

Info Note

Roadmap for the scaling up of Agroecology in Peru

An analysis of existing policies, programs and limiting factors

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Key messages

- Agroecology has been promoted by strong political advocacy by grassroots organizations, in combination with special attention by the Peruvian gastronomy at national and international level
- Peru has launched public policies for agroecology with PLANAE 2021-2030 and the Direction of Agroecology at the Ministry of Agriculture. Peru has 8 policy instruments, and 7 programmatic interventions related to agroecology at MIDAGRI (Agrorural), MINAM (ReSCa, SIPAM), MIDIS (Haku Wiñay, Qali Warma)
- 20 actors interviewed mentioned 55 limiting factors for current upscaling agroecology in Peru. Those factors belong to 6 dimensions, rated from greatest to least importance, as follow: i) market, ii) knowledge, iii) alliances, iv) productive resources, v) economic and vi) political. The key factors identified as barriers were the lack of transferring and co-creating knowledge for young people, the lack of access to seeds and the lack of access to credit for production.
- Considering 3 major strategic axes (short, medium and long term), 8 strategic lines encompassing 45 strategic actions were suggested by farmers, agroecological movements, academia, public officials, market and business actors, consumers and NGOs for scaling up of agroecology in Peru.

Scaling up of Agroecology

Agroecology is defined as a scientific discipline, a set of practices and a social movement (Wezel et al., 2009). As a science, it studies how the different components of the agroecosystem interact. As a set of practices, it seeks sustainable agricultural systems that optimize and stabilize production. As a social movement, it targets multifunctional roles for agriculture, promotes social justice, nourishes identity and culture, and strengthens the economic viability of rural areas.

Particularly in Latin America, agroecology has had a tangible and positive impact on crop yields, resource conservation, food security and food sovereignty (Altieri & Toledo, 2011). It is important to highlight that agroecology has been traced back to its origin as an expression of resistance to industrial agriculture and the green revolution, a tool and an approach to achieve food sovereignty and as an alternative to current agri-food systems (Val & Rosset, 2020).

According to Parmentier (2014), Nicholls & Altieri (2018), Tiftonell (2019), the scaling up of agroecology implies not one transition, but several simultaneous transitions, at different scales, levels and dimensions; social, biological, economic, cultural, institutional, political. This process leads to more families trying to optimize their management practices in increasingly large territories, involving more people at the technical-productive level in the processing, distribution and consumption of food derived from agroecology. Moreover, if we consider that scaling combines vertical (enabling policies) and horizontal (farmer-farmer networks) processes (Rosset & Altieri 2017), in our study, we focus on vertical processes, which emphasize institutional and political dimensions as enablers of agroecology scalability (Le Coq et al., 2019).

However, from an institutional perspective, specific policies designed in favour of agroecology have rarely been recognized in Latin America (Sabourin et al., 2017; Le Coq et al., 2020). Therefore, for this study, at the level of the policy framework we assessed whether some of the various dimensions of the concept of agroecology were addressed as a policy objective if these objectives existed, how they were implemented; if, on the contrary, there were no specific policies for agroecology; if any other instruments or programs had the potential to contribute directly/indirectly to the scalability of agroecology.

The main objective of public policy analysis is to clearly identify the actors involved in the process of defining, deciding and implementing a policy, and to shed light on the positions and interests of these actors (Roth, 2006;

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Fuenmayor, 2017). A policy's visibility tends to create commitment by both officials and civil society role-players who have to implement the policy from the bottom up, as well as politicians who have to support it from the top down. Ownership of a program reflects multi-level advocacy, implying administrative and political commitment (Brynard, 2009). Therefore, in order to understand the possibilities of scaling up agroecology, an in-depth analysis is needed of how the policies implemented directly or indirectly affect the various levels (local, regional or national).

In order to promote resilient and climate-adapted agriculture in Perú, the study focused on **identifying barriers and opportunities**, and defining viable **pathways for scaling up agroecology** in Perú through the elaboration of a Roadmap.

The following questions were addressed: i) What are the policies that are allowing or constraining the scaling up of agroecology in Perú? ii) What are the main limiting factors for the scaling up of agroecology in Perú? and iii) From the experience of the stakeholders involved, what are the actions needed to scale up agroecology in Perú?

