Event Report

International conference on Agrobiodiversity

“Sharing best practice in nature-based solutions from forest and farm producer organizations”

Pokhara, Nepal, 9-12 April 2024
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<tr>
<td>AAF</td>
<td>Alliance of Agriculture for Food</td>
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<td>BIOFIN</td>
<td>Biodiversity Finance Initiative</td>
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<td>CBOs</td>
<td>Community Based Organizations</td>
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<td>CCDABC</td>
<td>Center for Crop Development and Agrobiodiversity Conservation</td>
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<td>CFUGs</td>
<td>Community Forestry User Groups</td>
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<td>CSB</td>
<td>Community Seed Bank</td>
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<td>FAO</td>
<td>Food and Agriculture Organization</td>
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<td>FECOFUN</td>
<td>Federation of Community Forest Users Nepal</td>
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<td>FFF</td>
<td>Forest and Farm Facility</td>
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<td>FFPOs</td>
<td>Forest and Farm Producer Organizations</td>
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<td>GDP</td>
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<td>GOV</td>
<td>Government of Nepal</td>
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<td>IIED</td>
<td>International Institute for Environment and Development</td>
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<td>INGO</td>
<td>International Non-Governmental Organization</td>
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<td>INOFO</td>
<td>Inter-continental Network of Organic Farmers Organisations</td>
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<td>IPLC</td>
<td>Indigenous People and Local Communities.</td>
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<td>IPOs</td>
<td>Indigenous Peoples’ Organizations</td>
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<td>IPR</td>
<td>Intellectual property rights</td>
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<td>IUCN</td>
<td>International Union for Conservation of Nature</td>
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<td>LI-BIRD</td>
<td>Local Initiatives for Biodiversity, Research and Development</td>
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<td>MoALD</td>
<td>Ministry of Agriculture and Livestock Development</td>
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<td>MoFE</td>
<td>Ministry of Forests and Environment</td>
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<td>NBSAP</td>
<td>National Biodiversity Strategic and Action Plans</td>
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<td>NDCs</td>
<td>Nationally Determined Contributions</td>
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<td>NGO</td>
<td>Non-Governmental Organization</td>
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<td>NTFPs</td>
<td>Non-Timber Forest Products</td>
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<td>PPB</td>
<td>Participatory Plant Breeding</td>
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<td>SDG</td>
<td>Sustainable Development Goals</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>WRF</td>
<td>World Rural Forum</td>
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Abstract

The Agrobiodiversity Conference convened in Pokhara, Nepal, from April 9-12, 2024, engaging 180 participants from 32 countries, including representatives from forest and farm producers organizations (FFPOs) and Indigenous People and Local Community (IPLC) groups. Through shared experiences and field visits, the conference explored critical themes such as agrobiodiversity conservation, policy shaping agroecological approaches, traditional knowledge exchange, seed and farm management innovations, enterprise diversification, and nature finance.

The conference yielded significant outcomes and a global call to action, emphasizing key points:

1. **Agrobiodiversity Conservation**: Prioritize agroecological approaches to safeguard plant and animal species for global food security amidst climate variability.
2. **Empowerment of Smallholder Farmers and Indigenous Communities**: Recognize and support the vital role of local communities as custodians of agrobiodiversity, ensuring respect, rights, and direct financial backing.
3. **Integration of Agroecology**: Promote agroecology as a model that integrates ecological resilience, social responsibility, and economic efficiency, with stakeholders actively involved in policy formation.
4. **Preservation of Traditional Knowledge**: Respect and promote traditional knowledge in sustaining diverse food cultures and fostering collective action.
5. **Pluralistic Seed Systems**: Implement diverse seed conservation strategies, combining in situ and ex situ approaches, under supportive policy frameworks.
6. **Development of Agrobiodiversity-supporting Enterprises**: Foster enterprises within integrated forest and farm landscapes, supporting diverse food, fiber, and medicinal products, with a focus on internal governance and investment.
7. **Enhanced Financial Support**: Increase funding for FFPOs and IPLC groups, redirecting international climate and nature finance to local initiatives.
8. **Promotion of Nature-friendly Agroecology**: Advocate for policies favoring chemical-free, nature-friendly farming systems over monocultures for long-term food security.
9. **Understanding, promotion and utilization of ecosystem services**: Integrate ecosystem services such as natural pest control, pollination, nutrient recycling, among others into the existing farming systems.
10. **Knowledge Exchange and Policy Reforms**: Support ongoing knowledge exchange on agrobiodiversity to drive policy reforms for diversified nutrition and food system transformation.
11. **Utilization of Knowledge Networks**: Harness existing knowledge hubs and networks to scale up agroecological practices globally, strengthening alliances and promoting knowledge sharing.

These outcomes underscore the urgency of concerted action to protect agrobiodiversity, empower local communities, and foster sustainable agricultural practices in the face of global challenges.
**Introduction**

Agrobiodiversity is one of the components of agroecology and the subset of biodiversity. It offers multiple benefits including: food security and livelihood resilience, nutritional and health benefits, the provision of biomass energy and household materials, preservation of biocultural heritage, and the maintenance of ecosystem services including climate change mitigation. However, there is an alarming rate of agrobiodiversity loss and there are various reasons, which include changing sources of knowledge (moving away from traditional farming practices and the cultivation of farmers’ varieties/landraces), permanence of monoculture systems, power imbalances in land tenure and market access, the profitability of industrial-scale monocultures, and technological advances at scale that demand uniformity.

To combat this loss, several initiatives have been undertaken by several organizations around the world. In the same context, this 4-day international conference on Agrobiodiversity was organized by the FFF – a partnership hosted by FAO in collaboration with the International Union for Conservation of Nature (IUCN), the International Institute for Environment and Development (IIED) and AgriCord – in collaboration with the Ministry of Forests and Environment of Government of Nepal, Federation of Community Forest Users Nepal (FECOFUN), Local Initiatives for Biodiversity, Research and Development (LI-BIRD), Agroecology Coalition and International Indigenous Forum on Biodiversity.

**Objective**

“To bring people together to share innovative traditional and scientific knowledge on how Forest and Farm Producer Organizations (Including Indigenous People and local community groups) can advance agroecological practices, agrobiodiverse planting materials, and climate-smart business and finance models that enrich nature and nutrition”

**Participation**

The conference gathered more than 180 representatives from 32 different countries representing Forest and Farm Producer Organizations (FFPOs) supported by the Forest and Farm Facility (FFF), government personnel, NGOs, INGOs, the private sector, media agencies, and other relevant stakeholders across the globe. The conference stimulated the upscaling of good practices across a global network of FFPOs, facilitated by the FFF.

FFPOs from the Global South, particularly Asia, Africa, and Latin America, exchanged agrobiodiversity knowledge and experience through field visits and share fair, and discuss common challenges in maintaining agrobiodiversity, which will enable them to adapt their models from lessons learned to benefit their members’ livelihoods and ensure the sustainable management of agrobiodiversity.
Inauguration session

The International Conference on Agrobiodiversity started with the inauguration from Hon. Minister Nawal Kishor Sah Sudi from the Minister of Forests and Environment (MoFE), who was also the chairperson of the event. The session was inaugurated by Chair and Guest by watering Tulsi (Holi Basil - Ocimum tenuiflorum).

The program was also honored by the presence of Hon. Jwala Kumari Sah, Minister of Agriculture and Livestock Development (MoALD) along with distinguished guests such as Ms Sabnam Shivakoti, MoALD; Mr Badri Raj Dhungana, Joint Secretary, Ministry of Forests and Environment; Dr Ram Krishna Shrestha, Joint Secretary, MoALD; Dr Tanka Prasad Prasai, Secretary, Ministry of Agriculture and Land Management, Gandaki Province; Dr Ramchandra Kandel, Secretary, Forests and Environment Ministry of Industry, Tourism, Forest, and Environment, Gandaki Province; Dr Pratap Shrestha, Chairperson, LI-BIRD; and Mr Duncan Macqueen, Director of Forests, IIED. Following the inauguration, the national anthem of Nepal was played and all the participants showed respect by rising during the period.
Welcome remarks

Mr Badri Raj Dhungana, Joint Secretary, MoFE

A warm and extended welcome from Mr. Badri Raj Dhungana (Joint secretary, from MoFE) enveloped a diverse group of participants hailing from 32 countries, representing government agencies, forest and farm producing groups, and subject matter experts, all converging to advance the crucial discourse on agrobiodiversity conservation. Mostly the participants represent Asia, South America and Africa. Likewise, the conference also serves as a platform for more than 70 national participants for sharing knowledge and ideas, exchanging experiences and collectively addressing the current challenges of agrobiodiversity loss in Nepal. He expects this event will be able to contribute to FAO’s priority program that focuses on establishing resilient agri food systems with substantial support from the family farming. He further shares about the multifaceted challenges that confront the farmers, and the necessity to engage collectively for creating resilience through genetic and ecosystem diversity. He mentions the conference will adhere to diverse topics contributing sustainable agrobiodiversity management, and prove a catalyst for forging partnerships and collaboration between various stakeholders attending the conference, and make tangible difference in the lives of smallholder farmers. He looks forward to innovative solutions supporting the government plans and programs. At the end, he requests all the distinguished national and international guests to explore the natural and cultural heritage of Pokhara.

