



AGROECOLOGY DIALOGUE SERIES

Beyond the farm: Exploring the synergies between agroecology and conservation communities

This paper presents five main messages and key recommendations of a dialogue that explored opportunities and limitations of agroecology to address conservation needs beyond the farm. The messages hereby presented look beyond classical on-farm conservation approaches (e.g. conservation of local crop varieties and crop wild relatives) and focus instead on the contributions of agroecology to mitigate species decline and ecosystem degradation at the landscape scale. This although important is less explicitly recognized within existing narratives of agroecology or conservation communities. The paper identifies **concrete pathways to increase synergies between agroecology and biodiversity conservation communities for food system transformation** through policy reform, knowledge creation, investment and change of practices.

“ Agroecology will be key for the implementation of the global biodiversity framework”

Basile van Havre
Co-Chair CBD Open Ended Working Group negotiating the post-2020 Global Biodiversity Framework

This dialogue and emerging messages aim to support and feed into the Coalition for Food Systems Transformation through Agroecology (Agroecology Coalition) and to contribute to the emergence of a broader framework on multiple pathways to food systems transformation. Its findings reflect the diverse backgrounds, opinions, and areas of expertise of dialogue participants, and are not intended to reflect the opinions of the organizing institutions.

Figure 1: Overview of the key messages and recommendations presented in this outcome brief on exploring the synergies between agroecology and biodiversity conservation communities

Overview

During the dialogue, participants first explored the synergies between agroecology and biodiversity conservation communities. **Five key messages can be highlighted from the discussions:**

1	Agroecology is a holistic and system-based approach that is conducive to better biodiversity outcomes in the agricultural sector.	3	There is a need for policy coherence and common narratives within the agricultural and biodiversity conservation sectors to materialise the transformative power of agroecology.
2	There is increasing evidence of biodiversity benefits from the upscale of agroecology while at the same time agroecology builds on healthy biodiversity.	4	Collaboration between agroecology and biodiversity communities can accelerate changes needed to increase the sustainability of food systems.
		5	Agroecology needs to adopt a landscape perspective, to boost tangible biodiversity co-benefits of agroecological systems.

Afterwards, participants made a set of recommendations relating to the synergies between agroecology and biodiversity conservation communities. **These are grouped together to align with the focus areas of the Agroecology Coalition’s five working groups:**

 Research	<ul style="list-style-type: none"> • Increase transdisciplinary collaboration on the ground between farmers, communities, scientists, agroecologists, conservationists, and restoration actors; • Keep generating, documenting and communicating evidence about how agroecology results contribute to biodiversity conservation and vice-versa; and • Strengthen agroecology considerations when developing biodiversity-focused measures, tools and indicators.
 Communication and advocacy	<ul style="list-style-type: none"> • Showcase successful agroecology initiatives that have demonstrated biodiversity conservation benefits to encourage a global movement for transition to agroecology; and • Use advocacy and communication to establish a common understanding among the biodiversity conservation and agroecology communities and develop joint narratives.
 Investments	<ul style="list-style-type: none"> • Increase financial support to long-term projects to ensure biodiversity benefits at the landscape level; • Upscale necessary financial resources directed at agroecological farms and companies through existing direct mechanisms; and • Send strong messages to the investors/donor community regarding the farm soil and ecosystem restoration potential of agroecology.
 Policies	<ul style="list-style-type: none"> • Avoid promoting policies that harm the environment and the people, such as subsidizing chemical inputs; • Formulate and implement appropriate policy frameworks to create incentives that are articulated in line with national biodiversity strategies and action plans; and • Support access to funding and increase capacity of farmers through agroecological strategies.
 Implementation	<ul style="list-style-type: none"> • Move from short-term projects to supporting long-term processes that can guarantee better sustainability of the projected outcomes for biodiversity conservation and the shift to agroecology; • Increase cooperation and engagement with all stakeholders within a landscape to design and implement collective actions that can materialize better biodiversity conservation outcomes; and • Introduce processes that promote the participation of farmers in landscape design.

Five main findings

1 Agroecology: A holistic and system-based approach that is conducive to better biodiversity outcomes

Agroecology provides the systemic/ holistic approach needed to deliver conservation benefits in food systems. This differentiates it from conventional agricultural approaches because it integrates and considers all fundamental ecological, technological, social, economic, governance and policy elements that underpin the sustainability of food systems. To address local and global sustainability challenges of our food systems, it is critical

to build this holistic and systemic vision that goes beyond single dimensions, such as productivity (for the agricultural sector) or beyond fortress conservation (for the biodiversity conservation sector). Unlike other approaches, **agroecology lends itself to intrinsically reconciling agriculture and conservation objectives**, because of its multifunctionality and multidimensional focus.