Understanding the political and institutional framework

The political and institutional framework consists of strategies, laws and plans that can affect agroecology. Relying on the concept of policy mix (Flanagan et al., 2011), we consider agricultural, environmental, social, and economic policy as the main domains that can affect the scaling up of agroecology. The objectives and actions are detailed in the political and institutional framework documents. However, in order to understand how this framework affects the scaling up of agroecology, policy implementation must be evaluated (see Figure 1).

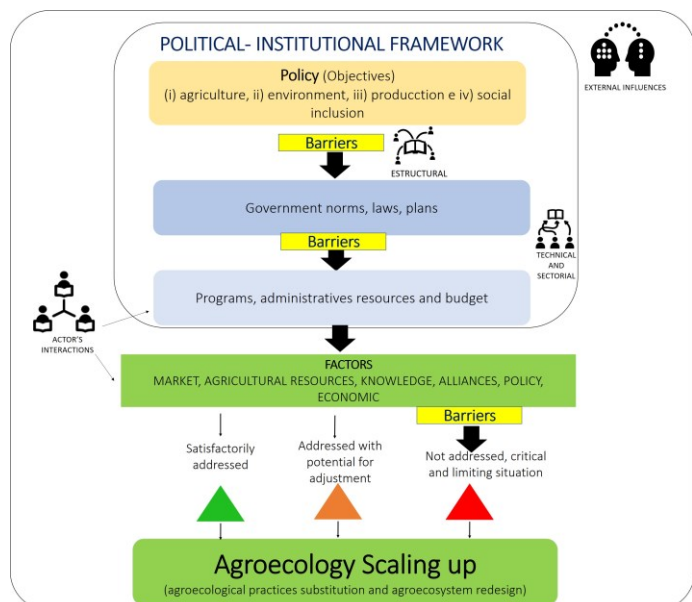


Figure 1 Analytical framework for the agroecology scaling up analysis. Source: Elaborated by the authors

The policy implementation translates into instruments, which define the actions of the State. The instruments are different types, e.g., regulatory, incentives (Lambin et al 2014). On the ground, they are translated into programs

that constitute the actions' programmatic grid. These instruments can be implemented both by public officers and international cooperation partners.

Enabling policies have the potential to create the conditions for the agroecology transition in multiple phases (alternative practices substitution and agroecosystem redesign), at different territory scales and dimensions such as i) agricultural resources, ii) policy, iii) market, iv) alliances, v) knowledge and vi) economic, (Anderson et al., 2019; Mier Y Terán Giménez Cacho et al., 2018; Gliessman, 2016).

The study followed 3 steps in line with the research questions. The **first step** consisted of public policy documents review to identify policies, budgets and programs that contribute to the scaling up of agroecology. The **second** consisted of 20 interviews with 8 types of actors representing the various components of the food system (see Table 1). The **third** consisted of a workshop validation where the study results were presented, and actions suggested by the actors to promote the scaling up of agroecology.

Table 1 List of participants interviewed July 2021

Type of Actor	Organization
Academy	Agraria La Molina University
Consumer	Slow Food Peru
	Association for the Protection of Consumers (ASPEC)
Officer	Consultant/Ex Minister of Agriculture
	SENASA
	Ministry of Environment - SERNANP, General Directorate of Biological Diversity (3 officials)
	FAO
	General Directorate of Agricultural Development and Agroecology (4 staff members) *
Market	La Molina Healthy Market
Movement	Alsakuy Agroecology
	Red de Agricultura Ecológica del Perú - RAE Perú (2 representatives)
NGO	IDMA-Institute for Development and the Environment
	Yanapai Group
	Rikolto
Producer	Bartolomé de las Casas Center
	RAAA
SME	National Association of Organic Producers (ANPE)
	Agroveli

* Stakeholders who participated only in the validation workshop

Agroecology in Peruvian public policy

Agroecological movements have had a strong presence in Latin America. For example, in Peru, the **Agroecological Network (RAE)** began in 1989 and promoted the approach in various local organizations, including the **National Association of Ecological Producers (ANPE)** in 1998. Today ANPE has 20 regional bases, more than 30,000 members and it has been holding its annual National Meeting of Ecological Producers (ENPE).

