Governance Structures and Mechanisms of



Agroecological Living Landscapes in Five Countries

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INALL Exchange between Zimbabwe and Kenya / Photo by: AE-I Country Team Kenya

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Abstract

The CGIAR Initative on Agroecology established Agroecological Living Landscapes (ALLs) in eight countries to foster the development of the context-specific application of the 13 agroecological principles. This document examines the internal governance structures, mechanisms, and organization of six ALLs located in five of those countries, namely, Zimbabwe, Peru, Tunisia, Kenya, and Senegal. Structures refer to the positions of the different actors in decision-making processes specified in governance roles and, in some cases, in internally created organizations (e.g., committees). Mechanisms refer to the rules that (i) regulate coordination between at least two stakeholders, and (ii) allow participation in decision-making within the ALL. A qualitative study was conducted to analyze the structures and mechanisms of the six ALLs. The six ALLs were characterized under four types, following a combination of three types of governance structures (centralized, polycentric, and hybrid), three types of governance mechanisms (formal, informal, and composite), and three types of governance organizations (community-based, host organizations, and multilevel). The ALLs in Zimbabwe are centralized, formal, and community-based with strong synergies between farmer groups, traditional authorities, and local government agencies for agriculture, natural resource management, and social inclusion. The ALL in Peru is polycentric and composite. It consists of strategic networks organized around specific innovations with the engagement of multiple stakeholders that influence public policy. The ALLs in Tunisia and Kenya are hybrid and composite based on host organizations to engage farmers and/or multiple food system actors (FSAs) at the local level. Each of these ALLs is also connected to a multi-stakeholder platform at the regional and/or national level for advocacy and influence on public policy design. Finally, the ALL in Senegal is centralized and formal. It consists of multi-level platforms with internal organizations for coordination, deliberation, and advocacy integrating a wide range of stakeholders at the local, regional, and national levels.

1. Introduction

The CGIAR Initiative on Agroecology (from now, the Initiative) aims to contribute to fostering agroecological transitions (AET) as changes triggered by applying context-relevant agroecological principles to certain elements of territorial food systems linked to production, distribution, or consumption. Thirteen agroecological principles have been identified, including recycling, input reduction, soil health, animal health, biodiversity, economic diversification, co-creation of knowledge, social values and diets, fairness, connectivity, land and natural resource governance, and participation (HLPE, 2019).

The main strategy to achieve this outcome was the development of Agroecological Living Landscapes (ALLs) envisioned as "a mechanism or vehicle for a diverse set of actors (e.g., producers, traders, processors, consumers, and institutions) – who are part of the territorial food systems and landscapes in which ALLs are embedded – to exchange their views and knowledge and co-develop and adapt agroecological innovations" (Quintero & McCartney, 2021). Eleven ALLs were articulated in eight countries, including Burkina Faso, India (2), Senegal, Zimbabwe (2), Kenya (2), Peru, Tunisia, and Laos. The ALLs are highly diverse as a result of varying contexts and production systems. However, it is possible to identify six common elements across the 11 ALLs articulated in the context of the Initiative.

- 1. ALLs are **social networks** in which diverse stakeholders interested in AET interact. These stakeholders could be individuals but are typically representatives of social groups and/or public or private organizations.
- 2. ALLs are guided by jointly defined context-specific objectives, goals, and shared desired futures related to a **shared vision** for developing context-specific application of the 13 agroecological principles.
- 3. ALLs are anchored in **diverse geographies**, with an initial focus on the local level with the potential of multilevel presence.
- 4. ALLs focus on **specific production systems** that are relevant to the livelihoods of smallholder farmers; as such, ALLs are connected to **specific value chains** (ranging from localized chains highly relevant to local food security to highly complex value chains with connections to international/high-value markets).
- 5. ALLs can be considered **labs for experimenting and developing agroecological innovations** that can be technical, economic, or institutional, mainly through participatory action research. In addition, ALLs are spaces for capacity building, collective learning, and/or advocacy to foster the necessary **behavioral changes** of various food system actors to facilitate AETs.
- 6. ALLs are organized on **democratic and participatory bases** to develop innovations and make decisions.

Those elements are articulated in institutional arrangements, structures, and rules, a process known as governance. Governance of the ALLs encompasses both the internal arrangements developed among engaged stakeholders within the ALL and the arrangements and interactions between engaged stakeholders and other actors in the broader institutional landscape in which the ALLs developed their activities. This report is part of a comprehensive governance study undertaken by Work Package 1 (WP1) and Work Package 4 (WP4) global teams of the Initiative. While WP1 global and country teams oversaw the establishment and functioning of the ALLs, WP4 focused on strengthening the policy and institutional enabling environment for AET in the territories where the ALLs are located. The study explored two complementary aspects under the overarching question of how ALLs contribute to the governance of AET. The first aspect, led by WP4, examines the role and stakeholder composition of ALLs in AET

considering the institutional environment in which these platforms operate in relation to the five levels of AET identified by Gliessman (2016).

The second aspect, led by WP1, and the focus of this report, investigates the internal governance structure of the ALLs, and the mechanisms implemented to organize collective action, further trust-building, and reduce power imbalances among participating stakeholders. By structures, we understand the positions of the different actors in decision-making processes specified in governance roles and, in some cases, in internally created organizations (e.g., committees). By mechanisms, we refer to the rules that (i) regulate coordination between at least two stakeholders, and (ii) allow participation in decision-making within the ALL. Consequently, two practical questions emerged: First, what are the governance structures and mechanisms implemented by each ALL? Second, what are the factors explaining diverse governance structures? From the first question, we aimed to identify how decision-making was organized in each ALL to understand if and how these structures could contribute to building trust and empowering farmers. From the second question, we aimed to understand the factors contributing to the particular structures of respective ALLs, and if independent variables underpinning variety across the cases could be found. This was based on the assumption that each country team made informed choices for the establishment and functioning of the ALLs according to perceived challenges and opportunities in their contexts.

To answer these questions, the study focused on six cases in five of the countries in which the Initiative was present: Zimbabwe (two cases), Peru, Tunisia, Kenya, and Senegal. Participation in this study was voluntary, requiring commitment from each country team to participate in interviews, facilitate documentation, and review the data. This document presents the results of the internal governance study after one iteration with the country teams, which included individual or group interviews, the revision of the data collected organized in figures and databases, and further clarification of specific information by email or subsequent interviews.

This document starts by outlining the literature gap and scientific problem the internal governance study sought to address. The second section describes the methodology for data collection and analysis. Then, general characteristics of the territories where the ALLs are located are introduced. The fourth section addresses the general governance characteristics of the ALLs, including the characterization of the governance structure of each ALL, the governance mechanisms implemented in each ALL, and the evolution of the ALLs to identify factors accounting for changes in the governance structure. The next section advances this study's main findings and propositions, while the final section addresses limitations.

2. Problem & Justification

As food systems are dealing with multiple crises, the question of how to better govern them to ensure equity and inclusivity becomes increasingly important (Behringer & Feindt, 2024; Oñederra-Aramendi et al., 2023). Emerging new and alternative approaches to governing food systems aim to identify better ways of addressing territorial challenges while tackling global issues such as climate change, biodiversity loss, soil erosion, and rural poverty. Diverse actors, including development and research for development (R4D) projects, seek to contribute to solutions for the serious challenges facing food systems, impacting the various arenas where different local FSAs interact (Schut et al., 2016; Toffolini et al., 2021). Increasingly, these projects support the development of diverse and more inclusive governance structures and mechanisms to foster the necessary collaboration for transforming food systems based on collective decision-making. This is usually known as collaborative governance, which requires mutual commitment, the recognition of interdependence among stakeholders, and trust, which enhances stakeholder participation in decision-making, action implementation, and resource mobilization (Ansell & Gash, 2007; Edlmann & Grobbelaar, 2021; Ostrom, 2005).

Multi-stakeholder Platforms (MSPs), Innovation Platforms (IPs), and Living Labs (LLs) are some of these collaborative governance spaces where stakeholders actively seek to reconfigure power dynamics to address collective action problems (Adjei-Nsiah & Klerkx, 2016; Barzola Iza et al., 2020; Ragasa et al., 2016). MSPs refer mainly to collaborative spaces designed to foster exchange and discussion among stakeholders (Ratner et al., 2022), while IPs are MSPs concerned with the adoption and eventual scaling of innovations, usually with a value-chain focus (Schut, 2018). For its part, LLs are usually small MSPs focused on the co-design of innovations and experimentation in real-life contexts engaging final users (Gamache et al., 2020; Potters et al., 2022). Indeed, ALLs combine elements of MSPs, IPs, and LLs.

The governance of these arenas is a complex polycentric and multilayered process shaped by the interplay of internal and external institutional arrangements across various geographical scales and sectors including their overlaps, complementarities, and conflicts (Aude et al., 2019; Jordan et al., 2023; Ratner et al., 2022). Internally, governance involves institutional arrangements that promote collective action through voluntary collaboration. Three interwoven elements shape these arrangements (McPhee et al., 2021; Ratner et al., 2022; Röling, 2016):

- 1. The **modalities of participation** define who participates and how.
- 2. The **rules in place** (either formal or informal) organize interaction, decision-making, and management of the activities.
- 3. The **organizational structures** allow these platforms to function and make decisions.

