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www.gia-agroecology.org

Origins of GIAA

The idea for an international grassroots innovations assembly emerged when Farmer-led innovation networks, such as Farm Hack, L'atelier Paysan, and Schola Campesina, convened at FAO's Second International Symposium on Agroecology, "Scaling up Agroecology to Achieve the Sustainable Development Goals," in April 2018. This sparked a conversation about global collaboration for technological sovereignty, particularly for smallholder family farmers. This conversation led to the development of a vision for creating alternative technological pathways that could empower rural families and promote food sovereignty.

In 2023, this vision was furthered with the formation of an international coalition dedicated to advancing the goals of a global grassroots agricultural innovation network. The working paper 'Technological autonomy not autonomous technology' provided a call for collaboration for organizations and groups working in open source and grassroots agricultural technology and innovation.

Facilitated by Schola Campesina, OpenTEAM, and FarmHack, this coalition organized strategic meetings and held a [pivotal in-person gathering in Italy](#) from October 18 to 21, 2023. Over four days, 12 leading grassroots innovation organizations and networks from around the world (France, USA, Kenya, Greece, Indonesia, Belgium, India, and Quebec) came together to exchange ideas and collaborate on solutions, culminating in the creation of the Grassroots Innovations Assembly for Agroecology (GIAA). GIAA gathered for the second in Ahmedabad (India) in January 2025; the present document is reporting on this second gathering.

GIAA emphasizes the importance of strengthening rural knowledge systems and defending technological autonomy as critical for small-scale food producers worldwide to solve practical problems while enhancing resilience, autonomy, agency and sovereignty.



Participating Organizations

24th-30th January, 2025

Ahmedabad, India

Honey Bee Network (*host organization*)

Gujarat Grassroots Innovation
Augmentation Network (*host
organization*)

Serikat Petani Indonesia (SPI)

Prolinnova Asia

National institution (Malaysia)- YIM

Kenyan Peasant league

Prolinnova Kenya

Boer Bricoleur

Fabriek Paysanne

P2P Lab

Toekomstboeren

Tzoumaker

Farm Hack

OpenTeam

Réseau des Fermiers et Fermières de
Famille

EkoRural/Groundswell

Prolinnova International

Schola Campesina Aps

Allies joining the convening:

The 11 Hour Project

Food and Agriculture Organization of the
United Nations (FAO)

Yayasan Inovasi Malaysia (YIM)

We thank Honey Bee Network and Gujarat Grassroots Innovation and Augmentation Network (GIAN) for the generous and exceptional hosting of this event. Thank you to 11th Hour project for funding and to Schola Campesina for facilitation. Illustrations from Jenni Ottilie's visual scribing. Report by Anna Lynton with contribution from Schola Campesina and GIAA members.

GIAA in 2025



After the establishment of the assembly in 2023, GIAA organizations met online several times to update each other on their innovations, concerns, and new projects; while setting up a governance system, a charter and common projects. A second in-person gathering was organized to further explore the topics of Innovations and Agroecology.

The second meeting was hosted by the Gujarat Grassroots Innovation and Augmentation Network (GIAN) in Ahmedabad, India, from January 24 to 27, 2025, and facilitated by Schola Campesina. This meeting provided a space for farmers, activists, and innovators in farmer-led agricultural development to meet and share experiences and ideas on the present and future of GIAA. Through a series of peer discussions and knowledge-sharing sessions, participants developed a shared approach to support smallholders in shaping the future of agricultural technology.

The major topics of this gathering, which are summarized in this report:

Grassroots Learning Experiences in grassroots learning, capacity-building, farmer-led experimentation, and Agroecology schools

Innovation for whom? Risks and harms of Innovation, the Data industry, and the Need for technology assessment framework

Fostering Innovation Processes of identification, documentation, and dissemination of grassroots innovations and local solutions.

Enabling Infrastructure Exploring the Technical, Legal, Financial, Social structures and administrative backbone to support agricultural knowledge commons

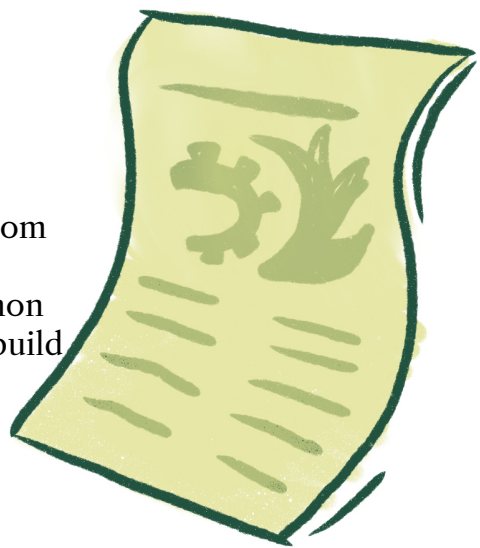
Financial Sustainment of grassroots innovations

Connecting to Movements Nyéléni and the Agroecology / Food Sovereignty Movement

Governance of grassroots innovations, organizations, and of GIAA

Charter

The Charter is meant to be the common ground of the GIAA. It is the identity of the Assembly and the basis from where it is developing. It is important that GIAA local networks and organizations state that they share common vision and values, in order to have shared knowledge, build collaboration and develop future steps together.



Who are we?