The development of public policies in favour of agroecology in Peru found an opportunity within the political-institutional framework through the recognition of the organic production (see Figure 2).

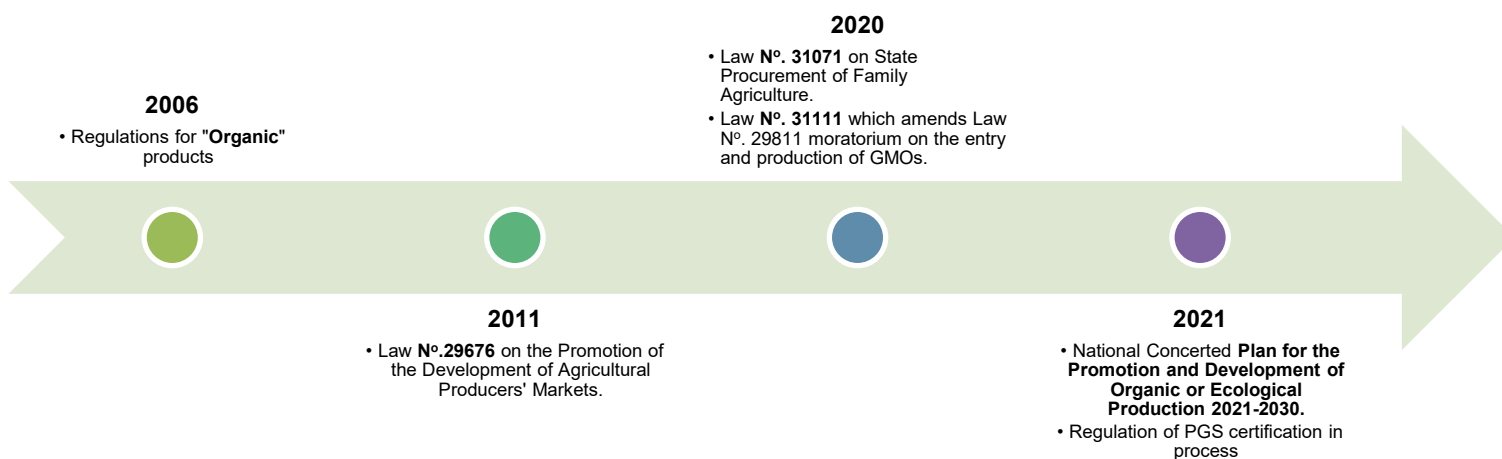


Figure 2 Key milestones in agroecological public policy in Perú. Source: Elaborated by the authors.

From 2006 to 2011, **organic and ecological production instruments** were promoted through regulations and the formalization of national and regional commissions (CONAPO and COREPO).

In 2009, MISTURA was inaugurated—an international Peruvian gastronomic fair, where the chef-farmer alliance was promoted together with ANPE, universities and the Peruvian Society of Gastronomy (APEGA), which strengthened the identity of Peruvians through their gastronomy and agrobiodiversity. In this context, in 2011, ANPE, the Institute for Development and Environment (IDMA) and RAE promoted the approval of two relevant laws for agroecology. These laws are i) **Law N°. 29676** on the *Promotion of the Development of Agricultural Producers' Markets* and ii) **Law N°. 29811** that establishes a moratorium on the entry and production of GMOs for a period of 10 years.

In the following years, international cooperation and various organizations working on ecological agriculture promoted favourable instruments. The following instruments were approved: i) **Law N°. 30215** (mechanisms of ecosystem services retribution) in 2014, and ii) **Law N°. 30355** (family farming) in 2015, which was materialized in the **National Plan for Family Farming** (2015-2021) and iii) **Law N°. 26839** (conservation and use of biodiversity).

In 2017, the law **N°. 30021** (Healthy Food Promotion) was approved. This law mandated informative and nutritional labelling for all food products. As a result of this legislation, the health care of children and young people of pre-school age was promoted through food, by the **Ministry of Health (MINSA)**. The law had a high political advocacy by the **Peruvian Association of Consumers and Users (ASPEC)**.