In addition to these factors, the context, and the history of the interaction and conflicts among stakeholders preceding the establishment of MSPs, IPs, and LLs, and the broader power structures are recognized as external factors influencing the quality of internal governance and the outcomes of these platforms (Bancerz, 2021; Sarmiento Barletti & Larson, 2021). These external conditions can either enable or hinder collective action. When conditions are unfavorable, replicating these externalities within MSPs, IPs, and LLs poses a significant challenge to their internal functioning, particularly in reconfiguring power and fostering new institutional arrangements. For instance, powerful actors can easily impose the agenda and pre-identified solutions on vulnerable stakeholders, legitimizing these solutions without meaningful participation from multiple stakeholders (Dentoni & Ross, 2013; Lundsgaard-Hansen et al., 2022; Sarmiento Barletti & Larson, 2021). This often leads to failure, even when MSPs, IPs, or LLs are considered a good choice to solve collective problems. Therefore, addressing those externalities is crucial for MSPs, IPS, and LLs to effectively develop collaborative governance.

While the literature has addressed external conditions, more attention is needed to the internal dynamics that influence the effectiveness of stakeholder arrangements in managing the externalities and internalities that complicate collaboration. In other words, the internal dynamics of these platforms need further consideration, as they can both reinforce adverse external conditions and create internal challenges that could make collaboration difficult. Additionally, research on their internal governance often focuses on specific case elements, without offering systematic lessons that could be generalized to other contexts.

This is particularly critical for MSPs, IPs, and LLs that support AET, as they aim to enhance sustainability in agriculture and food systems, thus altering the power structures of natural resource management and food production, distribution, and consumption. Agroecology involves a political reconfiguration of food systems based on social justice concerns such as inclusive natural resource governance, fair food access and distribution, and the improvement of farmers' livelihoods (De Molina et al., 2019; Rosset & Altieri, 2017). Agroecology in its political dimension posits an alternative to the dominant food regime based on the privatization and marketization of food security and the marginalization of small-scale farming (McMichael, 2006). This alternative includes the redistribution of economic power by shortening value chains, enhancing connectivity between producers and consumers, and supporting circular economies (Lamine & Dawson, 2018). The reconfiguration sought by agroecology needs to be implemented at various levels and at the same time, needs to respond to the context-dependent nature of agricultural systems. MSPs, IPs, and LLs, could be important tools toward AET that could benefit from collaborative governance arrangements that look to reconfigure power dynamics to spur collective action (Jeanneret et al., 2021).

Given the insufficient attention paid to the internal governance of MSPs, IPs, and LLs in the context of collaborative governance, this study aims to answer the following research question by using the ALLs as in Zimbabwe, Peru, Tunisia, Kenya, and Senegal as case studies: What are the types of governance structures and mechanisms that are developed in the context of R4D projects that aim to contribute to AET? Subsidiary research questions are:

- 1. What are the internal and external factors determining different governance structures of the ALLs?
- 2. How do governance structures and mechanisms of the ALLs address external and internal conditions?

We conceptualize governance structures and mechanisms as the result of institutional arrangements that evolve over time through dynamic processes. These processes are shaped by the interaction of the stakeholder representatives within the common spaces provided by the ALLs. Specific governance structures reflect different ways in which participation takes place, rules are crafted, and decisions are made. Governance structures address external conditions to various degrees and imply different kinds of trade-offs. Here, the analysis is focused on the modalities of participation, formal and informal rules, and organizational structures that regulate decision-making. As the cases in the five countries cover a wide diversity of external and internal conditions, we aim to illustrate a variety of structures and mechanisms.



Field Visit Peru / Photo by: Angela Navarrete-Cruz

3. Study Area and Cases

The study focused on the following ALLs: the Mbire Wards (2 and 3) in Zimbabwe; the Agroforestry Corridor Pucallpa-Aguaytía, Perú; the Agroecological Platform in the Kef-Siliana Transect (PAEKS), Tunisia; the ALL in Makueni County in Kenya; and the Local Dynamics for an AET (DyTAEL) in Fatick, Senegal.

Three ALLs operated within specific territories (Zimbabwe and Peru), while three ALLs operated at various levels from the local to the national (Tunisia, Kenya, and Senegal). This description primarily focuses on the local and regional areas where the ALLs were active, as these were the main geographical spaces for farmer engagement, co-design and testing of agronomic innovations, and co-creation of business models. At the national level, the three ALLs concentrated on advocacy and influencing public policy.



Senegal / Photo by: Raphael Belmin

Table 1. Characteristics of the territories in which the ALLs are located (Local & Regional levels)

ALL Characteristics	Mbire Wards 2 & 3 (Zimbabwe)	Agroforestry Corridor Pucallpa-Aguaytía (Peru)	Agroecological Platform in the Kef/Siliana Transect - PAEKS (Tunisia)	Makueni (Kenya)	DyTAEL (Senegal)
Description location	Part of the Mid-Zambezi Valley, formed by the former floodplains of the Zambezi River between Victoria Falls and Cabora Bassa Lake, at an average elevation of 400 m above sea level. Annual rainfall is low and ranges from 350 to 650 mm, whereas temperatures range from 10 to 38 °C, and can be as high as 45 °C. High persistence of Human- Wildlife conflict: Wild animals including hyenas and lions target cattle, goats, and sheep. Rich biodiversity and protected areas form part of the mid-Zambezi biosphere and CAMPFIRE (Communal Area Management Program for Indigenous Resources) buffer zone. Two seasons are clearly defined: a rainy season from December to March and a long dry season from April to November.	Two climatic zones: the sub-Andean zone (western sector of the ALL) and the Amazon plain, where most agricultural activities of the ALL develop. In the Amazon plain, an average minimum temperature of 19°C and a maximum of 32°C are recorded, while rainfall is from 1,200 to 3,000 mm/year. The dry season is between June and August. *3 million Ha of forest. The territory is facing severe deforestation and biodiversity loss. Between 2000 and 2018, 1'143,049 hectares of forest were lost, ranking second in GHG emissions. This is primarily due to land conversion for agriculture (coffee, cacao, palm oil, and more) and infrastructure development	The transect is characterized by a rugged relief and compartmentalized with mountain ranges, high and medium plateaus, and alluvial plains, covering a gradient of agroecological contexts of mixed treecrop-livestock systems in a semi-arid zone, from mountainous to plain zones. The two governorates have a noble forestry ecosystem with cork oak, Zen oak, and holm oak, among others. This ecosystem has socioeconomic functions (production and protection of dams) and ecological functions (soil protection, improvement of water sources regime, maintenance of rare species). Kef Governorate: annual rainfall varied from 350 to 450 mm. The lowest mean temperature was 7.3°C (January); the highest was 26.5°C (July).	Makueni County is in the eastern part of Kenya, located between latitude 1°35' and 2°59' South, and longitude 37°10' and 38°30' East. Makueni County is characterized by low-lying terrain except for the hilly areas of Kilungu, Mbooni and Kyulu. The hilly regions receive about 800 - 1,200 mm of rainfall annually, whereas the lower areas such as Kibwezi East receive below-average rainfall of about 250 - 400 mm. Mean annual temperatures range between 20.2 to 35.8°C, with the hilly areas being relatively colder than the low-lying regions. Makueni has two main rainy seasons: the long rains in March-May, and the short rains in October-November. Makueni County is also home to a diversity of both exotic and indigenous plants. Since the county is majorly semi-arid, a large proportion of it is shrubland. The ALL activities are concentrated in the hillier	The climate is predominantly Sudano-Sahelian, with a long dry season from October to June and a rainy season from July to October. Most of the department's timber and natural resources are situated in the southern region, where the use of non-timber forest products, are abundant. Additionally, the presence of a vast mangrove ecosystem further enhances the area's potential for fishing and tourism. The department is also home to two classified forests, encompassing a total of 902 hectares. In the north of the department, the landscapes of the groundnut basin predominate with a high level of degradation of natural resources.

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			550 mm. The lowest average temperatures varied from 3.2 to 13.0°C, while the highest from 17.9 to 35.7°C	areas of Mbooni in the northern area of Makueni County.	
Land structure and farm size	The Fast Track Land Reform Program (2002) created land tenure insecurity as private land holdings shifted to state land. Customary regimes predominate to regulate land tenure and use in the areas where smallholder agriculture predominates. Communal lands are inherited from the colonial system marginalizing black farmers to the periphery and less productive lands. Farm size: 2-10 Ha.	High informality: A weak land titling and cadastral system, primarily in rural areas, facilitates illegal and informal mechanisms in the land market. Large track of lands belongs to the state, but agricultural expansion is driving the incorporation of the land into market circuits. The promotion of legal agricultural activities and the granting of land titles has been a state strategy to combat the illegal production of coca leaf, which finds a market in the drug trade Farm size: 23 Ha (4.7 Ha for cacao production on average) - In the Amazon region, landholdings are bigger than in the rest of the country because these are areas that must be converted for agricultural expansion and land productivity is lower.	Large families composed the communities. These families gather in a set of households that compose the central decision unit for land and farm activity management Land fragmentation with population growth threatens the socioeconomic viability of farms Low development of the land market Highly unequal land distribution (78% of landholders are smallholders but occupied only 43% of the agricultural land). Farm size: <10 Ha	Kenya has three categories of land: public, community, and private land. High informality of land holding in Makueni with only 30% of the households having title deeds. The average land holding is 1.2 ha, with farmers in the southern parts of the county having larger pieces of land compared to the upper parts. Farm size: 1.7 Ha.	Land inherited from father to son Limited access to land by women and youth Conflict between customary and private regimes Land belongs to the nation, and land titles are rare in rural areas Farm size: 1,8 Ha

