMATE RESILIENCE**	South American Camelids density (Alpaca, Llama and vicuña)	It indicates the potential to work with districts that have high density of Alpacas, llamas, and vicunas; animals that depend on the puna ecosystems (grasslands and peatlands) and are part of the main livelihoods of the Puna communities.	Priority will be given to districts with a higher density of camelids (Alpacas and vicuñas), as an indicator of main livelihood for Puna communities.
2. **SUSTAINABILIT: POTENTIAL TO PARTICIPATE IN PAYMENT FOR ECOSYSTEM SERVICES**	Presence of public water utility companies (EPS) that have established a tariff in the framework of the payment for ecosystem service (MERESE).	To ensure long-term financing of EbA investments after the project timeline.	If the district belongs to a basin in which an EPS has established a tariff under MERESE, it is considered a priority.

4 RESULTS

The scope of the Puna Resilient project was defined in 91 districts that have the greatest need to implement adaptation measures based on ecosystems, their climate risk to droughts and the presence of ecosystems that provide ecosystem services that contribute towards resilience in the face of this risk.

Considering that the project objective is that communities and/or associations voluntarily apply with their Local initiatives for funds through the Puna Facility, based on the factors, criteria and variables agreed with the project partners, 58 districts were identified to be eligible to the Puna Facility as the districts present favorable enabling conditions for the overall implementation of the Local initiatives. The distribution of districts according to their location and strategies in the project are presented in the Table 5.

Therefore, in addition to the 58 districts eligible to the Puna Facility, the rest 33 districts out of the 91 districts will also benefit from activities strengthening local governments and small farmer capacities, pre-investment support, and technical assistance.

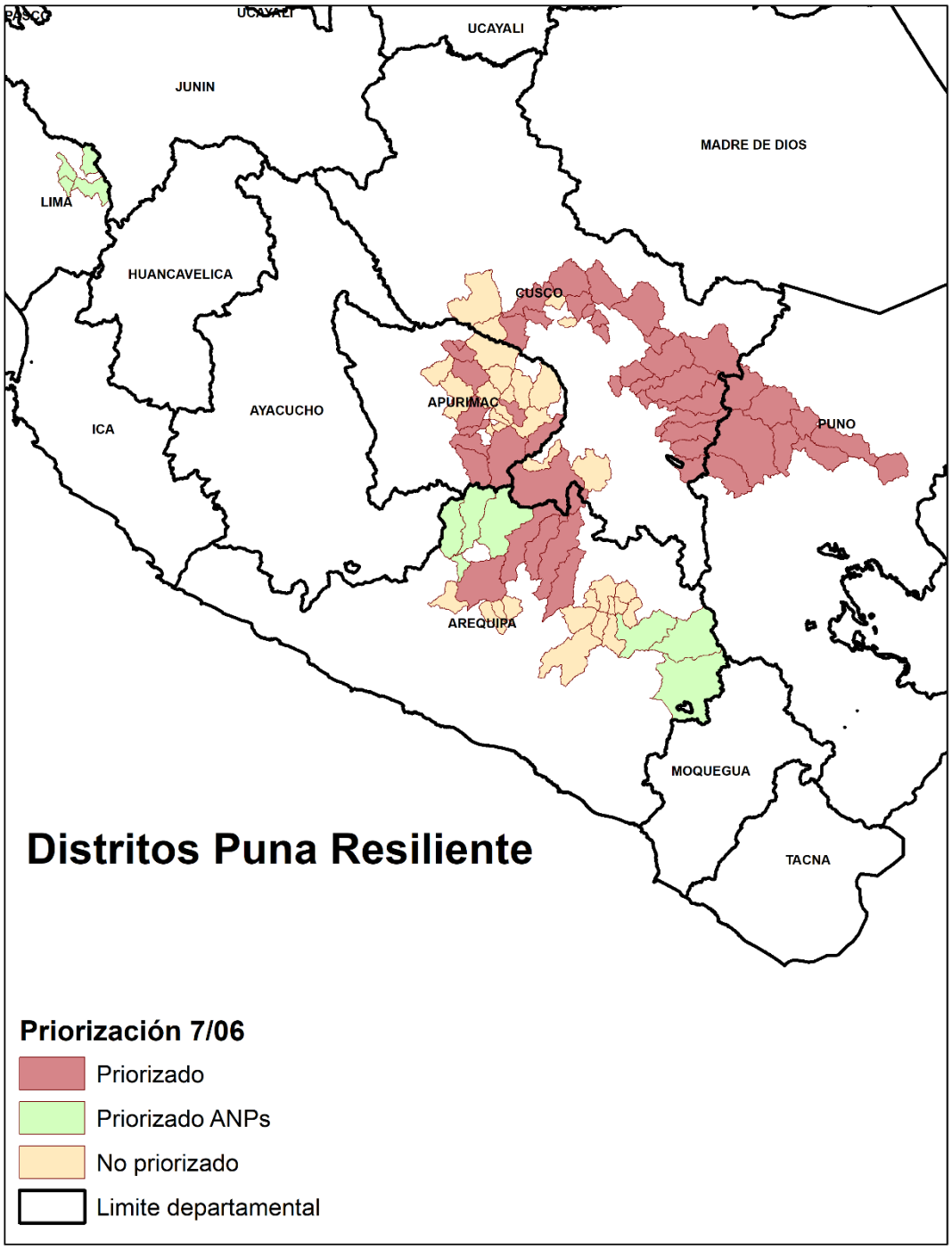
Table 5 Districts within the scope of the project.