Two videos, one from Nepal and other from Ecuador, were played showcasing the importance of local agrobiodiversity for rural communities, who are dependent on forests. The first one was about Chiuri trees being used by indigenous Chepang communities for their livelihoods through CFUGs. Ghee from Chiuri initially used for domestic consumption has now become a source of income for them. The next video, from Amazonian Chakar, was based on indigenous communities, organizations of family producers and fishing communities. It focused on the conservation and multiplication of seeds, and conservation of ancestral productive systems by these communities. These groups were later
recognised by the government and other stakeholders for conserving globally important agricultural heritage.

**Keynote speech**

**Mr Luis Miguel Aparicio, Forest and Farm Facility (FFF) Manager, FAO**

The keynote speech initiated with a vote of thanks to the GoN for hosting this conference. He shared that Forest and Farm Facility (FFF), established in 2012, now works globally in 12 countries and supports forest and farm producers organizations (FFPOs) as the key agents for developing climate resilient landscapes and improved livelihoods. In its second phase, it holds four outcomes that align directly with Agenda 2030 leaving no one behind regardless of age, gender and ethnicity.

He mentioned FFF catalyzes and mobilizes the investment, prioritizing public and private partnerships that will bring tangible benefits to the forest and farming communities. He also mentioned FFF delves to shift change from an isolated approach to a diverse one as forest based agri food systems hold a significant importance. They are paramount for sustainable agri food systems that have potential for nature conservation, conservation of diverse range of plant and animal species, adaptable to environmental changes and external shocks, secure livelihoods and benefits for future generations. He shared that FFF intends to build the capacity of FFPOs for present and future in order to ensure steady food supply, implement agroecological practices and increase resilience of the whole system.

**Mr Duncan Macqueen, Director of Forests, IIED: Background to why FFF choose agrobiodiversity as the conference theme**

Mr Duncan started his keynote speech mentioning Nepal as one of the global centers for agrobiodiversity management in the work, with a particular example on community forestry and its role in restoring the landscape successfully. Referring to the case from Nepal, he mentioned forests are the key in transforming climate resilient landscapes and sustaining livelihoods. He added variable change in climate has poised serious threats to our ecosystem, leading to natural degradation and loss of different species, which outlines the necessity of climate resilient landscapes.

He further shared about the survey conducted in 6 countries and 41 FFPOs, which showed people’s desire to manage agrobiodiversity and provided pointers to engage in agrobiodiversity conservation. He informed us about a similar conference that was organized in Vietnam two years back with a key message - Diversification for climate resilience, which must be ecologically, economically and socially viable. The major concern should focus on finding ways to manage biodiverse farms and generate income at the same time. This outlines the major role of agrobiodiversity management. He expects this event will further enrich the existing knowledge and promote learning from one another from the center of agrobiodiversity management.
Mr Thakur Bhandari, Chairperson, FECOFUN

Mr Thakur welcomed all the delegates engaged in agrobiodiversity and forest conservation to this timely conference, which will address various factors including climate risks in agrobiodiversity management. He added forests also hold significant place along with agriculture to achieve sustainable livelihoods. He added the MoFE and MoALD should work in tandem to generate and implement the policies that will benefit both forest and farm producers.

Further, he elaborated that our boundaries must be increased from agricultural lands to forests, keeping the conservation, promotion and utilization aspects at the core. He informed that 3.1 million forest users are associated with FECOFUN, working daily in conserving traditional knowledge, managing the forests and securing their livelihoods. He wished that the technical sessions will be able to generate new avenues for FFPOs across the world including Nepal.

Mr Ken Shimizu, FAO Representative for Bhutan and Nepal

Mr Ken welcomed everyone on behalf of FAO and GoN for hosting the conference here, mentioning Nepal as rich in biodiversity hotspots with exemplary initiatives in agrobiodiversity conservation through community forests. He, though, mentioned the climate vulnerability of Nepal with potential impacts on agrobiodiversity loss and livelihoods. He stated this gathering of agrobiodiversity activists can play an important role in agrobiodiversity conservation referring to the stories from FFPOs.

He shared that agrobiodiversity management is a top priority of FAO with 20 program areas focusing on agrobiodiversity conservation and management, climate resilient agriculture, food system transformation, gender inclusive, etc. He showed commitment towards the promotion of future smart crops, and informed He further shared that our agri food system is facing socio-economic and environmental challenges with rapid migration from rural areas to cities and abroad, creating labor shortage for producing forest and farm products. He highlighted the importance of climate finance-Green climate fund, and the need for developing such mechanisms for accessing finances for innovation and upscaling good practices conducted by FFPOs.

Dr Govinda Prasad Sharma, Secretary, Agriculture Development, MoALD

Dr Sharma started his keynote speech by stating biodiversity being noticed in agriculture, ecosystem and agriculture in Nepal, which is very well ranked across the world. However, human interventions, climate change and environmental pollution are major causes of agrobiodiversity loss.
The government observes the first day of every 10th month of Nepali calendar as a week for agrobiodiversity conservation. He also added the GoN has provisioned the National gene bank and mandated the conservation of germplasm of crops, livestock, and fisheries. There are various policies and instruments such as National Agrobiodiversity Policy 2007, National Agroforestry policy 2017, National Genebank (Agrobiodiversity Research and Conservation), CDDABC (Federal affairs for sustainable agrobiodiversity use and conservation), in situ and ex-situ conservation policy, promotion of indigenous crops in collaboration of numerous CSOs and CBOs as well as their registration into the national seedy system. He also mentioned this conference will bring partners at the national regional and national level to conserve these germplasms.

Inaugural address
Honourable Jwala Kumari Sah, Minister for Ministry of Agriculture and Livestock Development, Government of Nepal

Hon Minister Jwala Kumari Sah initiated the address by the agrobiodiversity as the importance for the conservation of agroecosystem, including its significance in maintaining food and nutrition security and livelihoods. She shared that people at grassroots, especially, women are the important actors of agriculture. Neglected and underutilized crops are very important and staple food for these people but the incursion of hybrid varieties has led to loss of NUS crops.

This drives our attention to conserve these crops. She addressed that the GoN has highly acknowledged the international treaty such as ITPGRFA, and all three tiers have the rights to mainstream agrobiodiversity conservation in their annual programs and plans. She mentioned that custodian farmers are being identified and supported with technical and financial support from the government programs. The GoN has begun to observe the first day of the 10th month of every year as agrobiodiversity promotion day. Agrobiodiversity is equally prioritized in all important policy documents by the GoN. She added education and capacity building are important to conserve agrobiodiversity, with complementary support from research and science, which must generate new
knowledge on this aspect. She expressed affirmative commitment to engage the communities, especially farmers, for conservation, promotion and utilization of agrobiodiversity.

Closing remarks of Inauguration Session

Honourable Nawal Kishor Sah Sudi, Minister for Ministry of Forests and Environment, Government of Nepal

The Hon Minister also welcomed all the delegates to the conference and stated that MoFE has engaged in result oriented global agrobiodiversity conservation. He shared that smallholders are not just producers but play crucial roles in conservation, and they are the guardians of agrobiodiversity. He presented his expectation that all the delegates and other stakeholders will be able to generate substantial conclusions from this 4-day conference.