After almost 10 years since **Law N° 2676** was adopted (in 2011), several favourable instruments for agroecology were promulgated in the period of 2020-2021. For example, **Law N°. 31071** (*State Procurement of Family Farming*) and the amplification of **Law N°. 31111** (Extension of the moratorium on the entry and production of GMOs). This

law was approved after a strong advocacy campaign by grassroots organizations and civil society.

In the year 2021, the **National Concerted Plan for the Promotion and Development of Organic or Ecological Production (PLANAE 2021-2030)** was approved, as well as **Law N°. 31335** (*Strengthening of the associativity of agrarian producers in agrarian cooperatives*). In addition, the **Direction of Agricultural Development and Agroecology** was created at the Ministry of Agriculture (MIDAGRI), all representing an important milestone for the promotion of agroecology in Peru.

Since the end of 2021, grassroots organizations and public officials have gathered to determine the regulation of **Law N°. 30983** - which would allow the establishment of a **Participatory Guarantee System (PGS)** at the national level. Although this represents an arduous process, it is expected that a final agreement would be reached. The PGS is being promoted by ANPE, IDMA and ASPEC, with more than 150 public and private institutions in 15 regions participating

This political-institutional construction in favour of agroecology has been carried out through consistent advocacy efforts by agroecological producers' associations, movements, NGOs and civil society (chefs, academia and consumers).

Main limiting factors for the scaling up of Agroecology

The actors interviewed mentioned a great diversity of limiting factors for the scaling up of agroecology. These factors were ordered by major dimensions and considering the number of mentions by the interviewees (see section 3.2.2 and 3.2.3 of the Peru report²). The factors related to the following dimensions were prioritized in order of importance: i) market, ii) knowledge, iii) alliances, iv) productive resources, v) economic and vi) political (See Figure 3).

² For more detail on the limiting factors and the diversity of appreciation according to the types of stakeholders interviewed,

see section 3.2.2 and 3.2.3 of the Peru report in Valdivia-Díaz and Le Coq, 2021.

This prioritization consolidates the diverse visions/experiences that stakeholders have with respect to the factors that they consider limiting agroecological scaling up.

The key limiting factors identified by the stakeholders were the following: in the knowledge dimension (lack of in-field assistance and co-learning spaces), in the productive resources dimension (lack of access to native seeds and agricultural resources), and at the economic dimension (lack of feasible loans for agroecological production)

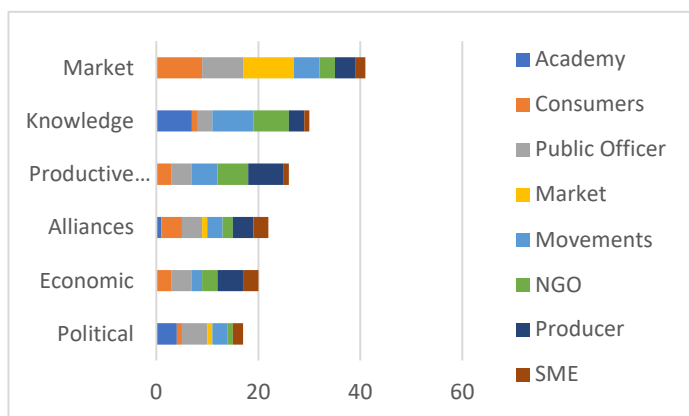


Figure 3 Number of limiting factors mentioned by the 20 interviews in Perú.

The **market** was the dimension with the highest number of limiting factors (15), where 3 of the most important factors were highlighted. The first is the limited consumer awareness at the national level regarding the health, social and environmental benefits provided by agroecological foods. In addition, the interviewees mentioned that consumers do not know how to differentiate between organic and agroecological labelling systems.

The second is the lack of government approval of the Participatory Guarantee System (PGS) scheme. In spite of the working groups on the regulation, no consensus has been reached yet that would allow the scheme to be recognized for marketing in short circuits at the national level. The third is the lack of formal sanitary authorizations adapted to agroecological production, as well as the promotion of farmers' associativity so that they would be able to access broader commercialization channels.