We are an Assembly of grassroots organizations and networks, rooted in agroecology[1], worldwide working to strengthen, defend and share food producers' knowledge, tools and innovations. We believe in and value grassroots actors' capacity to develop tools, machines, digital technologies and all kinds of innovations that address their needs and increase their autonomy in producing, processing and marketing food in their territories. Grassroots innovations are happening in very different ways across our diverse territories worldwide.

This Assembly aims at sharing our innovations and our social processes. We also aim at valuing and defending food producers' inventiveness as a solution for advancing agroecology as well as making our field work visible internationally. GIAA is a space of sharing, where grassroots innovations networks worldwide - who are already demonstrating a farmer-led future for agricultural technology – can connect and build a grassroots perspective on innovations.

What do we defend?

Drawing from a foundation of food sovereignty[2], agroecology and the rights of people to define their food systems, GIAA Assembly defends the following elements:

Agricultural knowledge and food production technologies are powerful components of the resilience, autonomy and sovereignty of small-scale food producers and land stewards globally.

Common, multigenerational agricultural knowledge and food production technologies and innovations are held by the communities worldwide and cannot be kept for commercial use.

Smallholders' farmers, agriculture workers and other food producers are at the center of our innovation processes. This Assembly is greeting smallholders' experiences and capacity to innovate, to develop techniques, to recover ancient skills and practices, to repair and adapt techniques, to develop and share knowledge, to cooperate.

Smallholders' knowledge, experiences and capacities are meant to be reinforced through the cooperation with allies sharing the same values (academia, NGO's, activists, engineers ...). The process of knowledge sharing is happening on an equal footing and the absence of hierarchy.

Women's important role in innovations for Agroecology has to be recognized and valued. Women's voice in the field of technologies and innovations are often unheard. Women play a central role in nutritious local food systems worldwide, they are the daily and silent engineers of agroecology.

Society transformation and conscious fight against power imbalance are a major element of the Assembly. Facilitation efforts are made to make visible, recognize and overcome power imbalance within the Assembly participating organizations due to language barrier, under-representativity of some sub-regions, etc.

Agriculture is a shared multigenerational human endeavor, and the primary way in which we as humans define, interact and influence our environment both positively and negatively during our limited lifetimes. Although our contributions to science, ideas and information and inspiration are limited to our single generation, we benefit from the knowledge of thousands of generations before us, and we have a duty to share our knowledge with those who come after us. Innovation must be regenerated and stewarded as a renewable resource

How do we approach Agroecological Knowledge?

This assembly is organized around the purpose of Agroecological knowledge and innovations as a commons, a shared resource upholding two main principles from which all else flows:

1. Contributing, stewarding and governing ubiquitous access to the best possible agricultural knowledge to enable anyone anywhere to improve the agroecology of their region and participate in improving the agroecological knowledge of future generations. Agricultural knowledge is cumulative and multigenerational and everyone everywhere should have access to the best possible agricultural ideas, information and Inspiration to benefit their community and environment AND contribute to continual improvement of the agricultural knowledge of future generations.

2. Recognizing that food and data sovereignty rights of individuals and communities are inalienable and all knowledge accumulated by the commonwealth must be through voluntary consent, without coercion, and with the agency of individuals and their choice of attribution.

These two principles are interpreted into community documents, oaths of care, and are manifest through organizations chartered under these principles. Organizations organized under this charter may translate these principles into their areas of action. It is understood that the above statement forms the basis of an Agroecological Knowledge Commons under which this assembly is chartered.

What are Agroecology innovations for GIAA?

Our innovations grow from ancestral knowledge. Innovation does not have to be new, it may be something which worked and was forgotten or erased. What is common in one place, or at one time, is an innovation in another context.

Our innovations solve real problems. An innovation starts with users' needs, often the need to adapt to a changing environment.

Our innovations come from the grassroots and are tested in the grassroots. They are local solutions to local problems that rely on the resources we have at our disposal and the generational knowledge of agroecological farmers.

Our innovations encompass the complexity of agroecology, including the social, political and ecological dimensions. Our innovations address ecosystem health and the wellbeing of our communities, not only food production. Our innovations may be mechanical, technological, or social; they may be a method rather than an object or artifact. We may innovate the innovation process itself.

Community governance and feedback systems determine the success of our innovations and make sure they do not create new problems. We recognize that governance requires increasing our communities' capacity to critically discuss technology.



[1] We recognize ourselves in the Nyéléni Declaration on Agroecology (2015), acknowledging the important role of other definitions: the FAO 10 elements of Agroecology and the 13 principles of the HLPE

[2] Nyéléni Déclaration on Food Sovereignty (2007)

Session 1

Grassroots Learning

Experiences in grassroots learning, agroecology schools, capacity-building & farmer-led experimentation

Agroecological knowledge and innovation operate within a fundamentally different framework than conventional, hierarchical systems. In contrast to expert-driven, techno-centric agricultural development models, this system prioritizes local expertise, firsthand experiences, and knowledge developed outside formal scientific circles. It embraces various methods of understanding and analyzing the environment, based on people's daily inventiveness and risk adaptation, acknowledging the vital role of traditional knowledge in addressing contemporary issues. Horizontal knowledge sharing is often driven by community-based grassroots organizations deeply connected to local territories, cultures and communities.

Popular Education & Innovation

Presented by Stephen Sherwood

Influential educators, such as Paulo Freire of Brazil, have demonstrated that education is inherently biased. The methods we employ in teaching and driving change have the potential to

foster either dependency and paternalism or genuine empowerment. In his work on critical awareness, Freire distinguished three principal paradigms of education:

Conventional education – This traditional, status quo-reinforcing approach disempowers learners, leading to their reliance on the existing system.