Enhancing biodiversity from the farm to the landscape level

Agroecology promotes the increased and sustainable use of biodiversity on-farm. It focuses on the development of sustainable production practices, many of which not only improve food production but at the same time enhance the status of biodiversity within farming plots. Some of those practices include conservation tillage, crop rotation, reduction of toxic chemicals in products, crop diversification and so forth. Agroecology also supports safeguarding and increasing biodiversity at the genetic level through, for instance, plant and animal breeding programmes, conservation of local or wild varieties, and community seed exchange.

Agroecology also contributes to the conservation of biodiversity and ecosystems beyond the farm. Although those contributions are less documented in agroecology literature, they may include increasing resources (e.g. habitat area and functional connectivity) for locally and globally endangered species; reduction of edge effects, leakages and runoffs to the landscape (in particular aquatic ecosystems and protected areas); maintenance of habitat complexity by embedding natural habitats into agricultural landscapes; sustaining ecosystem processes (e.g. pollination, nutrient cycling, water cycling) that are critical to overall ecosystem integrity and that underpin ecosystem services to society.



Biodiversity benefits of agroecology in various landscapes

Scaling up agroecology leads to conservation benefits for a wide range of landscapes. This includes increasing the resilience of production landscapes by reducing the reliance of agricultural systems on external inputs, such as chemicals, and promoting the use of resources existing in the landscape, e.g. cattle manure. In mosaic landscapes, it can support the production of food, feed, fuel and fibre while enhancing biodiversity and the provision of ecosystem services. In both production and mosaic landscapes, the integration of production and conservation objectives is key to manage landscape components of agriculture systems, including hedges, waterways, ponds and other ecological infrastructure elements. For intact or semi-intact landscapes, agroecology can enhance their ecological connectivity across regions,

provide livelihood alternatives with a lower ecological footprint in buffer zones, and support the growth of alternative activities such as ecotourism that can fund further *in situ* conservation activities.

Agroecological interventions or programmes that do not properly address ecosystem interactions and their synergies may not be truly effective in capitalizing on potential positive impacts at the landscape scale.

For agroecology to enhance biodiversity and resilience at this scale, it is necessary to adequately consider the production, conservation and consumption venues of the particular landscape. Agroecological interventions that consider their interdependencies with biodiversity are likely to be more sustainable, effective and/or efficient.