In addition, stakeholders mentioned i) the price of agroecological products has increased, instead of becoming popular and accessible for everyone; and ii) a need to add value to fresh food products to avoid food loss and to reach new market niches.

The **knowledge** was the second dimension that had a large number of factors mentioned, with (9) limiting factors, where 3 factors of major importance were highlighted. The first is the lack of knowledge sharing from elders to younger people in rural areas, as well as to students studying careers related to agriculture. Therefore, in general, young

people do not understand how to implement the agroecological approach in the different areas where they operate.

The second is the lack of field assistance, especially when pests appear, and co-learning spaces such as farmer field schools. The interviewees considered crucial for the agroecological transition the promotion of local leaders, who can be trained and provide assistance at the local level. The third is the lack of sustainable technological innovation, where traditional knowledge can be used. These innovations could be carried out through university research, especially if this technological innovation contributes to minimizing post-harvest and distribution losses.

Alliances was the third important aspect with (7) limiting factors, where 2 of the most important factors were highlighted. The first one, collaborations between farmers' associations and grassroots organizations are key, so it is necessary to reinforce connectivity and support, especially in isolated areas without internet access. The campaigns and advocacy that have been carried out in recent years have been successful due to the networking capacity of the organizations.

The second is the lack of collaboration between academia and farmers to work together in research topics taking into account the traditional knowledge of farmers. The interviewees considered that academia should provide guidelines based on scientific evidence in policy dialogues between producers and officials. As well as assessing how PGSs can have better credibility and trust with consumers through a data recording system.

Within the **productive resources** dimension, 8 limiting factors have been mentioned, of which 2 are the most important. The first is the lack of access to native seeds. The second is the lack of biological inputs and pest controllers. Both are crucial to achieve the transition and subsequent scaling up of agroecology.

Despite the producers know how to produce their own inputs (bio-fertilizers.), they mentioned that there is a great shortage/high cost of resources (e.g., biological pest controllers). Therefore, it is necessary that these resources become accessible in time/price through development of local bio-factories.

Within the **economic** dimension, 6 limiting factors have been mentioned, where 2 of the most important factors are highlighted. The first is the lack of specific credits for agroecology that would allow the farmers to continue the transition. Differentiated credit requirements and public incentives are urgently needed in order to begin a transition from conventional production to a more sustainable one. The second is the lack of economic insurances for crop protection against extreme weather events. This requires farmers to be able to calculate the profitability of their agroecological production.

Within the **political** dimension, 6 limiting factors have been mentioned, where 2 of the most important factors are highlighted. The first is that agroecology has not been yet considered in public budgets from its provision of ecosystem services and public health. The second is the lack of knowledge about the contribution of agroecology to

the country's economy, despite the fact that the national food supply is mainly provided by family agriculture (97%)

ROADMAP FOR PERU

After recognizing the wide diversity of barriers to the scaling up of agroecology, we evaluate to what extent the limiting factors were addressed by the current public policy instruments in implementation. Thus, a prioritization of the limiting factors was made according to the current degree to which they are addressed by public policies and programs³.

Based on this prioritization, a roadmap proposal was derived that takes up the actions proposed by the actors interviewed⁴ and discussed during a virtual workshop held in November 2021. After the workshop, actions proposed by stakeholders were reorganized according to time scale (short, medium and long term), considering in the short term the relevant actions for the scaling up of agroecology that can benefit from a policy framework or ongoing programs, in the medium term, actions that may take longer to implement due to the complexity of the factors identified as barriers and for which instruments already exist but need to be strengthened, and in the long term, actions that address factors that are more complex to resolve and for which policy instruments do not yet exist to facilitate them.

Hereafter we propose pathways for the scaling up of agroecology in Peru presented as a roadmap including 8 strategic guidelines and 45 strategic actions, distributed among 3 strategic temporal axes.

Suggested strategic guidelines for the scaling up of agroecology in Peru

1. Short-term: Promote agroecology from a welfare policy, youth integration, integrated rural development and public health.

With advances in the construction of policy and political frameworks, there are already multiple opportunities for scaling up agroecology. In particular, the recognition of ecosystem services (Law No. 30215) and the promotion of healthy eating (Law No. 30021) can be leveraged in favour of scaling up agroecology.