Departments	Districts within the scope of the project*		
	Capacity building	Puna facility	Total
Apurímac	13	10	23
Arequipa	14	12	26
Cusco	6	23	29
Lima		4	4
Puno		9	9
Total	**33**	**58**	**91**

The area covered by the 91 districts covers 5,314,607.00 ha and by the 58 districts 4,116,475.00 ha.

In 2017, these 91 districts had a population of 567,049people, of which 288,106 people lived in rural areas (INEI, 2017). Details of this information by district are provided in Annex 4.

Figure 5. Districts prioritized for Resilient Puna Project.

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CALLAO
LIMA
MADRE DE DIOS
HUANCAVELICA
CUSCO
APURIMAC
PUNO
ICA
AYACUCHO
AREQUIPA
MOQUEGUA
TACNA
Peru Map
Legend
Prioritized to be eligible to the Puna Facility
Prioritized to be eligible to the Puna Facility (from Natural Protected Areas)
Districts for capacity building
Departments of Peru

5 ANNEXES

5.1 Annex 1. Spatial inputs and source of information (Stage 1).

Criterion	Source	File type	Features
Climate risk: • Climate risk to droughts on agricultural land • Climate risk to droughts in livestock lands	Adaptation Risk Management Plan for the Agricultural Sector, Period 2012-2021, MINAGRI (2012)	Vector (polygon)	District level
Key ecosystems for ecosystem services	Map of land Cover, MINAM (2015)	Vector (polygon)	Landsat Resolution (30m) Scale 1/100,000
Deglaciation 1989-2018	Hidrandina (1989). INAIGEM (2018)	Vector (polygon)	Different
Land degradation	Map of degraded areas, MINAM (2018)	Raster	Modis resolution (250m)
Elevation	USGS	Raster	Resolution of 90.8m