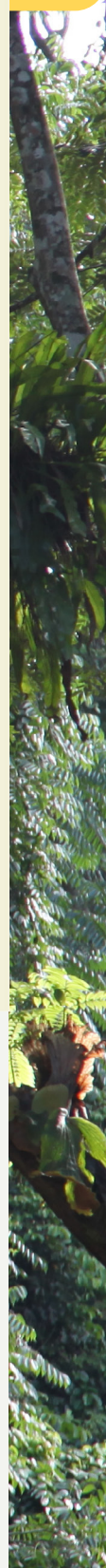
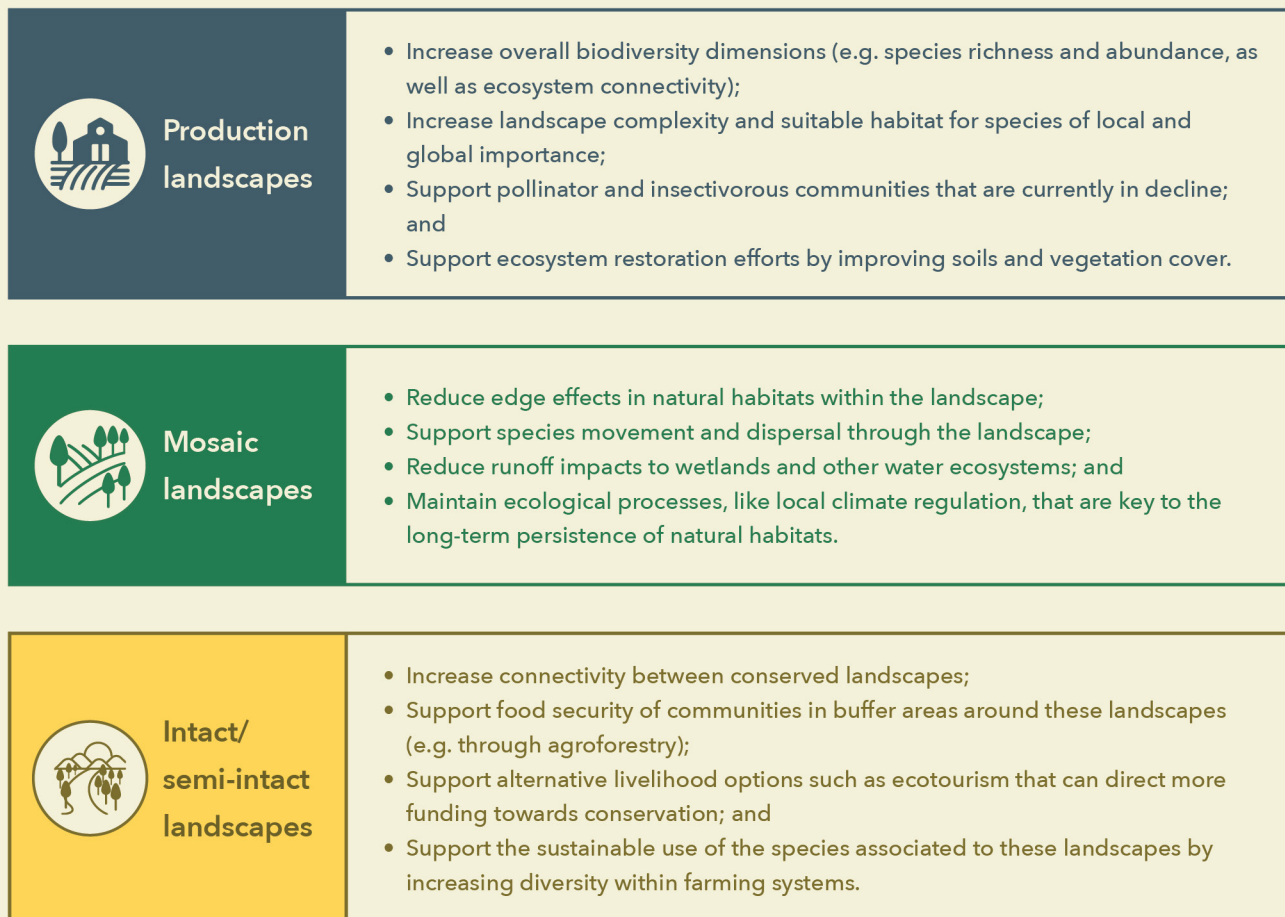


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Figure 2: Examples of contributions of agroecology to biodiversity conservation across different landscapes

Agroecology can significantly contribute to biodiversity conservation beyond the farm in a broad range of landscapes

As an inherently systemic approach, agroecology can benefit biodiversity and the processes that support it, across a broad range of landscapes. Below are some examples of these contributions for one of the many landscape typologies used in rural and conservation planning.



2 Increasing evidence of biodiversity benefits from the upscale of agroecology

Biodiversity plays a major role in the provision of ecosystem services, including those essential for sustainable agricultural production such as pollination, soil fertility, water and soil conservation and so on. Maintaining and strengthening biodiversity across landscapes is also vital for the ecological processes that underpin other provisioning, regulating, supporting, and cultural services of ecosystems to society. In order to accelerate action for the integration of agroecology in key policy frameworks and funding schemes, among diverse stakeholder coalitions and in a holistic approach, it is important to document, report and communicate evidence about the multiple benefits of agroecology.

Biodiversity co-benefits in agricultural and food systems depend on many contextual factors (e.g. geography, history of the landscape, timeframe, landscape design, ecological processes, life history) and its delivery over time depends on the appropriate management processes (e.g. funding streams, policy and incentives, adequate infrastructure, capacity building). **For agroecology to deliver meaningful co-benefits at larger scales, these contextual and procedural factors need to be understood (e.g. through greater evidence) and further supported (e.g. through better policies, better funding).** There is a need

to produce and document evidence on the benefits of upscaling agroecology at larger scales for biodiversity. Evidence of such benefits should be properly communicated, to ensure it is accessible and mainstreamed at all levels, from local to global.