In addition, it will be able to identify the strategies for conservation and promotion of agrobiodiversity in Nepal as well as in global context. The GON is affirmative to engage in observation of agrobiodiversity as guided by the outcomes of this event.
Technical Sessions

Session 1: Agrobiodiversity – What it is and why it matters.
The session was moderated by Dr. Ram Krishna Shrestha, Joint Secretary, MoALD.

Dr. Kamal Kumar Rai and video welcome from International Indigenous Forum on Biodiversity (IIFB) : The importance of agrobiodiversity from an Indigenous perspective.

Indigenous communities have a specific identity and they are the custodians of biodiversity. Indigenous people can speak with seeds, crops, soil, nature, water and sky and agrobiodiversity has a pivotal role in their rituals, culture and customary practices. Agrobiodiversity is not only a commodity but is part of their culture and customary practices, and it should be respected, recognised in form of legislative, legal protection.

Traditional knowledge is gradually lost and this knowledge is not transferred to the next generation. Modern science and technology such as gene editing, genetic engineering, DSI etc are negatively affecting the traditional knowledge system. Indigenous people have their practices for conservation and promotion of agrobiodiversity and genetic resources. Nepal being rich in cultural diversity is the reason we are rich in biodiversity. There is a need to recognize the importance of traditional knowledge by the government and the government should invest in documentation of local and traditional knowledge. Enterprise based on traditional knowledge can be promising to uplift the socio-economic condition of the communities. Indigenous communities need legal protection, a dynamic program to work with and a knowledge system and transfer to the younger generation. Indigenous Science and Modern Science can go hand in hand.

Duncan Macqueen, Director of Forests, IIED: Background report framing agrobiodiversity management
Agrobiodiversity is the subset of biodiversity. Agrobiodiversity contributes to enhancing climate resilience, health and nutrition, construction materials and energy, sustainable agroforests, biocultural heritage and economy and climate mitigation/adaptation. Smaller the land greater the diversity. There is an alarming loss of agrobiodiversity. Only 5 animals and 12 crops contribute to 75 % calories consumption in the present context. Policies and IPR, Land tenure, Knowledge loss, income, technology, and power are some of the key drivers of biodiversity loss. Organizations and community institutions are key to progress as they serve as a platform for information sharing, promoting nutritional diversity and health benefits, use of natural medicines, promoting organic and agroecological products, communication etc. Cultivating diverse crops (seed collection, registrations, seed fairs), Diversifying their business, organizing market fairs, business infrastructures, Fund mobilization (Soft loans, saving and credit) and Campaigning (ecological farming) are few strategies for sustainable agro biodiversity management. Small farmers and IPs steward the remaining agrobiodiversity of the world.

Maria Josefina Guadalupe Manicad, Consultant/ expert: Priorities emerging from prior
conversations on agrobiodiversity

Ms. Maria shared agrobiodiversity as a complex and managed at several levels (genetics, species and ecosystem). She mentioned there is global interdependence and no self reliant seed system across the world, calling for synergy between farmers managed and formal seed systems. She mentioned the issue of ownership management and plant genetic resources exchange and mechanisms for benefit sharing. She outlined the key global process that led to agrobiodiversity concept and terminology. She also informed about the fragmentation in knowledge systems and narratives, which does not acknowledge the farmers as the original plant breeders.

However, biodiversity management has been an integral part of the farming system since the very primitive period. There are also fragmentations in in-situ and ex-situ conservation. She also recommended some policy and investment priorities through improving global governance (mode of benefit sharing), revitalizing public breeding (formal seed systems) and supporting farmer seed systems by allowing them to register their seeds. She ultimately concluded by emphasizing the transition in agriculture through integration of agroecosystem services in our agricultural system, and that agroecology is inevitable.

Dr. Bal Krishna Joshi, Chief, National GenBank, Nepal: Agrobiodiversity policies and practice innovations in Nepal

Dr Joshi shared that Nepal has 28% agriculture genetic resources of the total biodiversity, and also mentioned agrobiodiversity favorable policy provisions. He shared that agrobiodiversity is mentioned as the main pillar in four policies related to agriculture, health, business and environment, proving their worth in each of these sectors. He further shared about innovative practices to conserve and utilize agrobiodiversity effectively, which are agro gene sanctuary, field gene bank, CSB, aqua pond genbank, on farm conservation, evolutionary plant breeding, registration of local landraces, among others.

He finally concluded by mentioning about policy consideration such as establishing large agro gene sanctuary in three agroecological zones, estimating agrobiodiversity index in each district, ensuring market and irrigation facilities, using and promoting geographical indication, establishing himalayan seed bank as safety back up, estimating health index and ecological yield of agriculture genetic resources, etc.

Damian Sulumo, CEO, Mviwaarusha, Tanzania: Key constraints to agrobiodiversity
conservation from a smallholder perspective – and how to address them

Mr Damian shared about agroecology based farming adopted by the farmers, which is the key objective of the organization, and engaged in community sensitization, mobilization and conservation of agroecology. He highlighted the key constraints of agrobiodiversity conservation such as monoculture, loss of traditional varieties, land use change, invasive species, climate change, lack of awareness, unfriendly policies and market force.

All these constraints contribute in one or another way to loss of agrobiodiversity. He shared that these are preventable and can be resurrected with the application of strategies, for instance, advocacy, farmers managed seed systems, policy on agro ecological issues and more research on biodiversity and seeds. In addition, there are other strategies. Beekeeping can be an important part of agrobiodiversity conservation with very important crop pollination service from honey bees as well as additional income from honey production. He further added alternative energy promotion also has a great potential in agrobiodiversity conservation through reduced use of wood for fuelwood. He explained that his organization has been advocating for farmers managed seed systems and provisioning of financial services to the farmers to engage in economic activities that directly or indirectly contribute to agrobiodiversity conservation.

Plenary discussion and closing of the session:

Ghansyam Pandey chairperson, Green Foundation Nepal, UNDP ecosystem restoration posed a question to Duncan Macqueen regarding governance issues in the current system, particularly the dominance of large businesses. He asked for alternatives to empower local communities financially and protect governance systems. Duncan suggested treating agrobiodiversity as a public good, giving preferential treatment to its custodians, supporting producer organizations, implementing taxes and subsidies for farmers, establishing Participatory Guarantee Systems (PGS), utilizing Geographical Indications (GIs), and strengthening community institutions through policies and programs.

Kamal Aryal (ICIMOD): Wild and Non cultivated edible diversity which is not given priorities in agrobiodiversity. Why focusing only on agriculture/Crop biodiversity? Need to integrate other components of biodiversity as well, such as wild and semi cultivated plants is one of them.
Vincent Zimba (FFF) inquired about efforts to commercialize indigenous seed systems and integrate them into formal value chains, seeking motivation for local communities. Dr. Balakrishna Shrestha mentioned deliberate work, including with LI-BIRD, on registering local seeds and obtaining Geographical Indication (GI) tags for eligible landraces. They identify elite lines, develop new varieties, and collaborate with Genbank to enhance the performance of native landraces. Market access is crucial for conserving these resources.

Thaneshwor Bhandari (Virtual Participant) raised a question about Nepal's absence from the International Union for the Protection of New Varieties of Plants (UPOV), citing the country's rich genetic diversity. Dr. Joshi highlighted that while Nepal possesses substantial genetic resources, there are issues with accessibility and acknowledgment. He emphasized the need for in-depth consultations on joining UPOV, considering the concerns at the grassroots level and the exploitation of Nepalese farmers' landraces without acknowledgement.

Conclusion:
This session has been able to prepare the stage for the upcoming three days of discussion on agro biodiversity and conservation.
Session 2: How policies shape agroecology approaches that help to protect and manage agrobiodiversity for better or worse.

The session was moderated by Ms Katja Vouri, Agricord.

Keynote Speaker: Oliver Oliveros, Executive Coordinator, Agroecology coalition: Principles and element of Agroecology

Current food system is not sustainable; it is responsible for 80% biodiversity loss, and it constitutes 1/3 of GHG emission, highly vulnerable to climate change, there is social inequality and loss of resources, and these are factors preventing change. So, a transformational change is needed for moving forward and agroecology is one of the promising pathways. In addition, addressing the sustainability of food systems has significant implications for the three Rio conventions; CBD, UNFCCC, and desertification, as the RIO convention has stated significant implications of climate change to the food system.

Agroecology, a paradigm shift, is a transdisciplinary science, and it is a combination of science, practice and social movement. It is a holistic approach, anchors the whole food system and is helpful in achieving economical, social and cultural safeguarding which ensures sustainable development and fulfilling the sustainable development goals.