5.2 Annex 2. Variables, their sources and standardization (Stage 2).

VARIABLE	SOURCES	PROCESSING AND STANDARDIZATION OF INFORMATION
Number of organizations registered by MIDAGRI per district	Register of Peasant Communities (MIDAGRI 2022) Register of producer associations (MIDAGRI 2022) Register of agricultural cooperatives (MIDAGRI 2022) Database of cooperatives (Produce 2017) Associations of managers of Vicuña (SERFOR 2022).	Considering that there are different types of organizations, we standardized data for districts for each type of organization, as follows: 0: in case they have no records of organizations, 2: in case the number of organizations is less than the 0.2 percentile 4: in case the number of organizations is more than 0.2 and less than the 0.4 percentile 6: in case the number of organizations is more than 0.4 and less than the 0.6 percentile, 8: in case the number of organizations is more than 0.6 and less than the 0.8 percentile, 10: in case the number of organizations is greater than the 0.8 percentile Finally, data for each district was averaged.
Presence of conflicts per district	Database of the Ombudsman's Office (Social conflict reporting N.° 221)	Conflicts in each district with a started dialogue process. The data was rated as follows: 0: Records of high level of conflict using the territory, but no dialogue. 5: Conflict records, but there's dialogue. 10: There are no conflicts
Presence of MIDAGRI programmes of protected natural areas per district	Information provided by MIDAGRI: Budgeting programs 0121, 0068, Agroperú Fund and Agroideas Fund. Natural protected areas and buffer zones cartographic information.	In the case of MIDAGRI, the presence of each program in each district was recorded. Independently for each program, its presence in the districts was recorded with 10 points and its absence with 0. For each district, a weighted average of these data was then averaged, assigning the following weights to different programs presence by the degree of interventions each one has in the field: Budget program 0121, 20%; Budget program 068, 50%; Agroideas, 10% and Agroperu, 20%. In the case of SERNANP, districts within the Natural protected areas and their buffer zones were identified. In districts with presence of Natural protect areas or buffer zones, 10 points were considered.
Camelids density per district	ICA[8] index for Alpacas (MIDAGRI, 2022) and vicuñas sheared (SERFOR, 2022), both for districts.	ICA data for each district were normalized according to percentiles as in the case of the first variable. The information of vicuñas sheared by district was averaged for the last 5 years with SERFOR data. This data was then standardised using the percentiles also. A weighted average was made giving a weight of 70% to alpacas and 30% to vicuñas.

[8] It is an index that represents the density of alpacas in a district calculated from the division between the Alpaca Units and the natural pastures areas. This data was provided by MIDAGRI.

VARIABLE	SOURCES	PROCESSING AND STANDARDIZATION OF INFORMATION
Presence of water utility which has established a tariff under the MERESE	Maps of basins with MERESE (SUNASS 2022).	The districts were rated as follows: 0: It belongs to a basin without MERESE. 10: It belongs to a basin with a MERESE tariff

5.3 Annex 3 Weightings and final Rates

The weightings agreed by the partners for the criteria were based on the importance considered for each of them, as shown in Table 6.

Table 6. Weighting of the criteria.

CRITERIA	WEIGHTING (%)
Potential to work with "local partners"	20
Governance	15
Government institutionality	25
Presence of livelihoods with potential to improve climate resilience	25
Sustainability: potential to participate in payment for ecosystem services	15

The results of the district ratings were also categorized using percentiles, considering five categories for the ratings, with the top 20% rated very high, and the bottom 20% rated very low. The categories "Very High", "High" and "Medium" were finally considered as priorities.

Table 7. Score Categories for prioritization

Rate categories	Range		Prioritization
	Minimum	Maximum	
Very low	0	Percentile 20	No
Low	Percentile 20	Percentile 40	No
Middle	Percentile 40	Percentile 60	Yes
High	Percentile 60	Percentile 80	Yes
Very high	Percentile 80	Percentile 100	Yes