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Main constraints and challenges for agriculture and Agroecology 1. Technical and environmental	Human-Wildlife conflict affecting crops and livestock Extreme climate Low input agriculture Water scarcity The region is suitable for semi-extensive livestock systems, resistant fodder crops, forestry, and wildlife tourism.	Deforestation for agricultural expansion Soil degradation Unregulated and excessive use of agrochemicals, without any protection for their application Agrochemical cross-contamination in organic systems Low technification Climate variability, with increasingly severe droughts and shorter but more intense rainy seasons	Low technification Deforestation Water Scarcity and Quality Poor soils, extremely low soil organic matter; Very high erosion risks; Extended practice of fallow; Low integration of forages Overgrazing in forest rangelands Unsuitability of most cropped land for agriculture (aggravating soil erosion) Arid climate	Climate Change Soil Degradation Biodiversity Decline Pest and disease control Upscaling in value chains Lifted GMO ban Low technification and access to extension services The capacity of the processing units for the main agricultural product (mango) is low Vs. production	Unemployment Government subsidies to agrochemical fertilizers and seeds Land salinization Soil erosion Low soil carbon content Climate change Degradation of tree cover Demographic challenges (overall population growth and ageing in rural areas) Low input Low technification and access to extension services Absence of processing units
2. Economic	Low market-access Low processing Predominance of middlemen in local value chains Non-farm activities are fundamental for subsistence	Unpaved roads and trails predominate, making transport difficult, especially during the rainy season. Deforestation has been driven mainly by agricultural expansion of cash crops, including cacao, oil palm, coffee, banana, cassava, and cattle ranching. Low agricultural productivity. Even though most of the population is engaged in agriculture (almost 30%), the sector	Mixed cereal-tree-small ruminants (sheep and goats) system prevails. State-owned enterprises regulate the marketing of strategic goods and byproducts such as cereals and olive oil. The current shortage of cereals and concentrates (linked to the Russia invasion on Ukraine) combined with price increase in legal and illegal markets caused some farmers to decrease or even abandon some livestock	Dominance of dominated by mixed crop-livestock farming systems. Most produce is sold in local markets. Unpaved roads and low availability of public transport outside of main roads make the transport of agricultural products difficult. Predominance of middlemen in local value chains, especially for sale of cereals and fruits to markets outside of the locality. Makueni County recently established a grain plant in	Unpaved roads and low availability of public transport makes the transport of agricultural products difficult. Low farmer power to negotiate with intermediaries Low access to formal credit Non-farm activities are fundamental for subsistence

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		only contributes to 12% of the gross value added.	activities, especially dairy cows.	Makindu to process and distribute pulses. The county also has a mango processing plant: Kalamba Fruit Processing Plant.	
3. Socio-political	Conflicts on the definition of the wards' boundaries Patriarchal culture impeding the participation of women in local politics and leadership positions Dependency on external donors Multi-stakeholder platforms at the local level are non-existent or inactive	Corruption and involvement of the local government of Ucayali in land grabbing, affecting small and medium holders and native communities. Legal incentives for land conversion because to obtain a property title after occupation, the area to keep native forest could be minimum 30% of the occupied area. Youth disinterest in agriculture resulting in aging rural population	Rising population Youth disinterest in agriculture Increasing involvement of men in non-farm activities	Kenya's 2010 Constitution established the no more than two-thirds gender principle in elective and appointive bodies. In Makueni, the dominance of men in political leadership has remained, and women remain under-represented in political and local leadership. According to the Makueni County Gender Policy (2020), gender inequality has been a major hindrance to the political development of its people.	Patriarchal culture makes it difficult the participation of women in local politics and leadership positions Youth disinterest in agriculture Rising population
Assets and opportunities for agriculture and agroecology	Traditional leaders are important for natural resource governance and preserving local knowledge, relevant for agroecology. Strong farmer groups facilitate adoption of practices, as they rely on moral incentives and sanctions for the farmers. Farmers participate in diverse agricultural activities (including croplivestock systems and various crops such as maize, sorghum,	13 FOs, bringing together nearly 700 family farmers, focused on agroecology. NGOs focused on sustainable agriculture and market access for smallholder farmers. The reactivation of the Regional Participatory Guarantee System (PGS) Council (promoting collective action around certification, markets, agroecological practices, and digital tools for supporting the monitoring	Increasing involvement of women in agricultural activities (from 13.5% of agricultural employment in 1975 to 36% in 2012). Increasing focus on value chain development to stimulate local economic and social dynamics while spurring resource protection and preservation. Leadership involves FOs such as SMSA or GDA with a president, and supporters or social associations. An FO is usually created at the	Development of multi-level platforms specifically promoting agroecology and biodiversity conservation. Recent efforts to strengthen extension services. For mango, for instance, technical assistance is provided to farmers by various sources, including the County overseen by the Sub-County Agricultural Office and Ward Agricultural Office. This assistance includes training on various aspects of good agricultural management	Civil society organizations (CSOs) play an active role in the political decision- making process in Fatick. CSOs partner with local authorities to promote sustainable development. Customary and religious leaders have a significant influence on conflict resolution, community decision-making, and the transmission of cultural norms. FOs are almost everywhere in the department, with generally at least one

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	vegetables, groundnuts, and sesame seed). Mbire has high biodiversity, and its economy depends on forest systems.	of agroecological practices). The environmental contribution of cacao is based on the high genetic diversity of this grain in the Peruvian Amazon. Opportunities in biotrade with native species for market integration through sustainable production	level of a social community and an agroecological area, both not necessarily homogeneous.	practices, such as pest and disease management, weeding, water management, manure management, and harvesting practices. NGOs promoting agroecology and providing further extension services and training to farmers	household member belonging to a FO Sustained market access (Permanent and weekly markets allow the sale of agriproducts and the department is located between two major urban centers -Mbour and Kaolack).

As shown in the Table, the local territories where the ALLs operate face similar constraints to agriculture development. These include challenges related to climate change, environmental degradation, insufficient market access, low income, gender inequality, and the migration of youth and men to urban areas for non-farm jobs. Additionally, the territories grapple with colonial legacies that altered land structure and marginalized local communities, particularly smallholders and women, from accessing land. Overall, these territories exemplify the systemic crises confronting food systems.



Tunisia/ Photo by: ICARDA

4. Methods

4.1. Data Collection

A comprehensive data collection approach was employed, encompassing a desk review, a questionnaire, and interviews and/or focus groups with the CGIAR/CIRAD country teams responsible for implementing the initiative. The desk review facilitated the composition of a governance database, drawn upon a sample of activity reports deemed to be part of the Initiative's milestones. Milestones are defined as significant events where decisions, alignment, or actions towards common goals have been made in the ALLs. A milestone may include diverse activities (e.g., Vision-to-action developed in various workshops). The selection of milestones was conducted using purposive sampling, based on two criteria: firstly, the identification of common milestones across the various cases, typically aligned with the global planning of the initiative's activities; and secondly, the identification of case-specific milestones that exerted a significant influence on the internal governance of ALL. The construction of the database entailed the incorporation of variables, including the objectives of the activity/milestone; the modalities of stakeholder participation; the decision-making objectives, the rules, structures; and key outcomes. A total of 86 events from the six ALLs were analyzed to build this database, and from this, a timeline of all the events carried out in each ALL was created. It is important to note that the ALLs also develop other activities to foster AET without the participation, support, or guidance of the Initiative. Given the focus of this study on the governance structures and mechanisms that mobilize the ALLs within the context of the Initiative as an R4D project, only the activities undertaken within the Initiative are considered.

Furthermore, a questionnaire was developed to evaluate various aspects of the ALL functioning. These aspects include geographical scope, goals and objectives, types of innovation developed, permanently engaged stakeholders, membership criteria, social inclusion strategies and challenges, conflict identification and management, decision-making structures, communication, transparency, and ethical considerations (e.g., confidentiality agreements). A literature review on the governance of MSPs, IPs, and LLs informed the identification of these variables. Each country team assigned at least one researcher to collect the requisite information and complete the questionnaire. A collective internal validation among various country team members involved in the establishment and functioning of the ALL, who work closely with stakeholders, was expected. Additionally, a review of other reports produced by the country teams was also conducted. These reports included a context assessment of the factors hindering or enabling AETs in the country and the specific location of the ALL, as well as a value chain characterization based on selected value chains of certain agri-products with the potential to adopt agroecological practices. An additional database of ALL characterization was then constructed based on the aforementioned review and the questionnaire. The database incorporated additional variables, including the territory of the ALL; predominant social, political, cultural, environmental, and economic factors that may influence ALL functioning; types of farm systems; prioritized agricultural products; the mission, objectives, and vision of each ALL; and the variables identified through the questionnaire.

The resulting databases (governance and ALL-characterization) were validated with the country teams, either in group discussions, individual interviews, and revision of preliminary results regarding the characterization and analysis of the internal governance structure of their respective ALL(s) conducted by the corresponding author.

Finally, information related to contextual factors or stakeholders was triangulated with secondary sources, including online information, grey literature, and academic literature.



Initial Visit ALL host center Makueni Kenya / Photo by: AE-I Kenya Country Team

4.2. Data Analysis

Three distinct methods were employed for data analysis and harmonization: 1. Qualitative content analysis, which consists of coding responses based on pre-identified variables related to governance mechanisms implemented in the different ALL-events. 2. Thematic analysis, based on iterative coding, in which an initial matrix for organizing the information and mind maps identifying only common topics as codes emerging from the data in an inductive process are generated (Alejandro & Zhao, 2023; Attride-Stirling, 2003). This facilitates the creation of visual representations of the governance structure of each ALL. 3. Finally, the process tracing method was employed to analyze the information from the timeline database, with the objective of identifying the critical junctures (major points of change) that are indicative of variables explaining transformations of the governance structure of the ALLs (George and Bennet, 2005).

A salient feature of the research was the incorporation of introspective analysis by the researchers in each country, in contrast to the empirical contributions of the global team members. This approach proved instrumentally in identifying common conceptual frameworks for deliberating on the governance and functioning dynamics of the ALLs.