Progressive education – This approach focuses on enhancing the ability to perform within a given system. (i.e., learning how to be a “good citizen” and operate within a given structure without necessarily questioning whether it ultimately serves public interests and needs)



Liberating education – This encompasses learning how to reflect on one's experiences, represent individual and collective interests, and reshape systems to serve community needs better.

Using these types of education to frame the conversation, we explored a central question:

**Is learning helping farmers
"break the chain" of
dependence?**

(can learning systems help farmers and communities move towards autonomy and away from dependence?)

In an era of aggressive capitalism and an arguably self-harmful and destructive industrial society, meaningful change involves learning to live differently and beyond the present system. Overcoming modern concerns such as the concentration of wealth and power, growing social disparity and marginalization, and environmental degradation, some rural communities seek opportunities to overcome dependence on externally based knowledge and technologies and to compete in markets on an equal footing. (Securing financial income is vital for rural populations; however, it is equally important for these communities to preserve their distinct cultural viewpoints and lifestyles, promote socially equitable progress, and protect and restore the natural environment).

Farmers are pushed to shift from experimentation and idea generation to merely absorbing knowledge from larger

movements or external actors, and this creativity is at risk. Excessive reliance on external technical expertise, private sector interests, and imposed solutions leads to "organized irresponsibility"—where those making decisions (e.g., about pesticides) are insulated from the consequences of their actions.

Meanwhile, those on the ground may develop a sense of 'learned helplessness' and a perceived dependence on systems, experts, and external resources rather than actively learning. It can limit the ability and creativity of individuals to act independently and autonomously.

Agroecological learning fosters creativity, the foundation of innovation.

Our goal in GIAA is not merely agroecological farming but innovation that promotes critical awareness and agency, both individually and collectively.

Agroecology as a Knowledge System & Community of Practice

Agroecology is a knowledge system and cultural paradigm. As described in the Nyéléni Declaration (2015):

"Our learning processes are horizontal and peer-to-peer... Agroecology is developed through our own innovation, research, and crop and livestock selection and breeding."

This learning mode is embedded in territories and communities and shaped by traditions, rituals, and relationships. The Andean cosmovision (Pachamama)—in which humans are part of nature—is one example of a cultural worldview that informs knowledge production.



Group Reflections: Is Agroecology Breaking the Chain?

Participants broke into discussion groups to explore two core questions:

Is learning helping farmers "break the chain" of dependence? (Does the experienced learning help farmers and communities move towards autonomy and away from dependence?)

How can grassroots learning become more liberating and transformational?

There is growing concern that grassroots innovators are moving away from ownership of ideas toward passive consumption of external knowledge. We view agroecology as a way to help rural families deepen their knowledge and strengthen their capacity to find timely, practical solutions. However, realizing local potential is hindered by domineering social systems, exclusive markets, limited public support, poor rural infrastructure, and isolation.

From an educational perspective, how people learn may be more important than what they learn. We advocate people-centered, "farmer-to-farmer" learning

models rooted in common needs, trust, rituals, and culture. By reviving attention to locally situated knowledge and supporting peer-to-peer learning, farmers can innovate on their terms and at their own pace, without interference from self-interested actors in corporations or government.

Serikat Petani Indonesia (SPI, or the Indonesian Peasants Union), has established systems to gather and share relevant knowledge and technical solutions with its peasant members. These systems both retrieve and appreciate traditional, ancestral knowledge, recognizing that knowledge is deeply embedded in culture. This strong connection between culture and farming is integral to a strategy that seeks to protect peasant culture against capitalist systems of knowledge.

Learning becomes liberating when it is joyful, participatory, and rooted in local culture. Building inclusive, decentralized platforms and embracing multiple learning styles—oral, experiential, and visual—can make innovation more accessible and inclusive. Agroecology encourages a return to learning from nature, the local context, and the environment and grounding knowledge in real-world relationships.

Conclusions

We value agroecological innovation that is rooted in context. Their quality, not their scale, determines the impact of movements. Farmers should be at the center as educators, knowledge holders, experimenters, and innovators. Our learning methods are interconnected with how we organize, resist, and cultivate regenerative futures.

Session 2

Innovation for whom?



The politics, risks, and harms of innovation, the data industry, and the need for a technology assessment framework