Agroecology recognises traditional knowledge and innovations. It has recently gained momentum working in partnership with multiple local stakeholders. However, We don't need to make a new wheel. Our ancestors have already talked about it. Evidence based advocacy for locally adopted diverse food systems is needed. FAO has promoted 13 principles of Agroecology while HLPE has 10 elements. It offers great benefits to agrobiodiversity at various tiers. Principles of agroecology should be taken collectively to bring change in the whole value chain approach. We have the opportunity to transfer towards biodiverse ecosystems. In the transformation process, it empowers farmers, changes social relations and value addition, reduces distance between consumers and producers. It promotes locally adapted agriculture, resource conservation techniques, ecosystem resilience, Sustainable livelihoods and human rights.

Keynote Speaker: Mario Marino, FAO Technical Officer, International Treaty on Plant Genetic Resources for Food and Agriculture – Agrobiodiversity, landraces, seed laws

Key points:
Current world is being benefited by the work done by farmers ten thousand years ago, so it is necessary to recognize the contribution of the farming system by realizing the Farmers right (unique instrument). Without human intervention, most crops would have been lost (conservation by utilization). He shared that, no country is self-sufficient, as all countries are interdependent on plant genetic resources which is necessary for ensuring food and nutrition security, a basic human right and more plant genetic resources are necessary for promoting food sovereignty, culture and cultural rights. For its conservation and sustainable use of plant genetic resources, on farm/in situ and ex-situ conservation is necessary.

Local crop diversity can only be maintained at the farmers field through continued adaptation of farmers' varieties over time. It promotes the role of farmers as custodians. Conservation and sustainable use is fundamental for international treaties. This encourages conservation and use of local traditional crops. Global seed vault in Norway is serving to conserve all the crop germplasm around the world based on the international treaties.

Panel Speaker: Normita Ignacio, Executive Director, Southeast Asia Regional Initiatives for Community Empowerment (SEARICE), The Philippines

She stressed the imperative for holistic changes within agricultural and food systems to foster transformation. Asserting the right to food as a fundamental human right, she delineated individuals as rights holders and states as duty bearers, advocating for accountability, transparency, and empowerment to ensure this right. Through the example of Araka, a previously impoverished municipality in the Philippines, Normita depicted a journey from legislative bill to the adoption of a sustainable agriculture code in 2017.

The code, enriched by community input, prioritized the protection and promotion of traditional seed systems, establishment of community seed banks, and seeds registration. Normita's narrative underscored the importance of inclusive legislative processes, where farmers' voices are valued, leading to the promotion of sustainable agricultural practices and socio-economic advancement.

Panel Speaker: Ms. Shabnam Shivakoti, Joint Secretary, Ministry of Agriculture and Livestock Development; What kind of policies that GON are promoting to support?
She outlined the policies promoted by the Government of Nepal (GON) to support small farmers and enhance food security. She noted that while smallholders traditionally operated in an integrated system of crop, livestock, and agroforestry, recent surveys have revealed inadequate food and nutrition security indicators, prompting interventions in production systems. Challenges include shrinking agricultural areas due to expanding forests and the introduction of monoculture and hybrid practices, impacting both pest management and human health. The Ministry is addressing these concerns by promoting not only conservation but also utilization and market linkages.

She shared that the expansion of organic agriculture highlights the need for alternatives to synthetic inputs, emphasizing the importance of synergies and trade-offs in sustainable practices. So, the emerging focus on food system approaches should aim to strengthen systems by integrating production, market, and consumer aspects, fostering overall transformation and sustainability.

Panel Speaker: Georgina Vargas Catacora, Prof. of Agroecology, Bolivian Catholic University, La Paz, Bolivia

She highlighted examples where agroecological practices involve cultivating a diverse range of crops on small plots of land, sometimes as small as half a hectare, with up to 60 different species. Agroecology focuses on agrobiodiversity helping restore ecosystem functions such as productivity, pollination, and natural pest control. It also creates habitats for both wild and domesticated plants, contributing to resilience, sustainability, and food sovereignty. Moreover, agroecology isn't just about food production; it also generates livelihoods and empowers communities socioeconomically and culturally. Restoring agrobiodiversity is crucial for restoring the water cycle and aiding in climate adaptation efforts. In summary, agroecology embodies biodiversity in agriculture, promoting ecological balance and sustainability while also benefiting communities in various ways.

Moderated discussion, Q&A, moderator’ wrap up

Kumar Rai queries Dr. Oliver from the Agroecology Coalition about how agroecology aids in the decolonization of indigenous systems and supports indigenous rights, such as food sovereignty and organic farming. Dr. Oliver responds by emphasizing how agroecology's principles of participation, equity, and fairness align with indigenous rights. They highlight agroecology's holistic approach, spanning from farm to landscape level, and its practical applications supported by existing research. Dr. Oliver underscores agroecology's transdisciplinary nature as a tool for advancing indigenous rights.
Mukund Prasad Bhusal from MoALD inquires Normita Ignacio from Searice about policies addressing the negative impacts of heavy chemical fertilizer use on the environment and health, and promoting agroecology in the Philippines. Normita responds by noting a lack of comprehensive policies on agroecology but mentions successful local-level initiatives. She highlights lobbying efforts for national budget allocation for agroecology implementation and opportunities for civil society engagement. Normita emphasizes the need for supportive laws, policies, and financial backing to preserve agroecology's biodiverse nature.

Kanimang Camara asks Mario Marino about the importance of farmers' rights and utilizing local varieties for future agricultural production. Camara highlights the significance of conserving native varieties, particularly in rice cultivation, given its crucial role in diets and the current threat of water scarcity. Camara suggests empowering farmers to save and sell seeds as a potential solution. Additionally, Georgina adds that indigenous communities play a vital role in landscape management and can contribute valuable knowledge to complement academic research. She emphasizes the importance of incorporating indigenous knowledge into the design of agroecological landscapes.

Summary of the session:
Ms Katja summarized the session and mentioned that agroecology can be instrumental in conserving agrobiodiversity, and also restore vital ecosystem services such as natural pest control, pollination, carbon sequestration, and nutrient recycling. Traditional knowledge and local innovations form the core of agroecology, highly value the engagement of local farmers in co-creating solutions. Local farmers are the custodians of biodiversity, and hence, need support from other stakeholders in the form of enabling policies, strengthening capacities, and arranging finance/investment to continue what they are practicing at their level.
Group Exercise: Preliminary discussion of how farm and food FFPOs might advance agroecological approaches

A collective group exercise was carried out among the participants in relation to the contribution of farms and FFPOs in the development of agroecological approaches. For this group exercise the participants were divided into 7 different groups based upon the region and language uniformity. Three questions were dropped into the floor for discussion within the groups and summarize the context in their respective regions.

Q1. How are forest and farm producers using agroecology and agrobiodiversity to improve their landscapes and livelihood (Experiences)

Experience from different regions:

**Nepal:** Agroforestry and plantation initiatives play a crucial role in expanding forest cover while providing fodder and Non-Timber Forest Products (NTFPs) such as timur spices (Sichuan pepper). These efforts also foster various forest-based enterprises like lapsi (*Choerospondias axillaris*) candy and medicinal plants, contributing to local livelihoods. Agriculture adjacent to forests benefits from increased crop yields, with concerted efforts made to protect water sources and conserve watersheds at the landscape level. Community forestry initiatives, coupled with pond management, ensure sustainable water resources. Benefit distribution from Community Forestry User Groups’ funds follows regulations, with allocations for both conservation and livelihood enhancement.

**India:** Women farmers are producing their own seeds in India, but there is no market and they are running a model called roody where the women sell at the same rather than other areas. **SWEA India:** Organic pesticides are being taught of the importance of several plant and the village is being sold to that area and the value of the plants is being increased (Roody is brand name)

**Vietnam:** Implement agrobio the farmers are being trained on the use of inputs which do not affect the environment, members are taught to reduce the use of chemical and are taught to make organic compost and pesticides, train on the diversity inclusion in their farms also keep the natural insect to protect the farms have also organize build up the water system to control pollution from the
production and grow trees on sloppy area for marketing to use the computer and digital marketing system are being developed and with qr code to maintain the quality of the product and provide information about the production for quality control

**Zambia:** making manure Bokashi manure and organic fertilizer takes 3 months for plant uptake while chemical in few weeks, organic pesticides from different species mainly neem (*Azadirachta indica*) tree, use leaves to also help plants to grow well and keep plant intact many soils are dead by the use of chemical fertilizer, when make own manure its cheaper in, bokashi can be used as basal and laster dressing as well. Resources are within themselves i.e farmers to produce the fertilizers and there will be more production. Cheaper to use the local products. Best solution is to provide the information rather than distribute the fertilizers.