5. Results

5.1. Characterization of the ALLs' Governance Structures

The governance structures of the ALLs vary significantly due to the unique interpretation and understanding of what an ALL is by the country teams. Indeed, the Initiative did not pre-define globally what an ALL should be beyond a general definition connecting the work of the ALLs towards AET, as shown in the Introduction, or whether and how institutional arrangements should be formalized. While the way in which an ALL was articulated depended on the country teams, it also tried to respond to the interests of the stakeholders and the availability of structures to engage with them. Additionally, each ALL has distinct visions, goals, and objectives, leading to tailored governance structures and mechanisms. Most of these structures are adjusted to align with the specific agricultural products targeted, which are chosen based on their importance to the local economies and their integration into value chains for developing (agroecological) business models.

Other variations across ALLs include integration with other MSPs, networks, and social movements; formation processes of the ALL; membership criteria; decision-making structures and rules; gender and social inclusion; meeting frequency; and organizational structure.

ALLs can either integrate into structures at different geographical scales or prioritize a single scale of action to mobilize agroecological principles and practices. The main variations in the governance structures of the ALLs pertain to formalization and centralization, as shown in the analysis after Table 2, which summarizes all these variations. A major common characteristic feature of the ALLs is the mobilization of the Initiative in each country by at least one of the 13 institutes that form the CGIAR group + CIRAD, which set up formal partnership agreements with local/national organizations. Typically, these organizations are considered critical to making decisions in the ALLs, implementing the different Initiative activities, and leveraging AET in their territories of action.



Vision to Action Workshop Zimbabwe / Photo by: AE-I Zimbabwe Country Team

Table 2. Characteristics of the governance structures of the ALLs in Five Countries

ALL Characteristics	Mbire Wards 2 & 3 (Zimbabwe)	Agroforestry Corridor Pucallpa- Aguaytía (Peru)	Agroecological Platform in the Kef/Siliana Transect - PAEKS (Tunisia)	Makueni (Kenya)	DyTAEL Fatick (Senegal)
Understanding of the ALL by the country team	ALLs should be viewed as a synergy for social aspects (e.g., social values, capital and often, house tailored innovation, iterative innovation or linear innovation). ALLs are not a physical structure but a way of doing things where people with a shared vision come together and decide how to reach their vision.	Networks of stakeholders centered around innovations to support AET at various scales. These networks act as key nodes in the interconnected relationships between the different stakeholders engaged.	Living Landscapes are a means to integrate the socio-system and ecosystems in one site to implement and test the AET. Applied to pastoral territories, it is intended to further adapt the concept into Pastoral Living Landscapes, which refers to all partnerships and coalitions aiming to solve stakeholders' problems and bottlenecks, of different backgrounds, toward enhanced and better performing food systems in pastoral territories. Innovations in the living landscape can be technical but also social, organizational, institutional, or a combination of these domains and linked with the social and geobiological history of the pastoral systems in place.	ALLs are territories for multistakeholder engagement in which agroecological innovations can be identified, codesigned, tested and adopted by its members. An individual ALL's boundaries are not primarily defined by geographical or administrative limits, but by the functionality of the territory. An ALL hence refers to: 1. A geographically coherent territory or landscape at the subnational level; 2. Which encompasses diverse actors who care and are concerned about promoting just food system transitions; 3. Who are willing to take transformative actions towards just food systems; 4. Whose interactions, utilization and hence 'meaning' bestow varying boundaries on that landscape.	The ALL was defined as a group of people experimenting together on common objectives and mission. The DyTAEL Fatick is built on the principles of synergy of action, pooling of resources, horizontal relations, and respect for the autonomy of action and free expression of members, which the DyTAEL does not replace.

ALL Characteristics	Mbire Wards 2 & 3 (Zimbabwe)	Agroforestry Corridor Pucallpa- Aguaytía (Peru)	Agroecological Platform in the Kef/Siliana Transect - PAEKS (Tunisia)	Makueni (Kenya)	DyTAEL Fatick (Senegal)
Vision	Ward 2: Improved institutional setting, good co-existence with wildlife, integration of trees and livestock production, efficient use of local resources, reduced stream bank cultivation, increased income, and improved women representation in leadership positions. Ward 3: Increased livestock productivity, reduced gullies, better methods of soil and water conservation works, increased production of traditional grains, easy access to markets and coexistence with wildlife.	Cacao farmers improve their quality of life and income by increasing cacao productivity and diversifying their farms under an organic, environmentally sustainable, and economically profitable production scheme	Integration and synergy of crop- livestock systems from seed multiplication to improve ecosystem health and production towards more self-sustaining and "resilient" systems. Valorization of olive products and by-products in olive-based farming systems Promotion of local products to increase income diversification and social inclusion in extensive agroforestry value chains such as honey, figs, and carobs (Mountainous Agroforestry Systems).	A sustainable economic and culturally vibrant community where everyone has access to adequate water, increased food production, good health, and more economic opportunities, and to partner with institutions that support community sustainable practices.	By 2035, the department of Fatick, a territory resilient to the challenges of agriculture through the implementation of strategies to adopt agroecology

ALL Characteristics	Mbire Wards 2 & 3 (Zimbabwe)	Agroforestry Corridor Pucallpa- Aguaytía (Peru)	Agroecological Platform in the Kef/Siliana Transect - PAEKS (Tunisia)	Makueni (Kenya)	DyTAEL Fatick (Senegal)
Desired Future Changes & Objectives	Ward 2: *Improved food production systems in the communities. *Improved natural environment with reduced soil erosion and siltation in water river systems. *Improved social and cultural norms and practices, respect of traditional leadership. Ward 3: *Improved livestock production system resulting in increased revenue at household level. *Integrated socio-cultural based society and institutions *Highly empowered community through income generation. *An improved environment with increased number of trees, improved water resources and gully free.	*Increase cacao productivity and diversified plots to enhance the quality of life and economic income of farming families, within the framework of an organic, environmentally sustainable, and economically viable production system. *Strengthen the technical capacities of farmers and technicians to implement environmentally sustainable and economically profitable organic production (not only cacao); and the diversification of cacao farms with species compatible with food security and commercialization.	*Strengthened technology transfer and capacity building among stakeholders *Exchange of knowledge and experience between stakeholders. *Implement agroecology-related activities that fulfil at least one or more of the 13 agroecological principles (HLPE) *Promote dialogue on agroecology-related policies at regional and national levels *Encourage public and private sector players to take part in collective activities organized under the PAEKS platform aimed at the agroecological transition.	*Increased water harvesting and management *Diversified crop production *Shorter supply chains in organic markets *Increased tree cover *Improved on-farm circularity *Increased use of renewable resources.	Support agroecological practices for agri-environmental and socio-economic resilience on family farms in the Fatick department. Specific objectives are: *Raise awareness among the administrative and political authorities and the local population of the need to adopt agroecological practices. *Capacity-building for the DYTAEL members and FOs in agroecology *Promote agroecological products through visits and fairs *Encourage new attitudes toward the environment
Crops on which the ALLs focus & Value chains for developing agroecological business models (underlined)	* Sesame * Sorghum * Livestock (cattle and goats) * Groundnuts * Beekeeping	* Cacao Indirectly from the Biotrade strategy (Amazon native products): *Camu camu (fruit) *Aguaje (fruit) *Ají charapita (chilli) *Cocona (fruit) *Paiche (fish)	*Olive oil *Forage crops *Honey *Figs *Carobs *Meat & Milk	* Mango * Maize * Beans * Cowpeas * Pigeon peas	*Millet *Milk
Composition according to stakeholder types	Farmer groups, state agencies, traditional authorities, research Institute, NGOs	FOs, state agencies, (I)NGOs, Research Institutes, University.	FOs, research institutes, universities, state agencies, NGOs, and development agencies and departments	Farmer groups, research institutes, NGO, public officers, schools, extension, community-based organizations.	FOs, (I)NGOs, research institutes, civil society networks, a network of local elected representatives, and processing companies.

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Integration with other networks, social movements, or multi- stakeholder platforms	No	Yes Integration with COREPO	No	Yes Integration with the Intersectoral Forum on Agrobiodiversity and Agroecology (ISFAA) and Participatory Ecological Land Use Management (PELUM)	Yes Part of the multi-level platform DyTAES
Formation of the ALL	Formation of new structures for networking	Formation of new structures for networking and integration with available structures	Formation of new structures for networking	Formation of new structures for networking and integration with available structures	Integration with available structures
Membership criteria	Formal membership [Compulsory] The constitution stipulates that the sanction for not attending two meetings in a row is expulsion. Selection and invitation to participate to farmers was based on farmer and farmer group representatives across the wards practicing agroecology-related activities selected by councilors within the selected value chains in the ALLs.	No Stakeholders are engaged based on the relevance for the specific innovations developed in the ALL.	Semi-formal [Good-will commitment] Charter of commitment for the organizations interested in developing agroecology in the Kef/Siliana Transect The aim of the charter is to strengthen the commitment of the various actors operating in the PAEKS in the AET through the adoption of the 13 principles of agroecology and the contribution to promoting these principles on a large scale. The signatories of the charter undertake to contribute to: *Strengthen technology transfer and capacity development of stakeholders. *The exchange of knowledge and experience between stakeholders. *The implementation of agroecology-related activities that meet at least one of the 13 agroecological principles	No Stakeholders are engaged based on their relevance for the development of agroecology and local and national food systems.	Formal membership [Compulsory] Steering Committee Agreement required Any formal organization that adheres to and contributes to the implementation of the following values may become a member: *Recognition and support for family farms, in particular by improving and securing their access to the means of production, including land, water, seeds, pastoral and fishery resources, farming equipment and structural investments. * The promotion of food sovereignty through people's participation in the process of drawing up and implementing public policies, the development of local value chains/industries in all or part of their various links, in particular local processing that creates jobs, especially for young people and women,