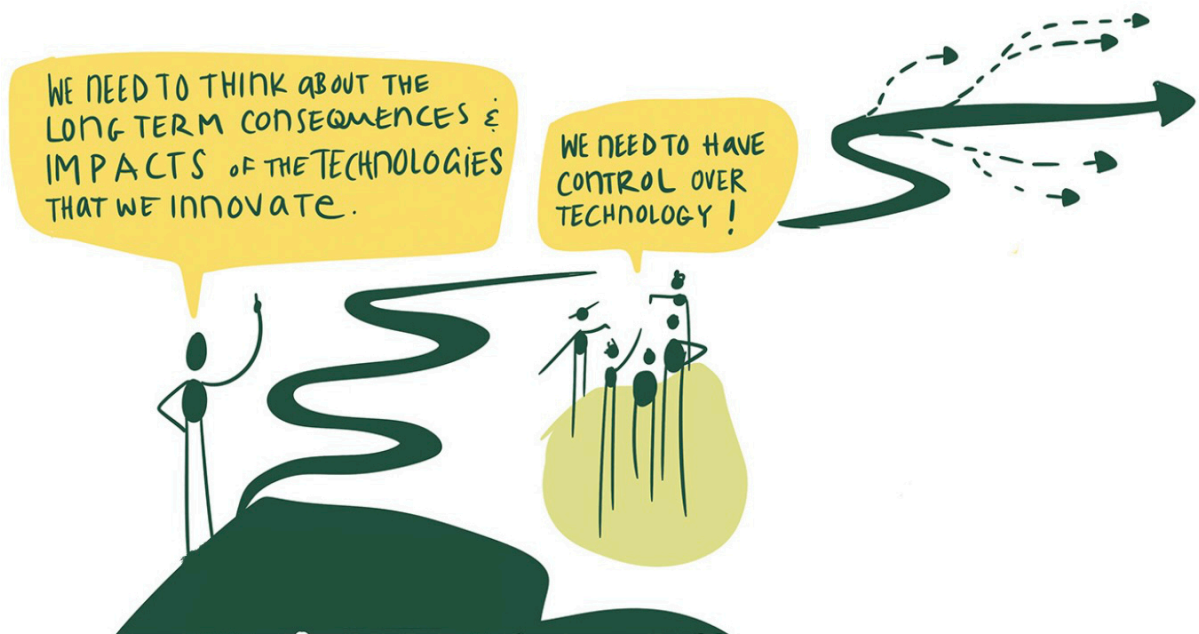
This session explored the political and economic contexts of emerging innovation in agricultural technology. Increasingly, tools such as precision agriculture, Artificial Intelligence, bioengineering, drones, and biotechnology seek to increase yields and efficiency. The methods claim to assist farmers in optimizing resource use and managing crops more efficiently, while they create additional dependencies. Emerging technologies in agriculture (AI, automation, biotechnology) should be critically examined for risks, especially to small-scale farmers' livelihoods, culture preservation, and autonomy.

Some technologies shape and control the environment, often leading to consolidation and concentration of power. Other technologies are developed with intent to address local problems, contributing to a more open and shared knowledge. These technologies can support decentralization and promote resilience.

Participants of this session engaged in discussions, mapping exercises, and group work to develop frameworks for assessing

and evaluating technology through their case studies. The goal was to develop a set of criteria to assess a technology or innovation from an Agroecological perspective, encompassing its impacts on communities, environments, and farmer autonomy.

The outcome, a list of concepts for critical assessment of technology, emphasized the need to be more skilled in order to critically consider new technologies on their own merits, recognizing the standard narrative that technological advancement is equivalent to progress. Instead, critically assessing each innovation's risks, benefits, and potential harms yields a more holistic evaluation. This includes considering environmental, social, and economic impacts—both locally and globally. Through this evaluation, innovations centered on co-creation and local contexts may be better positioned to further autonomy and resilience across contexts and scales.



The following evaluation considerations emerged from this workshop

Focus on Small Scale: A central concern was how emerging technologies affect small-scale farmers and land stewards. A farmer or community may need to adapt their practices to new technologies imposed by external forces if they are not designed for a local context. Innovations that support existing operations may better support local needs.

- Does it address a local need?
- What problem is it addressing (what, how, for whom, and why)?
- What harm may it cause to the user and community? Is it being imposed?

Co-creation: Evaluate who is making the innovation and who is utilizing it. Investigate the power dynamics involved in technology development and adoption, including the influence of external entities and potential social, ecological, or economic harm. Consider whether the innovation effectively incorporates local

knowledge and is well-suited to the users.

- Who is creating the innovation? How does that compare to who is using it?
- How was/is local knowledge incorporated into the innovation?
- Does it foster autonomy or limit it?

Inclusivity & Inequality: Technology evaluation should include the risk of perpetuating or creating inequality.

- Who benefits from the implementation and success of the innovation?
- Does it create further inequality for communities using it?

Economics: Consider the economic costs and risks associated with an innovation for its intended users. This included upfront costs, ongoing inputs, and other expenses that may arise during implementation.

- Is it affordable?
- Does the technology require

consistent external outputs?

Agroecological Principles: Consider how the innovation aligns with principles of agroecology, including the biological and social structure in which the innovation is being applied.

Externalities and Community Impact: Consider the externalities of technology, both positive and negative, in the broader community. This includes issues such as job displacement, environmental impacts, and social cohesion.

- What impacts could it have outside of those immediately involved?
- Is it reflective and responsive to cultural norms?

Resources: Consider what resources are required to implement the innovation. If the innovation requires consistent inputs from an outside source and is not reliant on local resources, it may threaten autonomy and enforce reliance on outside forces.

- Does innovation further rely on a system?
- Does it promote autonomy and self-reliance in utilizing local resources?
- Can it be repaired and adapted locally?

Scale Neutrality: Evaluate whether the concept can be generalized and applied locally, recognizing the diversity of farming contexts. Consider safety, standards, and licensing in different regions.

- Can it be sustainably applied to different scales?
- Is it adaptable to different scales,

including small-scale farms?

- What underlying principles can be shared for collective benefit?

Documentation and Knowledge

Transfer: Evaluate if the innovation lends itself to repeatability. Information should be accessible and include the necessary context for effective knowledge transfer and adaptation. Evaluate if the concept could be generalized and localized to apply to different communities and scales of agroecological systems, recognizing the diversity of farming contexts.