Most of the explicit evidence of agroecology in biodiversity conservation is linked to agricultural biodiversity aspects at the individual farm level and in a small-scale context. **Increasing co-benefits from agroecology on a larger scale requires reflecting on alternative proposals of scaling up (e.g. changing institutions in terms of policies and regulations), scaling out (e.g. increasing number of people/communities/enterprises practising agroecology), and scaling deep (e.g. changing relationships, cultural values and beliefs) pathways of agroecology.** For instance, can medium/large-sized agroecological farms effectively safeguard biodiversity and at the same time adequately adhere to the principles and elements of agroecology, or how can networks of numerous small/medium-sized agroecology farms coordinate landscape-level actions to enhance biodiversity benefits? Overall, this particular topic continues to raise many questions and there is no specific operational approach that can be applied to all contexts.



Case study - Hacienda El Hatico: a successful agroecological and biodiversity conservation endeavour

El Hatico is a farm located in the Southwest of Colombia that in the 1990s started moving from a conventional production system towards an organic one. The farm was the first certified organic sugar production in the Cauca Valley by 1996, and it also started moving towards intensive silvopastoralism.

Over three decades some key changes have been identified in the transition from conventional to organic systems. The abandonment of burning practices, conventional management and chemical inputs has resulted in a series of positive impacts in farming such as: soil recovery, providing better added value; increased production; reduced costs; promotion of functional biodiversity; product

differentiation; and ongoing research and data collection. Regarding soil recovery, it was noted, for instance, that a one percent increase in Soil Organic Matter is followed by an increase in water soil capacity, roughly 15 litres per square metre. In parallel, for biodiversity the use of agroecological systems and intensive silvopastoral systems have proven to be very beneficial for birds, ants, spiders and other species.

Farm management including sugarcane and livestock has been guided by ten agroecological principles, including: integration of agriculture, livestock and forestry; increasing plant biomass and diversity; increasing productivity per area; protecting regional biodiversity and using it sustainably.



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3 Policies: a driving force to promote conservation benefits from agroecology

Adequate policies are needed to promote agroecological systems, including inter alia developing the infrastructure and capacity needed to scale up agroecological systems (e.g. training facilities and programmes) or channelling long-term funding and investments. As of now, very few countries have taken solid policy steps to reform the field of sustainable agriculture in order to allow a true agroecological

transition, one that respects the key principles of agroecology – for instance according to FAO elements and the 13 principles of the HLPE – in the long-term.

Collaboration between agroecology and biodiversity communities can contribute to the acceleration of these policy changes.

An example of positive development in this direction is the recent strategies at European Union level (**see case study on page eight**).



Case study - Aligning agricultural, biodiversity, and development strategies at the European Union level to support the scaling up of agroecology

One of the most comprehensive policy developments that may pave the way to a proper introduction of agroecology in the agriculture framework at the level of the whole region is the one set up in the European Union. The European Union has just developed a vast policy strategy called the Green Deal, which covers a large array of topics and whose main objective is to make Europe the first climate-neutral continent in the world by 2050. To achieve the goals set by the European Green Deal, the European Commission has pledged to mobilize at least EUR one trillion in sustainable investments over the next decade. Several instruments including agroecology explicitly and/or implicitly are part of the strategy. For

instance, a Biodiversity Strategy for 2030 has been adopted, where it is acknowledged that agroecology can provide healthy food while maintaining productivity, increasing soil fertility and biodiversity, and reducing the footprint of food production. Right after that, the Strategy also mentions the potential benefits of organic farming at socioeconomic level as it creates jobs and attracts young farmers. Besides the above-mentioned Strategy, the European Union has also made solid commitments on agroecology in other instruments, such as the “Farm to Fork Strategy for a fair, healthy and environmentally friendly food system”. It explicitly commits to scaling up resources for agroecology by affirming that through “new

knowledge and innovations [it] will also scale up agroecological approaches in primary production through a dedicated partnership on agroecology living laboratories”.

Through international development cooperation, a multitude of projects and initiatives supported by agroecology have emerged. The European Union as a regional bloc has anchored agroecology firmly within the international development support in the field of sustainable agriculture. The new European strategies designed in recent years will not only have an impact at European Union level, but will also provide a policy framework to support agroecology in third countries, something that can be observed in the policy instruments of the International Development Framework of the European Union, such as the New European Consensus on Development and the Comprehensive Strategy for Africa. In the Farm to Fork Strategy policy paper, the European Union manifested that it will focus its international

cooperation on food research and innovation in a series of topics, which includes agroecology.

It is interesting to note the preliminary observations of one of the projects funded by Horizon, titled Agro-ecological strategies for resilient farming in West Africa, with the participation of a number of relevant actors, such as the Senegalese Institute of Agrarian Research, about the future of agroecology in Western Africa. The role of agroecology in the transition to sustainable food systems is described as follows: “To support a transition to sustainable food systems, agroecological farming is emerging as a compelling response to the challenges West Africa faces, aiming to reduce the environmental impacts of agriculture while meeting the growing demand for food, contributing to landscape quality and biodiversity, and enhancing activities resilience”.