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			*Foster policy dialogue related to agroecology at regional and national levels *Encourage public and private sector actors to participate in the collective activities organized in the PAEKS platform that aim at the agroecological transition		and the promotion of local consumption. *The transition to a profitable, healthier and sustainable agroecological production model, which takes into account the protection, restoration and sustainable management of our natural resources (soil, water, vegetation, local agrobiodiversity, pastoral and fisheries resources), the promotion of adaptation/mitigation practices with regard to climate change, the reduction of dependence on pesticides and mineral fertilizers and the rebuilding of synergies between the agro-sylvo-pastoral and fisheries sectors.
Decision-making structures	*Chamber structure (stakeholders are divided into categories to encourage participation with pairs (e.g., women, farmers, public servants, etc.). *Plenary (the farmer committee, the members, and public extension services representatives make decisions together).	Council (a small group of stakeholders make decisions)	*Plenary *Council	*Plenary (all the representatives of the stakeholder groups make decisions together) Instead of developing a chamber structure, the ALL encourages group discussions among different stakeholder categories. *Council (bilateral decisions)	The steering committee in plenary Technical Committee
Decision-making mechanisms	*Consensus *Majority rule	*Consensus *Consent	*Consensus *Consent	*Consensus	*Consent

ALL Characteristics	Mbire Wards 2 & 3 (Zimbabwe)	Agroforestry Corridor Pucallpa- Aguaytía (Peru)	Agroecological Platform in the Kef/Siliana Transect - PAEKS (Tunisia)	Makueni (Kenya)	DyTAEL Fatick (Senegal)
Gender & Social Inclusion	Ensured representation of women in the leadership roles and mainstreaming gender in training.	Low inclusion of women, youth, and marginalized farmers due to the high mediation of the cooperatives' representatives in the activities of the Initiative	Inclusion of a FO composed exclusively by women	Predominant participation of women groups, and high participation of youth based on the farmer networks previously enhanced by the host center	Awareness-raising actions and training on cooperativism to integrate women and young people. Targeted invitation to youth associations to join the DyTAEL-Fatick
Periodicity of meetings for decision-making	Once a month	Network on agronomic innovations, business models, and home gardens: ad hoc, exchange visits between farmers, extensionists, and researchers in the experimental plots Network PGS: Ad hoc according to calls from the Regional Directorate, monthly meetings Biocommerce strategy: bimonthly	Ad hoc	Regular meetings and ad hoc	Steering committee: At least once a year (compulsory) and if necessary Every three months for the technical committee (compulsory) and when necessary
Degree of Formalization of the ALL	High Written constitution with rules for participation and structures for functioning	Medium The ALL has both formal and informal rules for functioning depending on the network and the relationship among specific stakeholders	Medium The ALL has both formal and informal rules for functioning depending on the platform and geographical scale and the relationship among specific stakeholders	Medium The ALL has both formal and informal rules for functioning depending on the platform and geographical scale and the relationship among specific stakeholders	High Written constitution with rules for participation and structures for functioning
Degree of Centralization	High The ALLs have clear central structures for decision-making and functioning.	Low Various nodes make decisions and organize the activities independently with low levels of coordination with other nodes.	Medium Various nodes or structures make decisions and organize in coordination with other nodes	Medium Various nodes or structures make decisions and organize in coordination with other nodes	High The ALL has clear central structures for decision-making and functioning.
Type of organization of the ALL	Community-rooted	Strategic networks articulated around different nodes	Host organization(s) with integration with multi-level platforms	Host organization(s) with integration with multi-level platforms	Multi-level platform

The following subsections address each of the six cases considered in the five countries, focusing on their governance structures, including the positions of the different actors in decision-making processes specified in governance roles and, in some cases, in internally created organizations (e.g., committees).

5.1.1. Mbire Wards ALLs (Zimbabwe)

The Initiative country team in Zimbabwe established ALLs in two wards in Mbire and Murehwa. This study focused on the ALLs in Mbire as they have similar ways of functioning and engage the same type of stakeholders. Yet for the purpose of this study, the ALLs in each Ward are considered independent structures. Mbire is located in northern Zimbabwe, bordering Zambia and Mozambique, and serves as a crucial wildlife corridor for biodiversity. This has led to human-wildlife conflicts affecting agricultural development through crop damage and livestock losses.

The ALLs in Mbire are community-rooted and facilitate strong integration between farmers and local authorities, including both governmental and traditional leaders. Notably, the government representative from the Ministry of Agriculture at the local level is also recognized as a community member and leader. This dual role enhances his ability to convene farmers and facilitate various Initiative activities in the territory. Initially, the ALLs were structured around temporary farmer groups formed for specific objectives. However, the ALLs have provided these groups with consistency by developing formal mechanisms and governance structures. These structures enable decision-making, organization of activities, and resource management within the ALLs.

In the first farmer meeting in 2022, ALL members formed a seven-member committee to coordinate ALL activities in collaboration with the Agricultural and Rural Development Advisory Services (ARDAS) at the Ministry of Agriculture (MOA). ARDAS representatives are also ALL members. who are also ALL members. A constitution was established to serve as a binding document facilitating the governance of the ALLs. Together with the Initiative team, the ALL members decided on the positions needed in the ALL as shown in Figure 1. After agreeing on the required positions, ALL members were asked to list the expected qualities for each role. The individual expectations were compiled to create the overall desired qualities and responsibilities for each position. ALL members nominated three farmers for the chairperson and three for the secretary positions. The nominee with the highest votes became the chairperson or secretary, while the second highest became the vice-chairperson or vice-secretary. The nominees with the lowest votes were assigned committee member positions. Only two members were nominated for the treasury position, as it does not have a vice member. Voting was conducted secretly. Although the Initiative team led the discussion on drafting the constitution, members agreed on the binding rules.

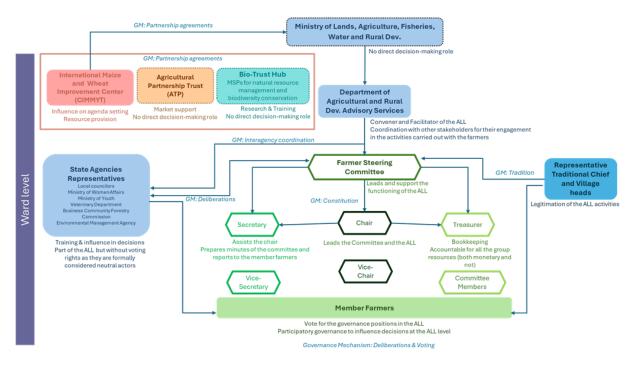


Figure 1. Governance Structure of Mbire ALLs, Zimbabwe Source: Authors

The binary composition of local authorities and farmers is embedded within hierarchical traditional power structures and power-knowledge dynamics. This has created a governance challenge, as government stakeholders often have significant influence over final decisions. To address this challenge, it was agreed that farmers should express their views and opinions first in decision-making processes, with other stakeholders participating afterward. The ALL has empowered farmers by developing a platform for direct discussion between traditional and governmental authorities, enabling them to participate in decision-making and advance collective action. The ALLs have also provided opportunities for capacity-building and social cohesion, focusing on community development and conflict resolution. Additionally, the ALLs have empowered traditional authorities, preserving traditional knowledge and local culture which can contribute to AET.

In terms of participation modalities, the ALLs have included chamber structures to allow women and young farmers to participate more actively without hesitation in front of males and elders, who are highly respected in the community. This has been combined with plenary discussions as a second stage to prevent the fragmentation of the ALL into different social groups. Furthermore, while the ALL interacts with some private sector representatives and NGOs, their participation is restricted to avoid creating counterpowers that may hinder the process of community strengthening.

5.1.2. Agroforestry Corridor Pucallpa-Aguaytía (Peru)

The ALL in Peru is situated in the Ucayali region of the Peruvian Amazon. During the 1990s and early 2000s, Illegal economies flourished in this area, primarily driven by coca production and trade. To combat this, development projects were introduced to "alternative crops", starting with palm oil and later expanding to cacao, aiming to transition farmers toward legal economies. These projects provided various incentives to farmers, leading to land conversion and the creation of complex value chain structures around these commodities and other cash crops. This process involved regional, national, and international stakeholders. Land conversion affected established farms and led also to agricultural expansion and deforestation. Efforts have been made to develop sustainable value chains that protect the Amazon's forests and biodiversity while ensuring the livelihoods of the farmers involved in these

complex value chains. The ALL has engaged with multiple stakeholders. Each advancing different agendas and innovations to enhance agricultural sustainability, given the area's regional, national, and international significance. Consequently, instead of creating a monolithic formal structure, the ALL identified key innovations to navigate this multi-organizational field by activating corresponding networks around each innovation. As illustrated in Figure 2, the ALL is structured around three main strategic networks, engaging various stakeholders whose participation is crucial. Their capacities are activated according to the specific innovation.