- Does it include the necessary context and documentation to replicate?
- Does the documentation include the context in which it was created?

This reflection is intended to continue in dialogue with other agroecology actors active in technology and innovation assessment frameworks

Conclusions

Agroecology organizations deserve to be informed of the ongoing trends in agricultural technologies, which fuel the trends of data, economic, and power concentration in a world where data is the new commodity, proving to be immensely profitable. Our organizations recognize the need to assess innovations, as regulation is inadequate and no assessment of the impacts of new innovations on our lives, autonomy, traditions, and livelihoods is conducted. We cannot allow that so-called innovations destroy farming systems. It's our role to assess technologies and to strengthen agroecology organizations to do so, including evaluating our innovations, practices, techniques, and tools.

Session 3

Fostering Innovation

Processes of identification, documentation, and dissemination of grassroots innovations and local solutions

This collaborative session explored the identification, documentation, and dissemination of grassroots innovations among farming communities and local initiatives. Rooted in the recognition that farmer-driven innovations often emerge through practical necessity and creativity, the session aimed to surface existing practices, highlight challenges, and generate shared strategies for strengthening these processes.

“Documenting and disseminating grassroots innovation is the lifeblood for every relevant initiative. Farmers and everyone around them exemplify amazing ingenuity in how they develop tools and methods to do their work. Capturing this process is of vital importance for those innovations to be shared both locally in the community but also globally. This allows individual initiatives to become a network that is much stronger than the sum of its parts, by adopting and building on each others’ knowledge and experience”. - Session Facilitators

Divided into four working groups, each group examined strategies within the three stages—identification, documentation, and sharing/dissemination. The goal was to share and learn from processes, brainstorm potential collaboration, and identify a list of strategies. The participants identified their strategies' pros (advantages/benefits/successes) and cons (challenges/problems/inconveniences).



Identifying Innovation

How do we identify innovation to document and share?

Strategy	Benefits	Barriers
Prosight Studies	Help forecast future needs; provide the opportunity to inform policy.	Time-consuming; resource-intensive; may constrain innovation by relying on existing frameworks.
Market Studies	Builds on existing knowledge and may provide an existing solution or inform the co-creation of a new solution addressing a similar problem	Only evaluates what exists, which can limit creativity and innovation
Local Innovation Catalogs	Provide tested, locally relevant solutions; easy to adapt and scale.	Time-intensive to compile; requires local language and contextual knowledge.
Farmer Testing/Piloting	Ensures practical relevance and field-level validation; fosters peer-to-peer exchange.	May face language barriers and require facilitation to ensure effective communication and sharing.
In-Person Community Meetings and Events	Build trust, fosters social connections, and creates informal knowledge exchanges. Sharing ideas in person provides the opportunity for a more detailed discussion and the ability to ask questions and collaborate. They also offer opportunities for informal connections and the emergence of new ideas.	Logistically demanding (time, travel, resources, and skills for facilitation and organizing); risk of low follow-up after the event; risk exclusion of less mobile or lower-income participants.
Media-Based Outreach (Posters, Newspapers, Leaflets)	Reach wide local audiences; reinforce visibility in specific geographies.	Costly; not targeted; effectiveness depends on community media habits.

Digital Platforms (WhatsApp, Telegram, Email, Zoom)	Low cost; fast dissemination; email allows targeted communication.	Internet access and digital literacy barriers
Informant Interviews and Surveys	Provide detailed insights; can be customized to local contexts.	Resource-heavy; time-consuming to design, conduct, and analyze.
Radio	Broad reach; familiar format in many rural areas.	Limited control over messaging; questions of access and ownership.

Strategies for Documentation of Innovation

How do we document innovations and processes?



Methods ranged from manuals, schematics, and reports to visual documentation, such as photos and videos. Documentation enables replicability, supports the recognition and validation of innovation, and can serve both technical and educational purposes.

Documentation methods often require technical skills, high costs, and may be limited by language or access to tools.

Strategy	Benefits	Barriers
Manuals and Reports occur once the innovation is complete. Includes instruction manuals and plans for building or using an innovation	Details the innovation that can assist in IP protection and enable recognition of the innovator; provides precise information that aims to be accessible; offers an asset for replicability; may provide opportunities for edits and updates depending on the technology used to create the manual or report.	Can encounter language and access barriers; high-quality manuals can be resource intensive and lack the specifics of the context the innovation was created in; and risks being extractive if IP and control are not maintained by the innovator. Video manuals (with informed consent) are one method for addressing language and cost barriers.

Note-taking and Summaries occur throughout the process and are often informal.	Capture detail and gather meaningful information, show who the source is	Pose difficulty in an organized understanding of the innovation, often face barriers in sharing
Photos and Audio-Visual	Pictures and videos can be quickly understood and provide the opportunity to overcome literacy and language barriers; the opportunity to add subtitles and translation	High-quality videos can be resource and skill-intensive and risk consistency, standards, and appropriate details and context to successfully share information

Strategies for Dissemination and Sharing of Innovations

How can we share the documentation so that others can benefit from the innovation?