1.1 Promote the implementation of integrated rural development policies, grounded in agrobiodiversity, traditional knowledge, health and well-being.

- i. Encourage the development of local projects on ecosystem services retribution provided by agroecology, considering Law No. 30215 "*Mechanisms for the retribution of ecosystem services*".

³ For more detail on the rating of the programs contribution to address limiting factors, see section 3.2.4 of the Peru report in Valdivia Diaz and Le Coq, 2021.

- ii. Enforce the Law for the Promotion of Healthy Food - Use of Octagons on labels, regulating the dissemination of junk food advertising - to encourage the consumption of agro-ecological products (fresh and healthy food).
- iii. Promote local authorities' awareness of the Budgetary Program and its use (PP) No. 0144: "*Conservation and sustainable use of ecosystems for the provision of ecosystem services*", through the Rural Development Agencies in the municipalities to develop projects related to agrobiodiversity conservation and natural resource management.
- iv. Promote agroecology as part of Peruvian ancestral livelihoods inherited from Andean culture (agro biodiversity and gastronomy), under an intercultural approach through the elaboration of Territorial Development Plans designed by a Public-Private Council for Territorial Development (municipal) or Regional Agrarian Management Councils (CEGRA).
- v. Convert AGROBIO and RESCA (MINAM) projects into public policy to be assumed by other sectors (MIDAGRI, MIDIS).

1.2 Promote cooperation between producers and intermediaries to articulate better access to different commercialization channels.

- i. Make effective the Law No. 31335 on cooperatives in order to promote associativity oriented to the cooperative model to agricultural producers, to guide and accompany the processes of constitution of agricultural cooperatives; as well as, transform producer associations to agricultural cooperatives with the support of the Ministry of Agriculture (MIDAGRI) in coordination with local governments (municipal and regional).
- ii. Enforce Law No. 28846 "*Law for the Strengthening of Production Chains and Clusters*" to promote agroecological territories. It is necessary to identify the local production system (Coast, Andes, Sierra) and the level of production of agroecological farmers (self-consumption or with larger surpluses) to link them appropriately to different types of marketing channels (short circuits, retail, corporate, digital, etc.) through the Ministry of Agriculture (MIDAGRI) in coordination with local governments (municipal and regional) and other sectors (PRODUCE, etc.).
- iii. Encourage the descendants of agroecological producers to become solidarity intermediaries (a dynamic actor in local commerce) through incentives for agroecology-focused enterprises. These incentives

⁴ For more details on the actions proposed by the stakeholders interviewed, see section 3.3.2 of the Peru report in Valdivia Diaz and Le Coq, 2021.

could be in the form of productive and economic resources (without return) through programs such as INNOVATE PERU, RETO BIO, among others (Ministry of Production), which would allow them to market local agroecological products based on their local contexts.

1.3 Promote co-learning spaces with rural and urban youth to improve agroecosystem management capacity.

- i. Promote a multicultural education (primary, secondary, higher education) where agroecology is made visible in all regions of the country through a curriculum structure by the Ministry of Education (MINEDU).
- ii. Promote co-learning spaces using the "Field Schools" methodology through the development of a curriculum created by AGRORURAL in collaboration with INIA and SENASA.
- iii. Promote local "Consultation Centers" to train local facilitators/leaders (*Yachachi*) to accompany producers in the agroecological transition. This can be done through MIDAGRI programs such as SENASA and AGRORURAL.
- iv. Build a registry of traditional knowledge to serve as an input for designing learning programs in field schools.
- v. Taking advantage of the 1500 Field Schools currently existing in the country to develop learning exchange programs for rural youth and university students, through agreements with Agrarian Universities, farmer associations and SECIGRA AGRARIO (draft law on agrarian civil service), which would allow the promotion of research that integrates traditional knowledge within contemporary innovations.

2. Medium-term: Guarantee the productivity of agroecology through access to productive resources and a differentiated distribution and consumption policy.

To strengthen/consolidate the process of scaling up agroecology in Peru in the medium term, it is also necessary to improve the availability of seeds and other productive resources, as well as consolidate market access for agroecological products through different mechanisms.