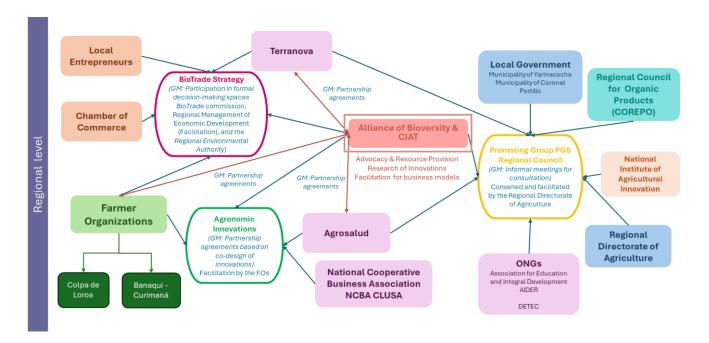


Figure 2. Governance Structure of the Agroforestry Corridor Pucallpa-Aguaytía ALL, Peru Source: Authors

Between 2022 and 2023, the first governance structure was established to support the agronomic innovations led by two cacao cooperatives, which were selected due to the reliance on family farming, a crucial aspect for the livelihoods of hundreds of farmers. This structure includes innovations such as the creation of home gardens for food security, seeking ecological alternatives for pest control and management, as well as efficient biofertilizers, and the development of agroecological business models. Since governance structures have not been agreed upon, this network is particularly influenced by the governance frameworks of the two participating cooperatives.

Both cooperatives evolved with the introduction of alternative crops and support from international cooperation agencies and other stakeholders. They are also involved in organic production, necessitating the development of monitoring systems to ensure compliance and enforce sanctions. The cooperatives operate with a four-legged structure encompassing administrative, commercial, financial, and social (development projects) aspects. A significant challenge in working with cooperatives is that interactions with farmers are mediated by the cooperative staff, resulting in direct benefits for a limited number of farmers. However, the advantage is that horizontal coordination facilitates the spread of innovations, driven by the cooperatives' extension services, enforcement mechanisms (both incentives and sanctions), and market access through the development of cacao beans with specific characteristics, such as aromatic qualities from native species or organic certification.

The second structure focuses on market innovations through the Biotrade strategy with an agroecology approach, involving around 50 organizations in formal participatory spaces. Specifically, a coalition was formed between the country team, the Chamber of Commerce of Pucallpa, the INGO Terra Nuova, and

local private entrepreneurs. This strategy derives from a national Biotrade public policy that provides general guidelines for subnational departments to develop their own strategies. In Ucayali, the strategy, approved as a local policy in June 2024, aims to promote agroecology by supporting the development of value chains for five products crucial for local diets and community development. These products are targeted for sale in local and international niche markets. By focusing on niche markets, the strategy seeks to enhance specialization, rather than commoditization, which could lead to unsustainable agricultural practices and deforestation due to cropland expansion. Thus, the second objective of the strategy is to promote environmental sustainability, including biodiversity conservation, and the reduction of deforestation and the degradation of the Amazon rainforest.

Finally, the third network focused on institutional and public policy innovations, with a governance structure built around the supporting group to the Participatory Guarantee System (PGS) in the Ucayali region. This network holds informal meetings convened by the promoting group which includes various (I)NGOs, research institutes, and state agencies. Additionally, this group also engages in a formal government space facilitated by the Regional Agriculture Directorate. This collaboration aims to develop regional standards that enhance trust between producers, traders, and consumers for positioning locally organic and agroecological production.

Most of the stakeholders in these three networks operate independently forming distinct networks that adhere to both formal and informal rules for interaction, organization, and decision-making. Notably, the Initiative team does not lead any of the spaces. Consequently, these diverse governance structures have facilitated the emergence of a supportive agroecological network, which has the potential to establish a mid- to long-term framework for supporting an AET. This development is significant because, at the inception of the Initiative the stakeholders were unfamiliar with the term agroecology and instead were more inclined to use sustainable agriculture as a narrative to address the numerous challenges associated with agricultural expansion, land conversion, deforestation, biodiversity loss, and complex value chains.

5.1.3. Agroecological Platform in the Kef-Siliana Transect PAEKS (Tunisia)

The ALL in Tunisia is situated within the Kef - Siliana Governorates transect, a semi-arid area where mixed cereal-tree-small ruminant (sheep and goats) systems predominate. This multi-scale ALL involves multiple stakeholders at both national and local levels, with universities and research institutions playing a crucial coordinating role. The ALL is structured around five main pillars as illustrated in Figure 3: FOs at the local level, a platform for high-level policy dialogues, public institutions including government extension services and departments at the local level, universities, and a broad Initiative team. However, in governance terms, the FOs, the policy dialogues, and the Initiative team are the instances in which decisions are made.

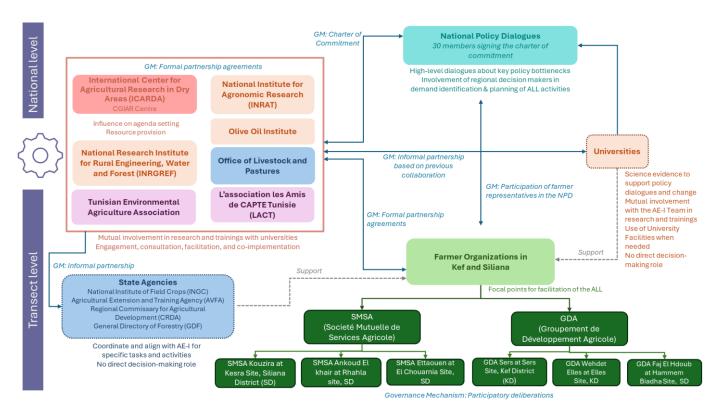


Figure 3. Governance Structure of the Agroecological Platform Kef-Siliana Transect ALL, Tunisia Source: Authors

At the local level, the ALL is hosted by six FOs across the two governorates, including three Mutual Societies of Agricultural Services (SMSAs for its acronym in French) and three Groups for Agricultural Development (GDA for its acronym in French). SMSAs, which have been revitalizing cooperatives since 2005, play a marketing role and have variable capital and shareholders. GDAs, on the other hand, are associations focused on farmer networking, natural resource governance, and the facilitation of agricultural services. They are democratically legitimized local structures with a long history as community organizations in Tunisia, even overseeing natural resource management on behalf of the state. The selection of the six FOs was based on their previous partnerships and agroecological attributes, to test innovations and co-creating context-specific scientific knowledge and evidence at different scales, from farm to landscape. During field visits, local diagnoses were conducted to evaluate potential FOs for inclusion in the Initiative. These evaluations focused on each FO structure, operations, main activities, challenges, vision, and potential areas of collaboration with the Initiative to contribute to AET. Importantly, the FOs include one GDA exclusively formed by women. At the local level, the ALL employs a chamber structure to divide decision-making between men and women.

The ALL has also initiated high-level dialogues with multiple stakeholders to address policy bottlenecks, involving representatives from the national and regional levels, particularly those responsible for demand identification and planning of ALL activities. Given the overlapping roles between the national level, which establishes the priorities for the transect, and the transect, where farmer representatives partake in policy dialogues, these discussions facilitate a coordinated approach to decision-making.

The third governance instance to articulate and make decisions is the Initiative team, which consists of seven organizations. This team includes significant participation from national public institutions and NARS. The coordination of actions is undertaken both formally, through partnership agreements, and in a decentralized manner, with overall coordination provided by INRAT and ICARDA.

Besides the policy dialogues, strategic alliances and partnerships with state agencies facilitate the coordination of various ALL activities at both the local and landscape levels. The involvement of research institutions and universities has resulted in a strong focus on developing scientific evidence, knowledge, and capacity-building. However, it is important to note that neither local state agencies nor universities play a direct role in decision-making.

5.1.4. Makueni County ALL (Kenya)

The Initiative team contributed to the development of two ALLs in the Makueni and Kiambu counties. This study focuses on the Makueni ALL. Makueni is Kenya's top mango-producing area located in the south where a semi-arid climate predominates. The Makueni ALL is hosted locally by the Drylands Natural Resources Center (DNRC) and is leveraged at both national and local levels by the Participatory Ecological Land Use Management Association (PELUM), a national NGO network, and the Intersectoral Forum on Agrobiodiversity and Agroecology (ISFAA) hosted by the Ministry of Agriculture. Additionally, PELUM currently facilitates the establishment of a county-level MSP in Makueni hosted by the Department of Agriculture at the county level and facilitated by PELUM. The Initiative has thus provided an opportunity to contribute to these aligned, yet independent platforms, as illustrated in Figure 4.

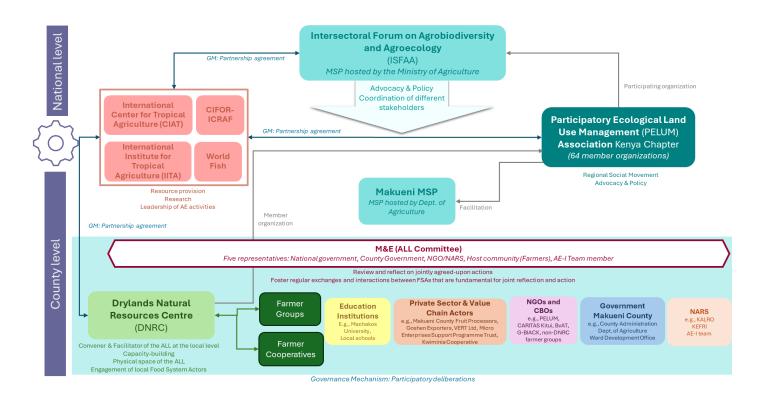


Figure 4. Governance Structure of the Makueni County ALL, Kenya Source: Authors

ISFAA, launched in 2020, is a multi-sectoral and multi-stakeholder platform designed to stimulate the integration of public institutions, FOs, CSOs, the private sector, research and academia, and the donor community. Its goal is to mainstream agroecology and agrobiodiversity. ISFAA aims to develop a cohesive approach to tackle challenges related to food production, environmental and biodiversity conservation, and health and nutrition, as each of these sectors has been traditionally addressed separately. The platform is guided by a steering committee representing key stakeholder groups and is supported by a secretariat under the Ministry of Agriculture and Livestock Development. ISFAA operates through seven thematic working groups including: policy and law; biosafety, GMOs, and seed sovereignty; principles,

practices, knowledge management, and climate change; access and benefit sharing; county engagement; and private sector, consumers, and markets.