Strategy	Benefits	Barriers
Social Events e.g. Farmers' Meetings, Innovation Festivals, Farmer Innovation Fairs, Food Fests	Foster celebration, peer exchange, and community learning; build networks organically.	Require significant planning and resources; participation can be uneven or exclusive.
Newspaper and local adverts, leaflets, posters	Reaches local people in a regional context for when the focus area and geography of the innovation matters.	Challenges in reaching a target audience, resources involved in designing, printing, and distribution, decrease in physical media for learning and sharing information
Digital Communication (e.g. Messaging Apps, Websites, Newsletters)	Broad reach, low cost, asynchronous sharing; scalable across geographies.	Exclusionary to those without internet or tech access; content quality control is variable.
Virtual Communication e.g. Zoom Events, Online Conferences	Lower logistical burden; allows real-time exchange across distances.	Relies on stable connectivity; digital divide persists, especially among elders and rural participants.

Conclusion

Participants strengthened a shared understanding of grassroots innovation documentation and dissemination. By understanding the systemic and contextual barriers that hinder knowledge exchange, individuals and organizations can work more thoughtfully and effectively to disseminate innovations within their respective contexts. The process is often non-linear. It doesn't always move from identifying an innovation to documenting and sharing it. Just as grassroots innovations and movements emerge from creativity and

necessity, so too is the process of discovering and sharing innovations, often an organic and fluid one.

Many strategies are context-specific and are adapted to local needs by considering resources, culture, and the nature of the innovation. Language and literacy (including technological literacy) remain persistent challenges in documentation and dissemination. When documenting the innovation, it is critical to consider digital divides and inclusion based on gender and other demographics.

There is a tension between accessibility and quality, especially in digital and audiovisual formats. High-quality documentation can be time- and resource-intensive, which may create a barrier to documentation. Documentation that is quicker (and in some cases 'lower



Session 4

Enabling Infrastructure

Technical, legal, financial, social structures to support agroecology innovations and agricultural knowledge commons

In this context, "infrastructure" refers to the essential tools that organizations need to support various processes involved in agroecology innovations across stages such as identification, documentation, dissemination, and maintenance of knowledge.

When transitioning from the abstract concept of community-led innovation to practical implementation, it is crucial to provide multiple layers of support to protect innovators, their knowledge, and their inventions, as well as the communities surrounding them. Legal frameworks, financial mechanisms, social and governance structures, and technical infrastructures can create a comprehensive toolbox that enables individuals and organizations to make informed decisions to support their agroecology innovation activities.

Often, research and development may conflict with people's creativity and needs. Therefore, grassroots research, farmer-led experimentation, and agroecology schools must establish their own infrastructure to foster bottom-up research and development processes and create democratized knowledge systems.

Agricultural Knowledge Commons

We use the term knowledge commons to mean information, data, and content collectively owned and managed by a community of users. In the context of an agricultural knowledge commons, users are farmers, innovators, researchers, and grassroots organizations. Rather than treating knowledge as a commodity or intellectual property to be enclosed, the commons framework emphasizes shared stewardship, community governance, and reciprocal exchange.

A Charter for An Agricultural Knowledge Commons

We use the term knowledge commons to refer to information, data, and content collectively owned and managed by a community of users. In the context of an agricultural knowledge commons, users are farmers, innovators, researchers, and grassroots organizations. Rather than treating knowledge as a commodity or intellectual property to be enclosed, the

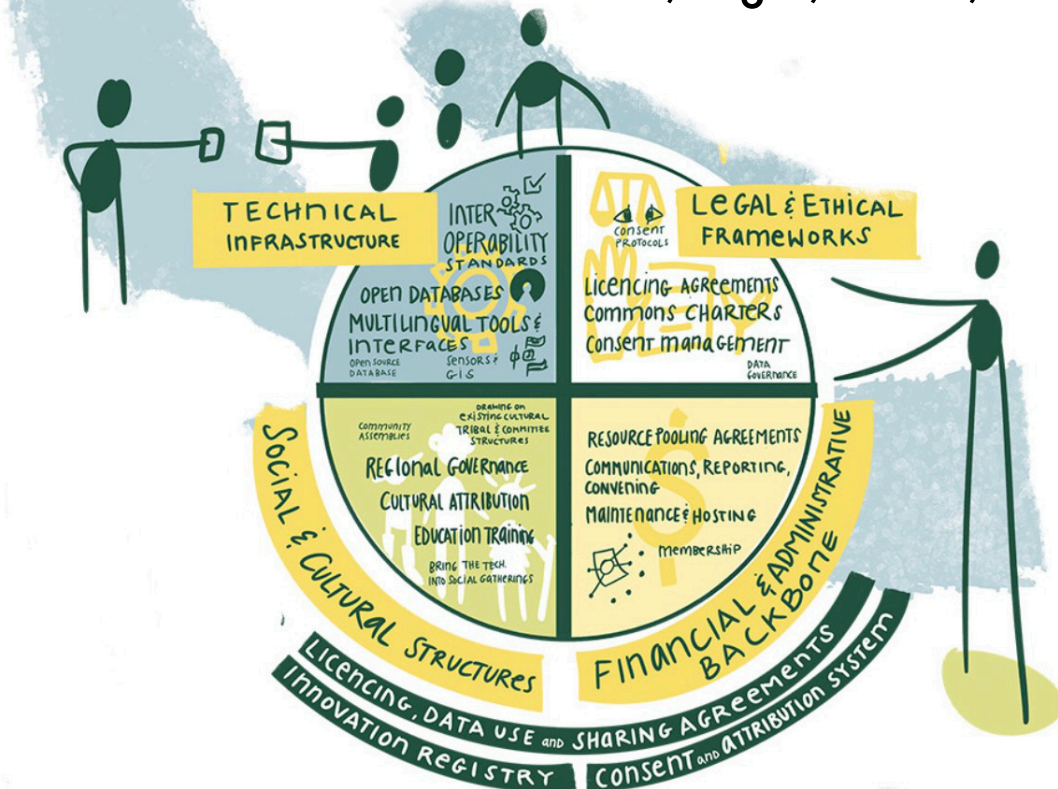
commons framework emphasizes shared stewardship, community governance, and reciprocal exchange. Under this framework, we believe:

Everyone everywhere should have access to the best possible agricultural

knowledge to steward the environment and improve their communities' livelihoods.