2.1 Ensuring seed, water and land custodian networks

- i. Safeguard native seeds in local seed banks and agroecological seedbeds based on Law No. 26839 - *Law on the Conservation and Sustainable Use of Biological Diversity*.
- ii. Encourage the recovery of vulnerable local seed varieties through the creation of a multisectoral Agrobiodiversity Program, inspired by the results of the

MINAM-ReSCA (*Rewards for Agrobiodiversity Conservation Services*) pilot project in collaboration with programs such as INIA (MIDAGRI) and sectors such as MINCUL and MINAM.

- iii. Promote "Agrobiodiversity Conservation Zones" as areas of high importance for the development of Agroecology, characterizing the 24 regions of the country, inspired by the results of SIPAM project (*Sustainable Agrobiodiversity Management*)- MINAM pilot project.
- iv. Promote the development of "Andenerías" in High Andean Zones with risk of soil erosion by slopes. It can be carried out once the project of Law No. 5103- that *declares of national interest the public policy of construction, reconstruction and promotion of andenería* is approved.
- v. Promote projects or programs for planting and harvesting water in the high Andean zones (public works, community projects, and others; as well as the dissemination of ancestral techniques for planting and harvesting water among the population), with the support of Law No. 30989- *which declares of national interest and public necessity the implementation of planting and harvesting water* through SUNASS and MIDAGRI.
- vi. Improve irrigation canal systems and develop a local innovation system to save water in irrigation systems on the coast and in the highlands, through the INIA-(MIDAGRI) program, encouraging the active participation of local irrigation boards in their maintenance.
- vii. Promote bio-factories projects to generate natural fertilizers, breeding grounds for biological controllers for local pest management in crops, through budget program (PP) No. 0144 at municipal scale.
- viii. Promote projects at the municipal level for land use planning and land restoration through budget program (PP) No. 0144.
- ix. Ratify the environmental protection instrument-Escazú Agreement (signed in 2018 by 22 Latin American and Caribbean countries) to reduce socio-environmental conflicts affecting the most vulnerable populations, especially indigenous peoples in the use and exploitation of their productive resources and biodiversity.

2.2 Promote market access through public procurement, labelling system, value added and diversification through differentiated marketing strategies.

- i. Develop a differentiated regulation for the artisanal food production, adapting the regulation of Law No. 29073. This should be done in coordination between INDECOPI, MINAM and DIGESA, considering the legacy of traditional knowledge linked to artisanal transformation processes and their environmental and health contribution.
- ii. Provide financial support, education and training to agroecological producers to comply with the DIGESA-(MINSA) regulation on food sanitary surveillance and control DS007-98 (General Principles of Hygiene -PGH-, Good Manufacturing Practices -GMP- and later HACCP).
- iii. Implement Supreme Decree No. 012-2021-MIDAGRI that approves the Regulation of Law No. 31071 "State purchases of food from family farming". Considering the fluctuation of annual production and accompanying agroecological producers on the tax and safety system adapted to artisanal conditions. This can be done through the Qali Warma program of MIDIS and AGRORURAL of MIDAGRI.
- iv. Recognize the Participatory Guarantee Systems (SPG) through Supreme Decree No. 002-2020-MINAGRI that modifies the Regulation of Law No. 29196 "Law for the Promotion of Organic or Ecological Production", as an economically accessible alternative for producers and that allows them to access national markets.
- v. Develop a national "Family Farming" label to certify the national producer, taking family and agroecological production as requirements, giving greater visibility to the farmers' work and local identity.
- vi. Replicate the experiences of capacity building for the implementation and monitoring of traceability systems currently being carried out by PROM-Peru, which offers on-site support in the Huancavelica territory.
- vii. Develop capacities for productive rural enterprises, scaling up the MIDIS Haku Wiñay project to other sectors.
- viii. Develop CITES in the areas that provide more agroecological crops (e.g. Madre de Dios and Junín), particularly involving young producers in the transformation process. Examples can be taken from the 16 CITES already existing in Peru, and in particular the Chavimochic CITE, which provides value-added development services, production support, laboratory analysis and sanitary registration.