5.4 Annex 4. Population in the project area

Departments	Provinces	Districts	Project interventions	Rural population (Inei 2017)	Urban population (Inei 2017)	Total population (Inei 2017)
APURIMAC	ABANCAY	ABANCAY	Puna facility	5,922	63,106	69,028
APURIMAC	ABANCAY	LAMBRAMA	Puna facility	3,002	0	3,002
APURIMAC	ABANCAY	TAMBURCO	Puna facility	1,690	9,171	10,861
APURIMAC	ANTABAMBA	ANTABAMBA	Puna facility	2,776	0	2,776
APURIMAC	ANTABAMBA	HUAQUIRCA	Puna facility	1,841	0	1,841
APURIMAC	ANTABAMBA	OROPESA	Puna facility	2,268	0	2,268
APURIMAC	COTABAMBAS	HAQUIRA	Puna facility	4,297	5,133	9,430
APURIMAC	GRAU	CHUQUIBAMBILLA	Puna facility	1,918	3,105	5,023
APURIMAC	GRAU	PATAYPAMPA	Puna facility	798	0	798
APURIMAC	GRAU	PROGRESO	Puna facility	2,945	0	2,945
AREQUIPA	AREQUIPA	SAN JUAN DE TARUCANI	Puna facility	1,377	0	1,377
AREQUIPA	CASTILLA	CHACHAS	Puna facility	1,646	0	1,646
AREQUIPA	CASTILLA	CHOCO	Puna facility	702	0	702
AREQUIPA	CASTILLA	ORCOPAMPA	Puna facility	512	7,665	8,177
AREQUIPA	CAYLLOMA	SAN ANTONIO DE CHUCA	Puna facility	886	0	886
AREQUIPA	CAYLLOMA	YANQUE	Puna facility	2,117	0	2,117
AREQUIPA	CONDESUYOS	CAYARANI	Puna facility	3,212	0	3,212
AREQUIPA	CONDESUYOS	SALAMANCA	Puna facility	478	0	478
AREQUIPA	LA UNION	COTAHUASI	Puna facility	735	2,190	2,925
AREQUIPA	LA UNION	HUAYNACOTAS	Puna facility	1,913	0	1,913
AREQUIPA	LA UNION	PAMPAMARCA	Puna facility	1,122	0	1,122
AREQUIPA	LA UNION	PUYCA	Puna facility	2,342	0	2,342
CUSCO	ACOMAYO	ACOMAYO	Puna facility	1,631	2,901	4,532
CUSCO	ANTA	HUAROCONDO	Puna facility	2,165	2,368	4,533
CUSCO	ANTA	LIMATAMBO	Puna facility	7,255	0	7,255
CUSCO	CALCA	CALCA	Puna facility	7,109	13,519	20,628
CUSCO	CALCA	LAMAY	Puna facility	2,413	2,900	5,313
CUSCO	CALCA	LARES	Puna facility	5,753	0	5,753
CUSCO	CALCA	PISAC	Puna facility	5,331	4,553	9,884
CUSCO	CALCA	SAN SALVADOR	Puna facility	5,232	0	5,232
CUSCO	CANAS	LAYO	Puna facility	5,171	0	5,171
CUSCO	CANCHIS	CHECACUPE	Puna facility	2,415	2,305	4,720
CUSCO	CANCHIS	MARANGANI	Puna facility	6,366	3,234	9,600
CUSCO	CANCHIS	PITUMARCA	Puna facility	3,144	4,026	7,170
CUSCO	CANCHIS	SAN PABLO	Puna facility	4,224	0	4,224
CUSCO	CANCHIS	SICUANI	Puna facility	10,441	47,386	57,827
CUSCO	CHUMBIVILCAS	SANTO TOMAS	Puna facility	10,003	11,725	21,728
CUSCO	PAUCARTAMBO	CHALLABAMBA	Puna facility	8,433	0	8,433
CUSCO	PAUCARTAMBO	PAUCARTAMBO	Puna facility	7,881	3,990	11,871
CUSCO	QUISPICANCHI	CCARHUAYO	Puna facility	2,863	0	2,863