Food and data sovereignty are inalienable individual and community rights, and all knowledge contributed to the commons

Key Infrastructure Areas: Technical, Legal, Social, Financial



Case Studies

OpenTEAM Social Contracts: Ag Data Use Agreements

The Ag Data Use Agreements provide a framework for ensuring that data control and ownership remain with farmers. This will enable producers (or designated trusted advisors) to determine where their personal and agricultural data is stored, how it is processed, who has access to or control over their data, and for what

purposes data is used within the suite of interoperable tech tools. The intention is to keep producers in control of their data and to create consent-based structures that are widely understandable. The purpose of the Ag Data Glossary is to establish a shared language and understanding of agricultural data use concepts that are used throughout OpenTEAM's Suite of Ag Data Use Agreements.

OpenTEAM and Farm Hack
Evaluation tool: FAIR tech registry

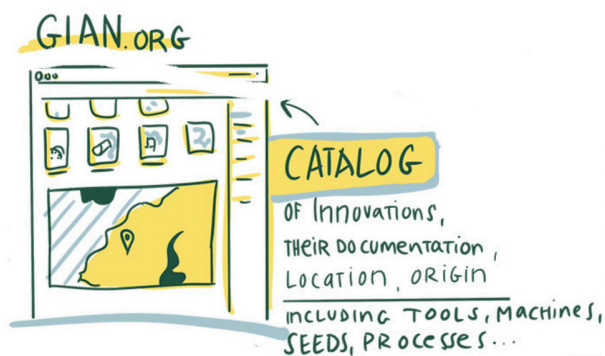
A FAIR tech registry refers to a system or platform designed to ensure that technology-related resources, such as data, tools, or software, are FAIR—an acronym for Findable, Accessible, Interoperable, and Reusable. These principles aim to enhance the sharing and management of digital resources, fostering collaboration, transparency, and long-term usability.

A FAIR tech registry helps maintain an organized, transparent repository of technologies that align with these principles, enabling better collaboration and ensuring that these resources are available and usable by the broader community responsibly and sustainably.

Honey Bee Network Databases

Documentation of over 65,000 grassroots innovations from farmers, students, and local inventors organized into open-access databases, including:

- Medicinal plants (available in multiple languages)
- Student innovations (Techpedia)
- Abandoned U.S. patents (1M+)
- Traditional knowledge (e.g., matchstick design improvements by children)



These databases promote informed consent protocols (including video consent for low-literacy communities). Honey Bee Network developed and maintains teaching tools and courses used in 91 countries.

Learn about other grassroots innovation databases here: [Innovation Databases](#)

Prolinnova: Creative Commons license / Participatory Innovation Development

Over a period of 25 years, Prolinnova has documented hundreds of local innovations from Asia, Africa, and Latin America. Prolinnova shares its knowledge products freely under a Creative Commons license. The materials are prepared in English, French, Portuguese, and Spanish, while partners in different countries translate these into local languages and develop their own knowledge products. These local innovations are considered entry points into a process of farmer-led joint research, also referred to as Participatory Innovation Development (PID) for the co-creation of new knowledge. The research process is led and controlled by the farmer innovator (individual or group), with other agricultural research and development stakeholders playing a supportive role.

Serikat Petani Indonesia (SPI): Agroecology schools

Agroecology schools where intergenerational and peer knowledge related to territory, community, land and farming practices can circulate out of the formal educational infrastructures.

Conclusions

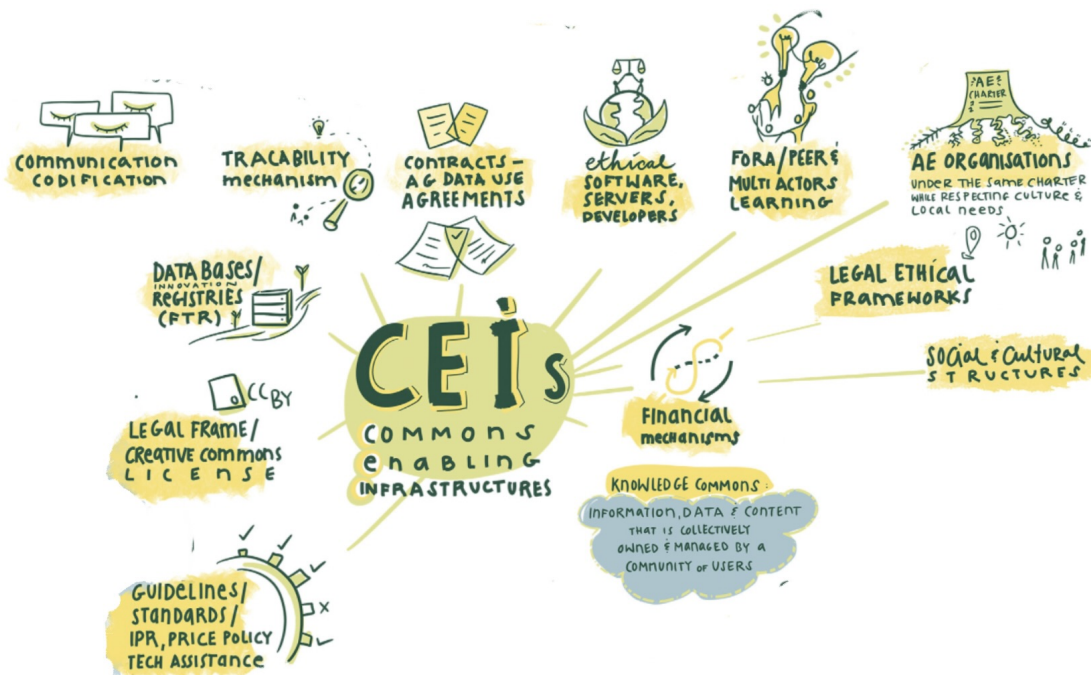
This session envisioned a global, participatory knowledge commons in agroecology—where grassroots knowledge is respected and supported by an infrastructure that enables learning, innovation, and sovereignty while supporting distributed governance and connectivity.