**Question 2:** What challenges are they facing and what do they hope to learn from the field trip to help them overcome these challenges (Learning)?

**Lessons learned:**
- Out migration leading to labor scarcity and small-scale production.
- Challenges with costly certification methods and branding.
- Denial of forest access to local communities, impacting culture.
- Replacement of local seeds with hybrid varieties.
- Lack of tree species diversity, focused on timber production.
- Human-wildlife conflicts and barren land issues.
- Difficulty in adopting costly technologies and misinformation about fertilizer use.
- Challenges with chemical subsidy and misinformation on fertilizer use, hindering transition to agroecology.
- Difficulty in scaling up agroecology for larger-scale production and engaging youth in farming systems.
- Lack of support systems and technical assistance for transitioning from chemical to organic farming.
- Expensive certification processes exacerbate the issue.
Expectation from the FFPOs:
- Learn the process and what has enabled them to develop and continue the product and process
- How the seed banks are being managed landscape restoration at the local level
- How the local communities have been able to sustain from the practices they are adopting
- Proper management of agrobiodiversity, governance mechanism of CFUGs through case stories

Question 3: What existing or new partnership could be built to address agrobiodiversity issues (Recommendation)?
- Strong law and policies from the government must be there to ensure the conservation of agrobiodiversity.
- Federation, networks, diverse groups, etc. must be provided with technical and financial support.
- Current production needs to be linked with the local value chain through collective partnership.
- Agriculture and Forest based enterprises need to be registered with the Ministry of Industry. E.g Beekeeping, which is very irrelevant and needs to be corrected through inter ministerial coordination. (structural compatibility)
- Evidence and data based policy formulation through collective efforts and equal stocktaking among various stakeholders.
- Include consumers in the programs and is whole education process is necessary of how it can help in the children education on the consumption
- Advocating the farmers to influence themselves
- Youths school children being educating about agroecology practices
- Linkages with the media, influencers on the farmer level
Session 3: Traditional knowledge of agroforestry systems and knowledge exchange practices that maintain agrobiodiversity

Moderator: Krystyna Swiderska, Principal researcher and team leader (biocultural heritage), IIEED

Ms Krystyna moderated the session on traditional knowledge on agroforestry systems and knowledge exchange practices maintaining agrobiodiversity. She shared a framework for biocultural heritage (traditional knowledge, languages, biodiversity, landscapes, and spiritual).

Keynote - Alejandro Argumedo, Asociación ANDES (Peru). Revitalising traditional knowledge for agrobiodiversity conservation in the Potato Park biocultural territory in Peru

Mr. Alejandro was not present personally. So, the moderator presented his keynote that was based on traditional knowledge of Quichua communities on agrobiodiversity from the Andes Mountain range in Peru, including potato park from Cusco Peru. There are six such communities engaged in potato farming and diversity conservation at landscape level in 9,200 hectares. Potato farmers have conserved approximately 1,400 varieties in their own landscape. He mentioned the local farmers are self-sufficient in their production, however Covid incidence and climate change have slightly impacted their food and nutrition security.

The communities have maintained biodiversity at landscape level, and acts as an in situ genetic reserve. They have also established potato guardian groups to conserve the diversity of potato, which is also balanced by the presence of sacred mountains and locals’ belief in them. There are also benefit sharing mechanisms between villages according to the customary laws. They have practiced celebrating the spirit of the potato among each family, enriching traditional knowledge. Research and documentation of such traditional knowledge has been initiated, and community databases are being developed, which the future generations can use.

Keynote – Dr. Balaram Thapa, Senior Advisor, LI-BIRD: Integration of indigenous agroforestry knowledge systems and practices in research and development for scaling out/up sustainable management of agrobiodiversity/agro-ecosystem in Nepal

Dr. Thapa shared traditional agroforestry systems from mid hills from Nepal, comprising three key components namely agricultural land, livestock and forest (trees). These are mutually reinforcing and inseparably integrated. Agri silvicultural, silvopastoral and agrosilvopastoral system are three types of systems that are commonly practiced in the mid hills region. However, the most dominant one is agrisilvicultural system. He also shared that there are other systems involving cash crops and forest trees, and home gardens. These systems have come under tremendous pressure and started to disintegrate. Some examples include animal draught power being replaced by machines and fertilizers; firewood replaced by cooking gas, iron and steel; human wildlife conflict and abandonment of farmland due to demographic shift.

About 30-34% of the farmland is abandoned in Nepal. There are equally significant climate risks and feminization of agriculture. He added that there must be a blending of traditions with new ideas and innovations to offer solutions for these problems. We will only be able to conserve agrobiodiversity if
it is linked with the economy.

Panel Speaker 1: Mr. Ongdi Dorje, Member, Nekota Farmer Group, Helambu: ‘Traditional and local knowledge in agrobiodiversity and production practices’.

Mr Ongdi shared the information about a traditional farming system adopted by their ancestor Hyolmo community, hailing from Helambu rural municipality in Sindhupalchowk district, and expressed his happiness to learn the same system is termed as agrobiodiversity conservation in the present context. Local farmers have been practising and promoting traditional knowledge and innovations such as wooden plough, seed storage technique, implements such as hoe, etc.

He shared that the farmers have adopted an integrated farming system with agriculture and livestock. There are practices in conserving local knowledge including crops such as maize, potato, buckwheat, radish, millet, rapeseed, soyabean, and bean. Traditional knowledge doesn't affect our ecosystem and climate. Earth is in safe hands with traditional knowledge passed on the generations of the farmers. Farmers are adopting crop diversification by introducing new relevant varieties and intercropping with other crops.

Panel Speaker 2: IIFB - Ali Aii Shatu, Gender and Women Coordinator Mboscuda Cameroon – Traditional knowledge of agrobiodiversity & agroforestry and knowledge exchange practices in Cameroon/Africa.

Ms Ali presented the role of traditional knowledge on agrobiodiversity systems practised by the farmers in Cameroon, and also shared the example on how traditional knowledge is being passed on from generations to generations in their communities. For instance, farmers select and preserve indigenous seed varieties in their local condition. She also shared a few other practices such as soil conservation methods, crop rotation and intercropping through legumes, and pastoralism practices. Local pastoral farmers cultivate crops using livestock manure in the farms.

They have adopted agroforestry systems with crops, trees and livestocks, and millets with sorghum and baobab trees. Trees are planted at the boundaries of the agricultural land as in taungya system, and act as fences protecting their crops from livestock incursion as well as wind. In some areas, the fields are left fallow and allowed to regenerate. She also mentioned that there must be focus to promote traditional knowledge, which can be achieved by

- Community engagement & intergenerational learning- facilitation between different age groups.
- Documentation and preservation - recording knowledge through books, audio-visuals, and other digital platforms.
- Partnerships and collaborations - researchers institutions and relevant stakes to understand,
protect and promote.
- Education and awareness- integrate traditional knowledge into formal and informal education systems.

### Plenary discussion and closing of the session

The moderator stressed the need for a multi sectoral research and development approach. The agroforestry system requires a multisectoral approach for research and development.