CUSCO	QUISPICANCHI	CUSIPATA	Puna facility	4,221	0	4,221
CUSCO	QUISPICANCHI	MARCAPATA	Puna facility	4,307	0	4,307
CUSCO	QUISPICANCHI	OCONGATE	Puna facility	11,064	4,159	15,223
CUSCO	QUISPICANCHI	QUIQUIJANA	Puna facility	6,892	3,444	10,336
CUSCO	URUBAMBA	OLLANTAYTAMBO	Puna facility	6,633	3,532	10,165
LIMA	YAUYOS	CARANIA	Puna facility	162	0	162
LIMA	YAUYOS	LARAOS	Puna facility	546	0	546
LIMA	YAUYOS	MIRAFLORES	Puna facility	229	0	229
LIMA	YAUYOS	TOMAS	Puna facility	520	0	520
PUNO	AZANGARO	POTONI	Puna facility	1,929	2,010	3,939
PUNO	CARABAYA	AJOYANI	Puna facility	2,138	0	2,138
PUNO	CARABAYA	CORANI	Puna facility	1,777	2,463	4,240
PUNO	CARABAYA	CRUCERO	Puna facility	2,131	6,977	9,108
PUNO	CARABAYA	MACUSANI	Puna facility	1,607	11,057	12,664
PUNO	MELGAR	ANTAUTA	Puna facility	1,737	3,622	5,359
PUNO	MELGAR	NUÑOA	Puna facility	3,809	4,641	8,450
PUNO	MELGAR	SANTA ROSA	Puna facility	3,124	3,073	6,197
PUNO	SANDIA	CUYOCUYO	Puna facility	5,024	0	5,024
Subtotal				**200,179**	**234,255**	**434,434**
APURIMAC	ABANCAY	CIRCA	Capacity building	1,866	0	1,866
APURIMAC	ABANCAY	CURAHUASI	Capacity building	8,843	7,380	16,223
APURIMAC	ABANCAY	PICHIRHUA	Capacity building	2,774	0	2,774
APURIMAC	COTABAMBAS	CHALLHUAHUACHO	Capacity building	8,329	6,196	14,525
APURIMAC	COTABAMBAS	COYLLURQUI	Capacity building	6,586	0	6,586
APURIMAC	COTABAMBAS	TAMBOBAMBA	Capacity building	5,857	4,524	10,381
APURIMAC	GRAU	CURASCO	Capacity building	1,229	0	1,229
APURIMAC	GRAU	CURPAHUASI	Capacity building	1,936	0	1,936
APURIMAC	GRAU	GAMARRA	Capacity building	2,782	0	2,782
APURIMAC	GRAU	HUAYLLATI	Capacity building	1,368	0	1,368
APURIMAC	GRAU	MAMARA	Capacity building	858	0	858
APURIMAC	GRAU	MICAELA BASTIDAS	Capacity building	935	0	935
APURIMAC	GRAU	TURPAY	Capacity building	628	0	628
AREQUIPA	CASTILLA	MACHAGUAY	Capacity building	488	0	488
AREQUIPA	CASTILLA	PAMPACOLCA	Capacity building	2,032	0	2,032
AREQUIPA	CASTILLA	VIRACO	Capacity building	1,545	0	1,545
AREQUIPA	CAYLLOMA	ACHOMA	Capacity building	841	0	841
AREQUIPA	CAYLLOMA	CABANACONDE	Capacity building	2,096	0	2,096
AREQUIPA	CAYLLOMA	CHIVAY	Capacity building	148	5,622	5,770
AREQUIPA	CAYLLOMA	COPORAQUE	Capacity building	1,089	0	1,089
AREQUIPA	CAYLLOMA	ICHUPAMPA	Capacity building	555	0	555
AREQUIPA	CAYLLOMA	LARI	Capacity building	904	0	904
AREQUIPA	CAYLLOMA	LLUTA	Capacity building	718	0	718
AREQUIPA	CAYLLOMA	MACA	Capacity building	701	0	701
AREQUIPA	CAYLLOMA	MADRIGAL	Capacity building	648	0	648
AREQUIPA	CAYLLOMA	TUTI	Capacity building	621	0	621
AREQUIPA	CONDESUYOS	CHICHAS	Capacity building	675	0	675

CUSCO	ANTA	MOLLEPATA	Capacity building	3,111	0	3,111
CUSCO	CHUMBIVILCAS	LLUSCO	Capacity building	4,368	0	4,368
CUSCO	CHUMBIVILCAS	VELILLE	Capacity building	4,948	2,883	7,831
CUSCO	LA CONVENCION	SANTA TERESA	Capacity building	5,972	0	5,972
CUSCO	URUBAMBA	CHINCHERO	Capacity building	6,336	4,141	10,477
CUSCO	URUBAMBA	URUBAMBA	Capacity building	6,140	13,942	20,082
Subtotal				**87,927**	**44,688**	**132,615**
Total population				**288,106**	**278,943**	**567,049**