PELUM is a transnational African network of NGOs and CSOs established in 1995. The network promotes agroecological principles and related approaches, such as agroforestry, organic agriculture, and family farming through five strategic areas: institutional strengthening, networking, and capacity development; policy influence and advocacy; agro-enterprise and market development; climate change resilience and Natural Resource Management (NRM); and women and youth inclusion in agroecology. Today the network has more than 280 members in east, central, and south Africa, and it functions under a formal governance structure in each of the 12 countries where it is active which includes a national board and a secretariat (country offices), as well as a transnational board and a secretariat based in Lusaka, Namibia. PELUM-Kenya has over 60 member organizations, including DNRC.

At the local level, the engagement of farmers and other FSAs is facilitated through the DNRC, a member organization of PELUM. The identification, characterization, and selection of the local partner was supported by ISFAA and PELUM in 2022. The objective was to select an organization with an important trajectory not only in agroecology, but also in social inclusion and value chain development, to host the Initiative activities and broader engagements. DNRC plays a crucial role in preserving and invigorating indigenous groups by addressing environmental, economic, and social aspects with a focus on natural regeneration, indigenous diets, seeds, economic diversification, social cohesion, and indigenous culture. These efforts contribute to the development of agroecological principles. In Makueni, DNRC promotes the sharing of knowledge among farmers, researchers, and other stakeholders by establishing community resource centers. Indeed, DNRC has collaborated continuously with existing networks of farmer groups facilitating the exchange of experience and knowledge. These farmers have also received training in various agricultural practices. DNRC also encourages collaboration between researchers and community members to develop locally relevant solutions. As the host center for the Makueni ALL, DNRC embodies the broader ALL providing a space where FSAs can meet, exchange, experiment and co-create. The ALL has developed a Monitoring and Evaluation Committee, involving various FSA representatives, to promote exchange and joint actions by the engaged stakeholders.

While DNRC hosts and facilitates the engagement of various FSAs at the county level and the development of co-designed innovations with farmers, the ALL is also connected to the agroecology MSPs at the county level facilitated by PELUM.

In this context, the Initiative's role has primarily been to contribute to and support to different spaces specifically created to develop AE principles and practices. These efforts are somewhat aligned and coordinated but do not form a unified multi-level platform or organization.

5.1.5. Local Dynamics for an Agroecological Transition DyTAEL Fatick (Senegal)

In Senegal, the Dynamics for an Agroecological Transition in Senegal (DyTAES for its acronym in French) coalition was established in 2019. This multi-stakeholder group includes NGOs, FOs, research institutions, and national elected representatives. DyTAES' mission is to promote the AET in Senegal through research, advocacy, awareness-raising, experience-sharing, and supporting local territories in advancing AET. DyTAES does not impose a particular definition of agroecology. Instead, it follows the ten principles identified by the FAO: diversification of production systems, co-construction of knowledge, water-soil-trees-animals-plants synergies, efficient use of resources, recycling of biomass and water, resilience of production systems, human and social values, food cultures and traditions, responsible governance and finally, the circular economy and solidarity. One of DyTAES's main objectives is to develop a national strategy for agroecology.

Since 2021, DyTAES has been actively establishing local multi-stakeholder platforms called Local Dynamics for an Agroecological Transition (DyTAEL for its acronym in French) across various regions of

Senegal. These platforms aim to spark and support AET at the local level. One such platform, the Fatick DyTAEL (DyTAEL-F), was launched in June 2022, experiencing rapid growth thanks to the support of successive development projects and the enthusiasm of its members. The Fatick department is characterized by two distinct landscapes: the groundnut basin in the northern and the wildlife and forest in the south.

The formation of the DyTAEL-F was a grassroot process initiated by local organizations. As DyTAES deployed various caravans nationwide, these local organizations seized the opportunity to establish DyTAEL-F with DyTAES' support. The DyTAEL-F is thus a completely independent structure from the Initiative. In terms of governance, the DyTAEL-F is highly formalized and centralized, comprising four main bodies, as illustrated in Figure 5. This structure replicates DyTAES' governance structure. The steering committee functions as a general assembly in which all the member organizations must participate. Given the diversity of this group, DyTAEL developed an animation committee exclusively composed of FOs to engage farmers and gain traction at the farm level. Additionally, DyTAEL-F has a secretary, also from a FO, responsible for logistics to ensure the platform's continuous operation and a technical committee, which develops the annual action plan decided by the steering committee.

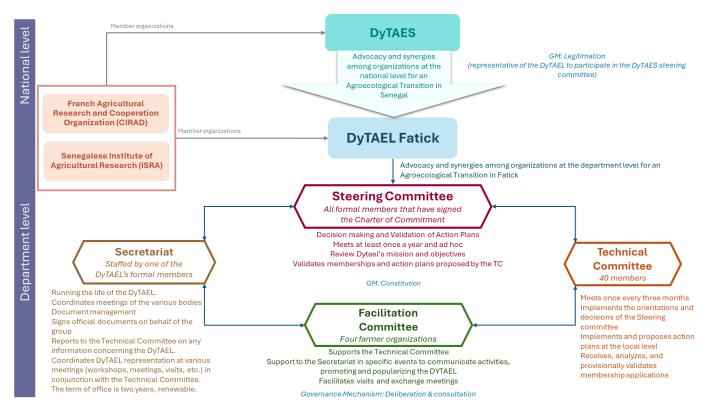


Figure 5. Governance Structure of the Local Dynamics for an Agroecological Transition in Fatick, Senegal Source: Authors

DyTAEL-F primarily serves as a framework for planning, consultation, and advocacy, aiming to coordinate and enhance the coherence and synergies among the actions of various partners within the department. Despite this collaborative approach, each partner retains responsibility for its own actions and activities. Given the importance of transparency, an advanced communication strategy was implemented at multiple levels (department, districts, and communes) to strengthen DyTAEL-F's legitimacy among its members and within the territory, particularly with local elected representatives. A significant challenge for DyTAEL-F has been gaining recognition for its role from local authorities, such as the regional council and mayoralties.

The establishment of the DyTAEL-F has been facilitated by various development projects aimed at enhancing agroecological agriculture in Fatick. This in turn has invigorated the DyTAEL-F. An example of this synergy is the participation of the Initiative through its national partners, CIRAD and ISRA, in the platform. Specifically, the co-design of agronomic innovations was articulated between the Initiative and the FAIR Sahel project. This project seeks to enhance climate-change resilience in agriculture via agroecological intensification of small-scale producers in Mali, Burkina Faso, and Senegal.

Overall, the functioning of the DyTAEL-F has been enhanced by a vibrant civil society composed of national and international organizations operating at both the national and local levels. These organizations are sensitized to agroecology as a viable solution for the environmental, economic, and socio-political challenges facing agriculture in the country. Although minimal, the functional integration with the DyTAES has served as a legitimation mechanism for coordinating and engaging several local FSAs interested in agroecology. The integration will be further developed by involving representatives of the DyTAELs in the DyTAES.

5.2. Modalities of Participation & Governance Mechanisms

Modalities of Participation describe the ways in which stakeholders engage in the various activities conducted by the ALLs. These modalities may or may not involve decision-making and encompass specific methods, goals, rules, and roles of stakeholders within the ALL. Governance mechanisms are included as part of these modalities, as they refer to the rules for coordinating collective action among at least two stakeholders. These mechanisms include decision-making rules, which typically involve either direct decision-making by stakeholders, where sessions are organized to reach decisions, or indirect decision-making, where certain mechanisms are implemented to inform decision-making.

The following table presents the codes used to classify modalities of participation. Most of these codes were pre-identified in the literature, while others were identified from the practices reported by each ALL. It is important to note that the ALLs also develop other activities to foster AET without the participation, support, or guidance of the Initiative. Since the focus here is on the governance mechanisms that mobilize the ALLs within the context of the Initiative as an R4D project, only the activities undertaken within the initiative are considered.

Table 3. Codes to classify Modalities of Participation and Governance Mechanisms

Method for Participation

Plenary discussion

Group discussion

Participatory research

Training

Fair

Missions/Field visits

Agreement

Exchange visits among ALLs

Voting

Surveys

Participation Goals

Knowledge transfer / Capacity building

Knowledge exchange / Capacity building

Engagement (activities aiming at spurring the active participation of the stakeholders in the ALL or the interaction of the stakeholders in the ALL with other stakeholders).

Consultation to inform decision-making

Decision-making

Research

Exploratory meetings

Advocacy

Raising awareness

Monitoring & Evaluation

Adoption / Adaptation of innovations

Validation (the Initiative Team, core partners, or a small group of stakeholders develop certain options for the stakeholders to refine or decide based on the inputs provided).

Structures for Decision-making

Cabinet: The Initiative country team members make the decisions in a private council.

Council (a small group of stakeholders make the decisions)

Plenary (all the representatives of the stakeholder groups make decisions together)

Chamber structure (stakeholders are divided into categories to encourage participation with pairs (e.g., women, farmers, public servants, etc.))

Rules for Decision-making

Consensus (Everybody agrees)

Majority Rule

Consent ("Live with" rule: If there is no consensus, those who are outnumbered are asked if they can "live with" the other group's proposal)

Source: Authors

Across all ALLs, the most common methods for stakeholder participation are plenary and group discussions (61%), followed by participatory research (14%), and mission/field visits (12%). The primary participatory goals are decision-making (40%) and consultation (15%), followed by engagement (14%) and research (13%). For decision-making, plenary decision-making is the most frequently used structure (56% of the times that a decision was made), followed by cabinet (18%) and chamber structure (11%). Decisions are typically made by consensus (53% of the times that a decision was made), followed by consent (44%). These rankings hold true for the ALLs individually considered, with a few exceptions: in Zimbabwe research (39%) is the most common participatory goal and in Kenya it is engagement (36%). Regarding decision-making rules, Senegal exclusively used consent, while Kenya exclusively used consensus.