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<th>Questions</th>
<th>Discussion/Answer</th>
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<tr>
<td>What could be the result of the invasion of artificial intelligence on traditional knowledge?</td>
<td>Krystyna acknowledges not having delved deeply into how AI impacts traditional knowledge, recognizing it as a critical area for intervention, especially with advancements like digital sequencing.</td>
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<td>What is the level of engagement in the community?</td>
<td>Ong Dorje Sherpa replied that After more than a decade of teaching, the goN not friendly with the young and farming generation, willing to live in this country, problem in mindset, need to work with soil and being farmers is not taken positively, but need to stay positive with the availability of multiple resources. major foods imported from other countries even though there is potential to grow local and organic in our own areas. Need to be respectful and love everything.</td>
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<td>How can we have partnerships with cooperatives and private sectors to bring products to the farmers?</td>
<td>Dr Balaram Thapa responded that Local crops and landraces need to have consumer awareness through a number of latest technologies - social media, conventional means like campaigns and workshops. Consumer awareness is very important. In Europe it disappears quickly in supermarkets but needs to work on this aspect in Nepal.</td>
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<td>How different farming practices affects agrobiodiversity &amp; TK is less liked by the young generation but new suitable yet not emerged, how is the case in Peru and Cameroon?</td>
<td>Ali Aii Shatu responded that climate change is becoming crisis, agroecology friendly farming practices can be the option, potential to use our organic manure, agroecology is the best option, youths look for white collar jobs and do</td>
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Session 4. Seed and Farm Management Techniques and Innovations to Sustain Agrobiodiversity

The session was moderated by Dr. Pratap Shrestha, Program Specialist, Seed Systems and Plant Genetic Resources, Seeds Change, Canada (Formerly USC Canada). He shared that we have formal and informal seed systems bringing together national seed systems here in Nepal. Farmers themselves are putting efforts for seed conservation. We need to advocate for policy change, which is inevitable for seed registration. A small shift in policy can yield a positive impact on the national seed system.

The formal seed system is not farmer friendly. Local seeds serve as a resource for developing new crop varieties that are more resilient in the face of changing climate. Farmers are adopting innovative ways of organizing themselves, conserving and promoting local seeds and utilizing the local agrobiodiversity.

Keynote speaker: Mr Bharat Bhandari, LI-BIRD; Farmers managed Seed System in Nepal and its contribution to agrobiodiversity management

Mr Bhandari presented on the farmers managed seed systems and their roles in Nepal. The formal seed sector is limited to major staples (rice, maize and wheat), and few commercial vegetables whereas the majority of small farmers rely on the informal or farmers managed seed systems. The formal seed sector contributes only 22% in Nepal and the rest belongs to the informal sector. He shared that community seed banks and community based seed producer groups have a central role in the informal seed sector, contributing to the agrobiodiversity management in Nepal.

LI-BIRD has been prioritizing the CSBs promotion across its project areas for agrobiodiversity management and strengthening the local seeds system. LI-BIRD has been supporting the communities in the registration process of local seeds, necessary for seed business and other opportunities.
Ms Yiching shared the background from participatory plant breeding to the farmers seed network in China. She mentioned that the formal seed system is dominant in China. The farmers managed seed system is also there but receives very little attention from concerned stakeholders.

She explained both seed systems (formal and farmer managed) need to be complementary and go together. The farmers seed system can play a pivotal role in local seeds conservation, innovation and sustainable use. She also mentioned that the genetic base of major cereal varieties is narrowing. The seed system can be made resilient by focusing on local farmers and indigenous communities; and linking it with the formal system. Agroecology can be a solution to address all these interconnected problems.

Ms Bhandari mentioned a few important information related to community seed banks (CSBs) as she leads the association formed by uniting 27 CSBs across Nepal. She shared that CSBs contribute to the conservation, promotion and utilization of local seeds. Local crops are registered to the national seed systems, and their germplasm are even conserved in the national gene bank of Nepal. She expressed her happiness when sharing that about 19 local crop varieties have been registered under the national seed board with the collective efforts of CSBs and new 5 crop varieties are in the process of registration.
She added further about various challenges that they have experienced in their pursuit of local seed system promotion and seed related enterprises, which are climate change, migration, lack of technical capacities, wild animals, unfavorable policies, among others. However, CSBs have actively supported the smallholder farmers by supplying local seeds during the 2015 Nepal earthquake and Covid-19 insurgence. She greatly appreciated the significant roles of the Department of Agriculture, Nepal Agriculture Research Council, National gene bank, Agriculture knowledge center and Centre for Crop Development and Agro Biodiversity Conservation along with LI-BIRD in institutionalizing the CSBs in Nepal. She informed about five CSBs being felicitated during agrobiodiversity week in 2024 that has further motivated local seeds promotion. At the end, she expressed seed exchanges, capacity building and collaboration with local and national governments as some of the priorities of CSB in the coming days.

**Shamika Mone, Inter-continental Network of Organic Farmers Organisations (INOFO)**  
**PRESIDENT: Seed keepers Innovative across India connecting it to the global seed keepers.**

Ms Shamika represents the National Seed Savers Network. She recalled the incident when she was approached by a group of farmers seeking for local cotton seeds for organic farming. Farmers are not just producers; they need far better appreciation as seed champions. They hold power of observation and selection leading to the development of varieties through years of dedication at their own farms. She also shared that the National Seed Savers Network has been documenting the seeds keepers in India.

Diversity between the crops and diversity within the crops has been created by farmers after watching the characters of crops and selecting them, keeping the seed, growing them and multiplying to maintain the variety. Farmers are not recognized in a way to compliment their work in terms of maintenance of seeds and varieties.

**Summary note: Dr. Ram Krishna Shrestha, Joint Secretary Joint Secretary, MoALD**

He summarized the session highlighting the importance of integration between formal and informal seed systems; the government needs to provide support and create an enabling policy environment. Also, he pointed out the role of the NGO’s and INGO’s for developing and formulating our seed policy, and seed regulation. He insisted on developing mechanism to engage the policy makers towards the importance of agroecology nexus along with strengthening the institutions, building social capital, and networking leading to one platform- FFF; global or regional network.
Session 5: Enterprise innovations that encourage diversification in what is planted

Moderator - Dr Popular Gentle Bhusal, Environment Advisor to Rt. Hon. PMO]

Clifford Amoah Adagenera KANBAOCU. Financial cooperative to support investments in diversification
Mr. Clifford comes from Ghana and is engaged in a small cooperative there. He shared that agrobiodiversity-based farming can reduce risks and provide more stable income, resulting from diverse products. But there are several problems affecting the diversification of farmers, and these include i) Inadequate access to finance for investment into value chain and productive activities, ii) High interest rates, iii) Low market linkages, aggregation and value addition services, iv) Ineffective mobilization of farmer groups, and v) Climate associated risks.

These factors can miserably affect the farmers' livelihoods. But the solutions exist with the financial cooperatives. There could be a great role of financial cooperatives in agrobiodiversity management. They can offer multiple services to the local farmers namely access to finance, agricultural inputs and tools, technical assistance and collective marketing of the products.

Thakur Bhandari, Chairperson, FECOFUN: Forest based collective enterprise models: Learnings from Forest Farm Facility

Mr Thakur mentioned FECOFUN, which is a federation networking about 3.1 million forest users through large networks of community forestry user groups. These people are mainly dependent on the forests to manage their livelihoods through forest based enterprises. He added forests also hold significant place along with agriculture to achieve sustainable livelihoods. He added the MoFE and MoALD should work in tandem to generate and implement the policies that will benefit both forest and farm producers. Further, he elaborated that our boundaries must be increased from agricultural lands to forests, keeping the conservation, promotion and utilization aspects at the core.
Sita Pandey, Munaa Krishi Limited, Nepal: Agrobiodiversity based Market and opportunities for investment and innovation by private sector in Nepal

Ms Pandey shared about the initiatives on marketing of local and indigenous crops that their private company, Munaa Krishi Limited-Nepal, is undertaking in Nepal. She finds a huge scope in the agrobiodiversity based agro enterprises. She emphasized on the market led approach to the sustainable management of agrobiodiversity. This can have positive impacts on livelihoods, environment, national economy and global synergy. Agrobiodiversity based entrepreneurship can also support SDGs as well through income generation in rural communities, women led enterprises, empowering producers and consumers, and impacting policies and budgets.

Summary of the Session

Dr. Bhusal summarized the session by stating that finances are very important for agrobiodiversity conservation, and local indigenous farmers need to have access to financial mechanisms. The conservation efforts must be linked with the economic activities for sustainable outcomes, and this will have positive impacts on the livelihoods of forest and farm producers across the world. MoFE and MoALD, in Nepal, should work jointly to promote forest based enterprises for improving livelihoods of people living at the interface of forests and land.


The session was moderator by Pascale Bonzom, Head, Agriculture Team, IUCN with major emphasis on the finance and nature

Duncan Macqueen, Director of Forests IIED ‘Nature and agrobiodiversity finance: An overview

Mr Duncan mentioned agrobiodiversity finance and its relevance. It is the expenditure that contributes to the conservation, restoration and sustainable use of agrobiodiversity. According to him, it can be called a subset of climate finance. Agrobiodiversity finance mechanisms can benefit smallholders engaged in agrobiodiversity conservation by investing in diversification, strengthening solidarity, empowering women, increasing climate resilience, and building financial track records - increasing access to external finance.