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4 The need for the biodiversity conservation and agroecology communities to work together

Agroecology and biodiversity conservation communities have many features in common and their boundaries can at times blur into one another. Agroecologists refer to agroecology as **a movement, a practice and a discipline**, which are lenses also often used by the biodiversity conservation community when referring to their own structures. They **both seek to improve the sustainability of land use and management practices**. They also aim to reform rural policies, rural planning and agricultural practices, as these are at the centre of food systems and are important drivers of biodiversity loss. The shift to sustainable agriculture is essential to achieve global biodiversity objectives, while in turn biodiversity loss undermines efforts to transform food systems. The paradigms that underpin their philosophies are also increasingly converging. Biodiversity conservation recognizes more and more the importance and role of ecological and social aspects in food production, which is at the core of agroecological approaches, while agroecology has consolidated biodiversity as one of its core guiding principles.

Both the agroecological and the biodiversity conservation communities have a role in supporting farmers and other actors to make collective decisions that result in adequate spatial design of landscapes, which follows

agroecological principles and delivers conservation benefits. To this end, it is pivotal to put farmers at the centre, and to help them develop common interests in agroecology and broader biodiversity conservation. One potential path to catalyze this is by collaborating on processes of co-creation of knowledge, for instance to develop farming practices that support biodiversity, such as the incorporation of habitat corridors for wildlife within agroecological landscapes.

Increasing exchanges, such as through the sharing of knowledge, expertise and tools, should be the foundation for growing cooperation between both communities. Agroecologists have a profound understanding of the ecological principles underlying sustainable agriculture, while the biodiversity conservation sector possesses expertise in preserving and restoring ecosystems. **These communities could come up with strategies for sustainability that are more comprehensive, coherent, and effective if they capitalize on their joint expertise.**

The result of such beneficial and mutual exchanges can only benefit both sectors. To achieve a high level of symbiosis in the transformation of food systems, scoping and awareness-raising activities will be necessary to help identify a list of potential cooperation mechanisms among both communities. In

general, agroecology and biodiversity conservation communities can work together more effectively by finding common ground and shared goals, and by recognising and respecting each other's interests and domain-

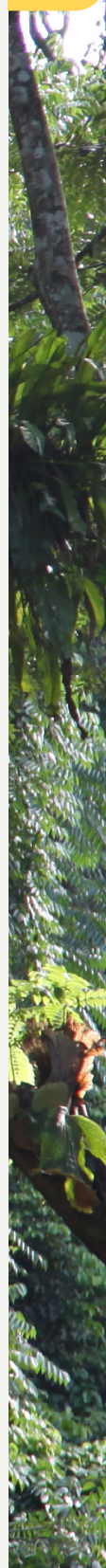
specific perspectives. **Cooperation between these communities can result in food systems that are more resilient, sustainable, and able to meet both human needs and the preservation of biodiversity.**

5 Agroecology needs to adopt a landscape perspective

To result in tangible and wider benefits for biodiversity conservation, agroecology needs to adopt a landscape perspective. This means taking into account the larger context in which agroecological practices take place, such as how agricultural and natural systems interact, how land use affects the environment and local communities, and the potential for integrated approaches to land use management. **There is a pressing need to move away from isolated on-farm interventions, towards ways to empower the agroecology community with tools that can catalyze benefits to biodiversity conservation beyond the farm.** Spatial planning and coordination or collective action at the landscape level are crucial in the delivery of biodiversity co-benefits by agroecology. These are areas where more knowledge needs to be available and operationalized (e.g. enough knowledge on this exists but it has not permeated the agroecology sector), where toolkits need to be co-developed (e.g. based on knowledge co-creation processes), and more demonstration activities need to be implemented to show concrete co-benefits (e.g. more evidence available).

Furthermore, the development of agroecology cannot be separated from restoration and protection of the overall landscape. During the dialogue, agroecology was recognized as a strategy to restore degraded landscapes, as well as to contribute to the protection of natural/pristine ecosystems. Indeed, the agroecology community needs to be seen as a powerful force for enhancing biodiversity values at landscape level and in all type of landscapes.