5.3. Evolution of the ALLs' Governance and Milestones

In all five countries, priority was given to territories in which the country teams had previous experience or ongoing activities (e.g., engagement with other R4D projects) significantly influencing locality selection. Figure 6 presents the overall process of the evolution of the ALLs, including establishment and engagement processes that contributed to the development of specific governance structures.

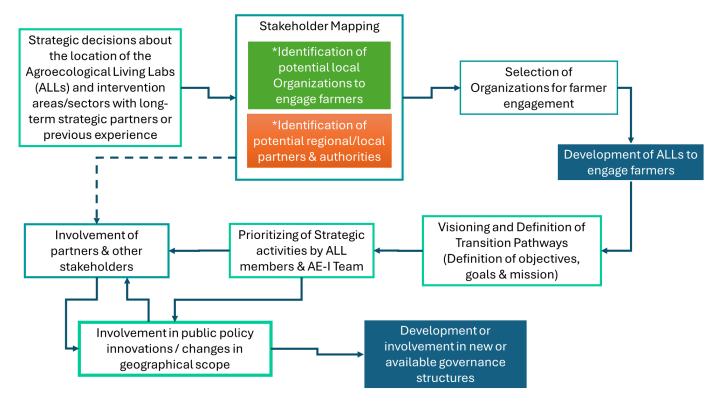


Figure 6. Evolution of the ALLs' governance structure
Source: Authors

While the stakeholder mapping provided an initial understanding of who was relevant to support AET in specific territories, the next step for the ALL establishment in Zimbabwe, Peru, Tunisia, and Kenya was to develop structures ensuring the engagement of farmers, predominantly smallholders and family farmers. In these cases, collaboration with existing MSPs facilitated the development of Initiative activities at the production level, focusing on identifying current agroecological practices, and co-designing and testing on-farm agroecological innovations. In Zimbabwe, the Initiative team engaged directly with farmer groups. In Peru, Tunisia, and Kenya a strategic decision was made to seek host organizations. In Kenya, a community-based organization with experience in supporting farmers was selected to host the ALL at the local level. This organization is responsible for engaging local FSAs to support the co-development of agroecological practices (including but not limited to the Initiative) and facilitating the interactions among stakeholders. In Peru and Tunisia, the process was done through FOs. However, in Peru, cooperatives did not act as conduits to engage other FSAs locally and instead, focused on developing specific innovations. Unlike the other countries, in Senegal it was possible to integrate the Initiative into a multi-level platform that included local structures to engage with farmers.

The trajectory of the ALLs, starting from their inception, was marked by various milestones corresponding to major activities designed within the work packages of the Initiative. Many of these activities evolved over different periods, requiring updates and dynamic adjustments, making it challenging to definitely conclude some tasks (e.g., context assessment). While these activities often necessitated the implementation or development of new governance mechanisms or the expansion of stakeholder composition, they did not directly alter the governance structure of the ALLs. The visioning (WP1) and the context assessment (WP2) were crucial in defining the ALLs' contours and initiating the Initiative activities. Particularly, the visioning exercises allowed the definition of the main objectives and mission of the ALLs. Constructing timelines to understand behavioral changes in the ALL territories toward AET (WP5) and identifying AET pathways in the specific territories (WP1 and WP5) were vital for developing action plans to advance agroecology principles through ALL activities. The development of agroecological business

models (WP3) contributed to expanding the stakeholder composition as it required further engagement with the private sector.

Changes in the governance structures of the ALLs were driven instead by their engagement in public policy (WP4), as shown by the cases of the ALLs in Peru and Tunisia. This engagement led to their involvement with existing platforms and networks or the formation of new ones, shifting the focus from the farm level and concomitantly expanding the geographical scope of the ALL. In Senegal, the emphasis on multi-level advocacy and policy innovations, along with the establishment of the DyTAEL-F from the national to the department level, resulted in a centralized and formal structure of the ALL. Here the farm level is primarily addressed through the coordination of development project activities rather than the creation of a local ALL, as seen in the other four cases. Therefore, this change was driven by a top-down expansion of the geographical scale. Conversely, the ALLs in Zimbabwe, which focus mainly on community development, have maintained a stable structure over time, as they did not transit to governance structures aimed at policy innovations.

The involvement in policy innovation and/or the geographic scope of the ALLs were enhanced by their strategic objectives, typically determined during visioning and transition pathways workshops. These workshops identified or suggested avenues for public policy development, targeting stakeholders whose behavioral change was necessary or expected (e.g., in Kenya, Tunisia, and Peru). Additionally, the development of policy innovations and the expansion of the geographic scope were influenced by emerging opportunities to engage with MSPs, networks, and stakeholders at different geographical scales (e.g., in Peru and Senegal).

Main Findings and Initial Propositions

From a governance perspective, ALLs are structures, mechanisms, and organizations designed to leverage collaborative networks of FSAs within specific territories. These stakeholders are interested in implementing agroecological principles and practices to achieve more sustainable and fair food systems and specific value chains by developing agronomic, institutional, social, and economic innovations.

In terms of governance structures, ALLs can be highly centralized, polycentric, or hybrid. Centralized ALLs have a single internal governance structure or node that makes decisions and coordinates collaboration among stakeholders. Polycentric ALLs have various nodes that make decisions and organize activities independently, with minimal coordination between nodes. Hybrid ALLs feature multiple nodes or structures to make decisions and coordinate with each other. In terms of mechanisms, ALLs can develop three types, ranging from formal, informal, and composite (combining both formal and informal elements). Formal mechanisms refer to the cases in which the rules and internal structure of the ALL have been agreed upon by the engaged stakeholders as a result of clear procedures, leading to written agreements. Informal mechanisms refer to the cases in which rules emerge from the interaction among engaged stakeholders but are unwritten and do not derive from established procedures and agreements.

Theoretically, ALL governance can be characterized by nine combinations between types of governance structures and types of mechanisms (centralized and formal; centralized and informal; centralized and composite; polycentric and formal; polycentric and informal; polycentric and composite; hybrid and formal, hybrid and informal; and hybrid and composite). Additionally, an ALL can focus on a specific geographical scale from the local to the national levels or can also have multi-level presence. Finally, an ALL can be based on various types of organizations, from local communities to large networks.

According to these four variables (governance structures, mechanisms, geographical scale, and organization) we found four main types empirically: 1. A community-centered ALL with a centralized governance structure and highly formalized. 2. A regional (sub-national) ALL with a polycentric structure and composite mechanisms organized around strategic networks. 3. Hybrid multi-level ALLs with interrelated semi-independent governance structures, including local host organizations, a national multi-stakeholder platform, and/or regional MSPs. These ALLs developed composite mechanisms. 4. A formal and centralized multi-level ALL with governance structures articulated around one organization at each action level. Figure 7 represents the typology of ALLs and their variations according to formalization and centralization.

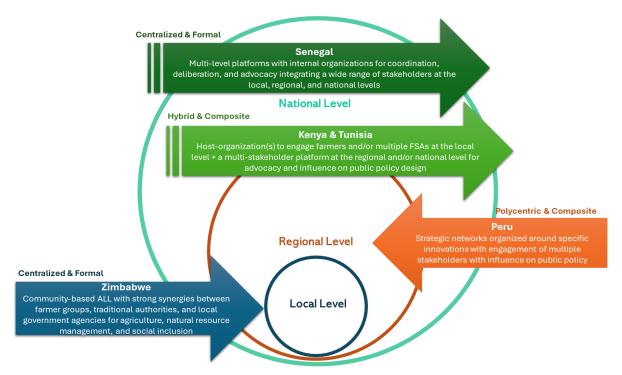


Figure 7. Typology of ALLs in the CGIAR Initiative on Agroecology Source: Authors

Additionally, the governance structure and mechanisms of the ALLs are likely to evolve. This evolution is driven by the involvement in public policy innovations and the expansion of the geographical scope and territories of the ALLs. This relates to efforts to scale up innovations (vertically), understood as the use of innovations beyond the initial stakeholder group and/or geographies. Importantly, efforts to scale out innovations and specifically agronomic innovations are unlikely to change the governance structure of the ALLs, as they are mainly conducted through FOs at the local level.

7. Limitations

The main limitation of this study is the low engagement with stakeholders in the different ALLs, as it mainly focuses on the perspective of the Initiative country team members from the CGIAR institutes and CIRAD. Interviews with stakeholders were conducted independently by the corresponding author in Peru, mainly involving farmer members of the cacao cooperatives and technical services. However, this was an exception. To mitigate the lack of engagement with other stakeholders, online sources and grey literature produced by main implementing partners were considered.

Another limitation is the lack of reports for certain activities, as the country teams did not necessarily have written reports for all the activities they were conducting. The main assumption was that important activities were indeed reported. However, in the case of Peru, this was challenging due to the polycentric nature of the networks, and other stakeholders were in charge of holding archives and minutes.

Finally, this study did not directly measure governance outcomes such as increased trust or reduced power imbalances. Instead, two main proxies were used. For trust, the continuous engagement of at least a core group of stakeholders was verified, under the assumption that stakeholders would not continue their engagement if trust was not established. For power relationships, the inclusion of farmers in decision-making structures, and mechanisms specifically engaging farmers were considered. Further elaboration on these aspects for each ALL is pending in this document.

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