He shared that we need enabling external climate investment for the climate-biodiversity-development nexus. In addition, smallholder and indigenous people’s own finance mechanisms must be unlocked so that it will decrease their dependency on the external source for funding their initiatives for agrobiodiversity conservation. This will ensure sustainability in it.

Elena Aguayo, World Rural Forum
Ms Elena shared that we need to recognize the catalyst role of family farmers along with ensuring participation in decision making processes. There must be more direct and better funding opportunities for enhancing the family farmers' resilience. Access to finance, capacity building and policy solutions can really enhance their resilience. They receive only 0.35% of international climate funds while producing 80% of the global food. The climate crisis is looming around the world.

This calls for efforts to design food system transformation to be more biodiverse and resilient to climate risks and disasters. It will be very helpful to maintain the agrobiodiversity in the rural areas. FFF can propel this agenda forward. She also shared the new strategic line of WRF, which is to ensure the effective participation of family farming in the climate change and biodiversity agenda.

**Dr. Devendra Gauchan, Honorary Research Fellow at Alliance of Bioversity International & CIAT: Nature based financing options, challenges, and evidence for agroecological farming and agrobiodiversity conservation in Nepal**

Dr Gauchan mentioned biodiversity is needed for nourishing the people and revitalising the planet. Land degradation is a major issue in Nepal; fallow land and further degraded one. 50% of the native varieties are lost in Nepal. Unlike forest and wildlife, agrobiodiversity cannot be conserved by fencing, it needs selection and evolving. Smallholder farmers are conserving agrobiodiversity at their own cost, which is injustice as a big ex-situ conservation is being funded. There are no funding schemes for the farmers' registered seeds, and hence requires alternative and market-based financing similar to payment to ecosystem services, agrotourism and agrobiodiversity incentives.

On-farm agrobiodiversity conservation can only be done by the farmers. Farmers are the major actors to conserve farm diversity by seed exchange and continuous selection of crops. Positive initiatives are being considered in Nepal even though the funding amount is very small. All the local bodies have allocated some budget for agrobiodiversity conservation because of continuous advocacy and efforts. There are some issues regarding strong policies/plans in terms of agrobiodiversity conservation and limited public funding.

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**Dr. Bijendra Basnyat, UNDP**
Dr Basnyat shared that the Nepalese economy is biodiversity dependent and contributes to half of the national GDP. The government enacted NBSAP (2014-2020) but only partial targets were achieved and the inadequate investment is one of the reasons. There was a big question on the funds spent on agrobiodiversity during the NBSAP period, which was very negligible (almost 0.3% of Nepal’s GDP). The BIOFIN project (2023-2030) launched by UNDP is addressing the financial gap in biodiversity conservation. There is a financial gap, which needs to be addressed for further addressing the drives of biodiversity losses.

There are various financial solutions and they need to be prioritized like forest development fund, insurance products for human wildlife, biodiversity management in the community forest, access and benefit sharing, ecological fiscal transfers, etc. Agrobiodiversity expenses are not enough. So, the gap addressing is necessary to be done. Policies and plans are also not sufficiently addressing this issue. Financing agrobiodiversity is a shared approach and solution should be designed prioritizing agrobiodiversity.

**Ms. Shamika Mone is the President of INOFO (Inter-continental Network of Organic Farmers Organisations) ‘Presenting examples of successful nature finance channeled to FFPOs and their challenges’**

Ms Shamika shared INOFO is a group of organic farmers associations across the regions. It is engaged in farmers advocacy and knowledge sharing is also done locally and globally. It focuses on the promotion of local markets focusing on local food systems for transparency, low carbon footprint and sustainable livelihood in all regions. Organic farming conserves more biodiversity compared to conventional farming. Since there is no use of chemical fertilisers, every farm is participating in conservation of agro biodiversity.

In Europe, the government calls for funds every year for conservation of agrobio diversity as it falls in their priority areas while in the developing countries such as Philippines, India, Kenya, Ghana, Brazil, etc., minimum funds can be seen through credit provided by projects only, which is comparatively low in relation to the needs. Access to nature finance is critical for agrobiodiversity conservation efforts globally.
Concluding Session:

**Session 2:**
Oliver Oliveiros, Agroecology Coalition

Agroecology is biodiverse; it allows sustainable management of the different systems within the food system. The way we sustainably manage biodiversity is inherently interconnected. He emphasized that the local context matters, so local community involvement is key in the process. Agroecology principle-based synergy should be promoted. There are already lots of things happening, so anchoring conversation among all going things needs to be engaged. Anchoring topics could be agroecology, agrobiodiversity, etc.

**Session 3:**
Ali Aii Shatu from Cameroon, Africa

Traditional knowledge is very important. Traditional knowledge, food culture and diverse plants are very important. Traditional knowledge is important for fostering community resilience. Unity and love among community people is necessary for collective action, so the traditional knowledge needs to be managed and promoted.

**Session 4:**
Ms Katja Vuori, Agricod

Session on seed system and traditional knowledge discussed on diversity in traditional knowledge and its association with the seed system, manage to domesticate the seeds. Need for the pluralistic approach: integrate the farmers and formal seed system with valuing the farming communities’ contribution on plant genetic resources; enabling policy environment needs to be there; need to involve every key stakeholder in the process.

**Session 5:**
Mr Duncan Macqueen, Director of Forests, IIED

He highlighted 3 major points: Potential for enterprise innovation; its pathways and model for partnership development. Potential for enterprise innovation: Agroecology forestry farm landscape is an integrated approach; Certain food, fuel, fiber, cosmetics, eco-tourism, need different models and models require multiple people working together for developing different products.
Small farmers receive a mere 0.3% of international climate finance, failing to reach smallholders effectively, thus advocacy is crucial. Representation in national policy discussions is vital for the next two years, particularly as Nepal revises its National Biodiversity Strategy and Action Plan (2014) and updates its Nationally Determined Contribution (NDC) next year. Foresta and Farm Producer Organizations (FFPOs) are creating their finance mechanisms, necessitating increased awareness. On-farm producer organizations should be regarded as equal partners.

Round Table Discussion: The way forward: Exploring the need for a new global alliance on agrobiodiversity

The round table discussion was moderator by Oliver Oliveros & Maria Josefina Guadalupe Manicad (Gigi Manicad), Consultant/ expert

Uddhav Adhikari, Alliance of Agriculture for Food (AAF) Nepal

It is a political agenda rather than a technical one in the case of promotion of chemical free, and nature friendly agroecology-based farming systems. The farming system has moved to modernization, industry based, shifted from mixed to monocropping, and family friendly farming to industry-based farming. Our food system is based on imports from other countries. Agriculture is not seen as a part of life, source of nutrition, conservation and sovereignty.

Whatever agrobiodiversity is there, it is saved by local and indigenous communities and smallholders. He also mentioned that AAF is committed to critical analysis of the government plans and programs, and engage in policy advocacy for right to food, seed sovereignty and agrobiodiversity conservation.

Oliver Oliveiros (Agroecology Coalition)

He shared that, exchange of knowledge on agrobiodiversity among countries, leveraging evidence to advocate for policy reforms addressing nutrition and food system transformation is important. Also, advocating for increased funding to enhance accessibility. Establish markets, businesses, and enterprises based on sustainable agroecology practices, ensuring products generate decent income. Utilize networks, groups, and alliances to promote agroecology. Strengthen member countries, exceeding 49, by leveraging networks and alliances. Pilot initiatives in select countries before scaling up and out.
Bharat Bhandari, Executive Director of LI-BIRD

He highlighted thematic areas of intervention including agri-food systems focusing on nutrition, biodiversity and ecosystem health for resilient communities, and climate actions. Directly benefiting 40,000 households, LI-BIRD conducts participatory research to generate evidence for policy interventions and mainstream technologies. Renowned for participatory plant breeding, community-based biodiversity management, and climate-resilient agriculture, LI-BIRD adopts an agroecology-approach to strengthen community institutions and co-create solutions. It is part of alliances such as AAF and ITPGRFA as CSO members, aiming to become a knowledge hub for agroecology and climate-resilient agriculture.