By adopting a landscape perspective, agroecologists can better understand the impacts of agriculture on biodiversity and develop strategies and practices that support the conservation of biodiversity. For instance, a landscape perspective can help to identify areas where agriculture and conservation can be integrated, such as through the establishment of agroforestry systems or the creation of corridors for the movement of wildlife. Additionally, a landscape perspective can also support the development of innovative and diverse farming systems that are better adapted to local conditions and more resilient to challenges such as climate change.



Recommendations

Dialogue participants made a set of recommendations to catalyse the potential biodiversity benefits from agroecology, which includes boosting the cooperation between agroecology and the conservation community. Their recommendations also highlight the vast potential for both communities to mobilize resources, knowledge, policy reform, changes in practices, etc. The recommendations are grouped together to align with focus areas of the Agroecology Coalition's five working groups:



Research

- » **Increase transdisciplinary collaboration on the ground between farmers, communities, scientists, agroecologists, conservationists, and restoration actors.** Such processes need to lead to the co-creation of knowledge and tools that can address social (e.g. food security), economic and ecological (e.g. biodiversity) needs in a particular landscape;
- » **Keep generating, documenting and communicating evidence about how agroecology results in higher biodiversity conservation benefits and vice-versa.** This process should include bringing evidence and know-hows to technical and extension service offices, but also exploring innovative approaches such as citizen science or remote sensing; and
- » Strengthen agroecology considerations when developing biodiversity-focused measures, tools and indicators; particularly in subject matters where there is still considerable disagreement in the agricultural sector. Experience from the forestry sector (e.g. high conservation value approach) might be readily applicable to boost the benefits of agroecology.



Communication and advocacy

- » **Showcase successful agroecology initiatives that have demonstrated biodiversity conservation benefits to encourage a global movement for transition to agroecology.** Bring these examples to biodiversity conservation spaces such as Conferences of Parties of biodiversity-related conventions, including the Convention on Biological Diversity (CBD) and the Ramsar Convention, and the IUCN Conservation Congress; and
- » **Use advocacy and communication to establish common understanding among the biodiversity conservation and agroecology communities,** by highlighting potential co-benefits, synergies, opportunities, and common processes (like participatory management).

Investments

- » **Increase financial support to long-term projects, as biodiversity benefits from agroecological interventions on landscape require time to materialize.** This would include adequate funding for agroecology transformation processes in developing economies, reaching where most needs are;
- » Upscale necessary financial resources directed at agroecological farms and companies through existing direct mechanisms like payment for ecosystem services, but also indirectly through increased resources to farmer-field schools and farmer-trainers; and
- » **Send strong messages to the investors/donor community** regarding the farm soil and ecosystem restoration potential that agroecology can provide at the landscape scale.

Policies

- » **Avoid promoting policies that harm the environment and the people,** such as subsidizing chemical inputs. This could mean, for instance, repurposing subsidy systems to support agroecological practices and making better use of ecosystem services;
- » **Implement appropriate policy frameworks to create incentives; these need to be articulated with national biodiversity strategy and action plans** to increase policy and intervention coherence. Although various national and regional policy frameworks are being developed in several countries, how this can be translated into actions at the local level still remains to be seen; and
- » **Promote agroecological strategies that can support individual farmers over the long-term** through better access to funding and increase their capacity to change unsustainable practices while maintaining and investing in good practice.

Implementation

- » **Move from short-term projects to supporting long-term processes that can guarantee better sustainability of the projected outcomes for conservation;**
- » **Increase cooperation and engagement with all stakeholders within a landscape to design and implement collective actions that can materialize better biodiversity conservation outcomes; and**
- » **Introduce processes that promote the participation of farmers in landscape design.**

About the agroecology dialogue series:

The agroecology dialogue series is an initiative of FAO and the Biovision Foundation in support of the Coalition for food systems transformation through Agroecology (Agroecology Coalition). It consists of thematic dialogues that aim to identify entry points, opportunities, building blocks, innovative approaches and institutional frameworks that can support the upscale of agroecology. They ultimately aim to contribute to the emergence of a broader framework on multiple pathways for food systems transformation that highlights concrete steps to promote agroecology at the national policy level, and set priority areas for a food systems transformation. Between 60 and 90 participants contributed to each dialogue from various backgrounds (scientists, government representatives, civil society organization, intergovernmental organizations, private sector and others) and sectors. The agroecology dialogue series furthermore supports and feeds into the Agroecology Coalition that launched during the UN Food Systems Summit (UNFSS) 2021, with the ambition to advance adapted policies, strengthen research and development programmes and secure public and private investments to promote agroecology worldwide.

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