3. Long-term: Promoting consumer awareness, social connectivity and facilitating economic funding for agroecology.

Although the essential principle of agroecology is food sovereignty. Access to markets has been considered relevant

by those interviewed in order to maintain it over time. A factor of great importance is the massive connection with consumers and their awareness of the socio-environmental benefits of their consumption. However, to achieve this, it is necessary to increase connectivity at different scales: i) at the level of government sectors, ii) between producers and consumers, iii) between producers and sources of financing, and iv) road and telecommunications infrastructure.

3.1 Promote awareness campaigns and mass connection with consumers at different territorial scales.

- i. Generate producer-consumer alliances to influence municipalities opening more market fair spaces such as the "AGROFERIAS CAMPESINAS" through the municipalities and with AGRORURAL in the ITINERANT MARKETS.
- ii. Promote a National ECOFERIAS Program in which it is mandatory to develop one for each province.
- iii. Educate consumers about agroecology through experts in health, agriculture and environment in a playful way through TV Peru channels and national radio. Making effective the Law of Promotion of Healthy Food N° 30021.
- iv. Promote the recovery of local consumption patterns through influencers who are positioned in gastronomy and/or health.
- v. Recover the space of the "Gran Mercado" held by the chef-farmer-university alliance at the Mistura International Fair.
- vi. Develop a surveillance and monitoring program in alliance with academia in all regions of the country, to evaluate the content of agrochemicals in consumer products on a monthly basis, and propose an inspection, sanction and assistance plan for improvement.

3.2 Increase social connectivity, roads and telecommunications infrastructure.

- i. Develop an intersectoral institutional framework that allows the articulation of ministries (Environment, Education, Culture, Health, Transportation and Production) with regional governments, directing policy at the local level for the promotion of agroecology, and taking advantage of municipal/regional funds distributed for this purpose.
- ii. Promote formal agreements between producer-transporter to use transport with a production cycle that lasts 12 months. Example of interest: Project in Cajamarca, articulates producers to transport various crops (purple corn, garlic, peas).

- iii. Promote the creation of collection centres through co-operatives, based on Law No. 29676- *Promotion of the Development of Agricultural Producers' Markets*.
- iv. Develop digital competencies for marketing in rural areas through digital community centers at the national level, for example by scaling up the "TODOS CONECTADOS" Plan, involving the sectors - MINEDU, PRODUCE, MIDAGRI.
- v. Develop digital platforms managed by the children of producers to educate and provide information on agroecological practices in the field.
- vi. Promote a greater connection between producers and networks, agroecological movements, among others, through the use of digital platforms that allow them to participate in the processes of political incidence.

3.3 Facilitate economic funding for agroecology

- i. Adapt AGROBANCO's "Portafolio Verde" credit line to agro-ecological production and with a 3-year profitability term.
- ii. Encourage agroecological production by means of the insured sale of the harvest through advance contracts.
- iii. Enable access to financial insurance in banks to protect crops from extreme climatic events.
- iv. Promote agreements with municipal savings banks for credit loans at affordable rates for agroecological producers with a 3-year term of profitability.
- v. Provide training to rural youth and producers on their production costs so that they have a better understanding of their sales prices and investments.
- vi. Facilitate access to seed capital for young farmers at a 2% annual interest rate, supported by agricultural organizations and agroecological producers' associations as guarantors.

Recommended reading

- Valdivia-Díaz, M & Le Coq, JF. (2022). Roadmap for the scaling up of Agroecology in Colombia- *An analysis of existing policies, programs and limiting factors*. Info-note CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) and International Center for Tropical Agriculture – CIAT
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The CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), led by the International Center for Tropical Agriculture - CIAT, now part of the Bioversity-CIAT Alliance, has conducted a study under the project "Agroecology for Climate Action in Latin America: Strengthening the Evidence for Climate-Resilient, Low-Carbon Smallholder Agriculture. Pilot project in Colombia, Ecuador, and Peru".

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The CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) is led by the International Center for Tropical Agriculture (CIAT). CCAFS brings together some of the world's best researchers in agricultural science, development research, climate science and Earth System science, to identify and address the most important interactions, synergies and tradeoffs between climate change, agriculture and food security. Visit us online at <https://ccafs.cgiar.org>.

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