Luis Miguel Aparicio, FFF Manager

Luis Miguel Aparicio, FFF Manager, stated that the organization now operates globally in 12 countries, supporting forest and farm producers’ organizations (FFPOs) as key agents for developing climate-resilient landscapes and improving livelihoods. In its second phase, FFF focuses on four outcomes aligned with Agenda 2030, prioritizing inclusivity regardless of age, gender, or ethnicity. Aparicio emphasized FFF’s role in catalyzing and mobilizing investments, particularly through public-private partnerships, to benefit forest and farming communities. FFF aims to shift towards a more diverse approach, recognizing the significance of forest-based agri-food systems. These systems are crucial for sustainability, nature conservation, adaptation to environmental changes, livelihood security, and intergenerational benefits. FFF intends to build the capacity of FFPOs to ensure steady food supply, implement agroecological practices, and enhance overall resilience.

Chemuku Wekesa, the International Network of Mountain Indigenous Peoples

She stressed the need for a new alliance to support and sustain their network. INMIP addresses gaps in representation for mountain communities within government structures. They prioritize building resilient seed systems that benefit local farmers and indigenous communities, while also linking with formal systems. Wekesa emphasized agroecology as a holistic solution to interconnected problems, alongside community-based biodiversity management.
Pius Ranee, The Indigenous Partnership for Agrobiodiversity

He highlighted the inclusive nature of their advisory board, with 42% women and 42% youth participation. The organization prioritizes the rights of Indigenous peoples and the conservation of nature. They have collaborated with LIBIRD to promote community seed banks for strengthening seed systems. Ranee emphasized the necessity of a new alliance where the voices of Indigenous peoples are heard, and stressed that a food system approach must remain central to their efforts.

Kamal Rai, The Indigenous Peoples' International Forum for Biodiversity (IIFB)

He emphasized the importance of respecting and recognizing traditional knowledge. He advocated for the implementation of prior informed consent (PIC) and the establishment of advisory bodies for Indigenous Peoples' Organizations (IPOs) at various levels. Rai called for the revision of policies and programs to recognize indigenous communities within a landscape approach, ensuring their full participation. He stressed the need for an advisory body specifically for indigenous peoples, given their marginalized status, to ensure their voices are heard.

Additionally, Rai highlighted the necessity of a rights-based financial mechanism to support indigenous communities.

Closing Session:

The closing session was chaired by Dr. Tanka Prasad Prasai, Secretary of the Ministry of Agriculture and Land Management, Gandaki Province, we were honored to have Honorable Khagraj Adhikari, Chief Minister of Gandaki Province, as our Chief Guest. Our esteemed guests included Mr. Luis Miguel Aparicio, Ms. Pascale Bonzom, Ms. Katja Vuori, Mr. Thakur Bhandari, and Dr. Pratap Shrestha, who shared valuable insights and perspectives.

Dr. Pratap Shrestha, Mr. Thakur Bhandari, Ms. Katja Vuori, and Ms. Pascale Bonzom provided their remarks on the successful completion of the conference and appreciated the technical sessions and field visit during the conference. A vote of thanks was extended by Mr. Luis Miguel Aparicio, expressing gratitude for the fruitful collaboration and contributions to the conference. Finally, Hon. Chief Minister Khagraj Adhikari delivered his remarks, shedding light on the significance of the agrobiodiversity conference themes especially in face of the climate change and global warming. He pointed out the importance of the Indigenous groups for conservation of the natural resource and biodiversity. He added that wetland and water bodies are also important parts of biodiversity, hence requiring concerted efforts from local, national, regional, and global level for the conservation of the same.
Outcome summary and call to action

The Agrobiodiversity Conference held in Pokhara, Nepal from 9-12 April 2024, brought together 180 in person participants from 32 countries – including many representatives of forest and farm producers organizations (FFPOs) and Indigenous People and Local Community (IPLC) groups from both national and regional and global organizations. The conference involved a share fair and four field visits to allow peer-to-peer learning and exchange. Technical sessions involved presentations, panel question and answer sessions and working groups covering: 1 - What agrobiodiversity is and why it matters; 2 - How policies shape agroecology approaches that help to protect and manage agrobiodiversity for better or worse; 3 - Traditional knowledge of agroforestry systems and knowledge exchange practices that maintain agrobiodiversity; 4 - Seed and farm management techniques and innovations to sustain agrobiodiversity; 5 - Enterprise innovations that encourage diversification in what is planted; and 6 - Nature finance – improving flows to FFPOs and IPLCs. It concluded with a roundtable discussion on how alliances might advance agrobiodiversity globally.

Outcomes from the conference include a call to action globally in line with the following 10 key points:

1. Agrobiodiversity conservation is essential to the human future, and agroecological approaches that have potential to halt and reverse the drastic decline in animal and plant species, and varieties used must become the mainstay of global agriculture if we are to achieve global food security in an increasingly variable climate.

2. Smallholder farmers, indigenous people and local communities are the current custodians of much of the world’s remaining biodiversity and their agroecological knowledge, seed systems, farming practices, diversified enterprises and finance systems demand respect, rights based approaches, and direct financial support in response to the global conventions on climate, biodiversity and desertification.

3. Agroecology practiced by smallholders farmers, indigenous peoples and local communities integrates ecological resilience, social responsibility and economic efficiency – and these stakeholders must therefore become primary actors in formulating laws and policies that are responsive to those integrated needs.

4. Traditional knowledge is very important in sustaining diverse food culture and plant and animal cultivation, and the unity and love required to foster collective action, so traditional knowledge on nutrition, health, and cultivation needs to be respected and promoted.

5. Seed systems that protect agrobiodiversity require a pluralistic approach: in situ farmers seed banks and genetic resources that protect ever evolving landraces, with support from ex situ seed storage systems, and under an enabling policy environment that prioritizes the former but also involves every key stakeholder in the process.

6. Agrobiodiversity-supporting enterprises can be developed from contextually specific yet integrated forest and farm landscapes, that offer varied options for subsistence and commercial sale of food, fibre, fuel, fertiliser, medicines, cosmetics, tourism etc – and require support for building regional aggregation and marketing units with trusted internal governance, internal investment funds, quality best practice production manuals, support services for lower-tier member groups, and linkages to pioneering impact-investment support partners while also promoting lesser-known crops and products wholesale can incentivise diversification in what is produced.

7. Financial donors need to do better than get 0.3% (circa US$ 2 billion) of international climate and nature finance to FFPOs and IPLC groups, and national finance processes around
Nationally Determined Contributions (NDCs) and National Biodiversity Strategic Action Plans (NBSAPs) need to channel funding more directly to local groups, including linking more creatively to internally mobilized smallholder finance, savings and loan groups and financial cooperatives that are currently funding US$ 368 billion per year of necessary climate adaptation – much of which involve agrobiodiversity conservation.

8. A new political agenda is needed that favours the promotion of chemical free, and nature friendly agroecology-based farming systems over chemically enhanced monocultures that provide temporarily cheap food but at the long term expense of future food security.

9. Promotion of agroecology-based farming requires understanding, promotion and utilization of ecosystem services, which till date are taken for granted, and no specific actions are designed for their optimum integration into our farming systems. For instance, pollination management is absolutely neglected in many parts of the world that could possibly thwart the food and nutrition security of people in the region.

10. Support is required for ongoing knowledge exchanges on agrobiodiversity across countries such that new evidence of agroecological success can be used to push for policy reforms (around diversified nutrition and food system transformation with a push for funding and financing to increase its accessibility).

11. Greater use must be made of existing knowledge hubs (such as LI-BIRD) networks, groups, alliances, both nationally and internationally that promote agroecology – strengthening members be they individual or even countries (such as the agroecology coalition that has 49 member countries) and using programmes and projects to scale up and scale out

Acknowledgment
We extend our sincere gratitude to the following individuals for their invaluable contributions to this report:

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<th>Sambat Ranabhat (LI-BIRD), and Dipesh Neupane (LI-BIRD)</th>
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<td>Ali Logan Pang (IiED), Sambat Ranabhat (LI-BIRD)</td>
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<td>Note Takers</td>
<td>Dipesh Neupane, Anita Gautam, Rita Gurung, Samikshya Pandit, Sunita Thapa, Bishnu Bhusal (LI-BIRD), Projwal Shrestha (FAO)</td>
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