The assembly identified several common principles for enabling infrastructure.

- Multilingual and multimedia tools (e.g., radio, podcasts, video) provide more inclusive access to address language and accessibility challenges
- Peer-led, culturally embedded learning systems (e.g., farmer-to-farmer

education) encourage local, resilient solutions and knowledge-sharing

- Free, Prior, and Informed Consent (FPIC) and appropriate attribution towards creators and knowledge holders
- Voluntary, reciprocal contributions to the commons governed by shared charters align individuals and communities toward collective success. Agreements and protocols that prioritize consent, contextual integrity, and provenance.
- Voluntary participation and trust-based relationships between contributors.



Session 5

Financial Sustainment

of grassroots innovations

This session focused on how grassroots innovations, including tools, technologies, and social practices, are financially sustained. Participants discussed the challenges that many initiatives face in securing and maintaining resources. They shared insights into these obstacles, strategies for overcoming them, and what financial sustainability truly means in the context of agricultural innovation.

Each participant responded to the following set of questions, answering for both (a) within their grassroots organizations and (b) within the context they work in (community, country, etc.)

What does it mean to be financially sustainable?

In which areas is it challenging to (financially) sustain innovating?

Which bottom-up strategies to improve financial sustainability do you have experience with?

Which valuable lessons did you learn from your experience?

Key themes emerged from both small and whole group discussions:

What does financial sustainability mean?

Financial sustainability goes beyond securing funds. It includes long-term viability, autonomy, and capacity to adapt to changing economic and social landscapes. The definition could include

reinvesting in innovation and farmer engagement, as well as creating internal systems for resource management and knowledge retention.

Common Challenges in Financing Grassroots Innovations

Many grassroots innovations don't fit standard funding templates due to their evolving and learning nature through innovation.

Many funders prioritize short-term outcomes and technical solutions. Social innovation is more difficult to quantify and value.

Time-limited funding often results in a lack of long-term support, leading to loss of institutional memory and continuation of pro

Innovation by grassroots actors is often viewed as less legitimate than top-down technological solutions, leading to fewer funding opportunities.

Alternative Strategies in Financing Grassroots Innovations

Reducing the cost of innovation and centering solutions that don't require large allocations of resources and instead place value on knowledge

Diversified funding by combining public grants with private support and local contributions

Collaborative funding that shares resources between institutions and forms partnerships to strengthen grant applications for successful execution

Phased growth that starts small and scales with demonstrated success within a community

Transparency around finances and responsibilities within communities and teams.

Develop strategic partnerships with more significant social movements to mobilize existing networks and benefit from existing funding streams.

Approaches to Grow Resiliency

Develop exit strategies early to ensure project continuity after time-limited funding.

Maintain core staff or knowledge holders to prevent the loss of organizational knowledge and develop thoughtful, intentional documentation systems.

Encourage and advocate for longer-term, smaller-scale funding With less stringent requirements and reporting.

Adopt innovations locally to maintain authenticity and effectiveness. Scaling up is not always the goal.

What can GIAA do?

- Increase its capacity to engage, educate, and influence funders who may lack contextual understanding of grassroots innovations.
- Share resources and tools on funding strategies openly to support all members of the assembly as well as outside grassroots innovators.

How will GIAA sustain itself?

Funding alone does not sustain the assembly. Passion and commitment from members drive progress. Sharing resources, taking the initiative, and providing administrative support are essential for building openness and trust within GIAA, while also facilitating successful collaboration.

Conclusion

While this session highlighted common financial challenges, it reaffirmed a commitment to learning openness and resilience in sustaining grassroots innovations. Different organizational models can learn from one another's approaches and work more effectively together as a network.

Session 6

Connecting to Movements

Nyéléni and the Agroecology & Food Sovereignty Movement

This session grounded the work of GIAA in the broader political and social movements advocating for food sovereignty, agroecology, and the Right to Food. Introduced by Jyoti Fernandes (Land Worker Alliance), the discussion traced the roots and core values of these movements, highlighting the importance of GIAA aligning its vision and practices with global efforts to transform food systems toward agroecology, where small-scale producers' knowledge and innovations are central elements of community life and resilience.

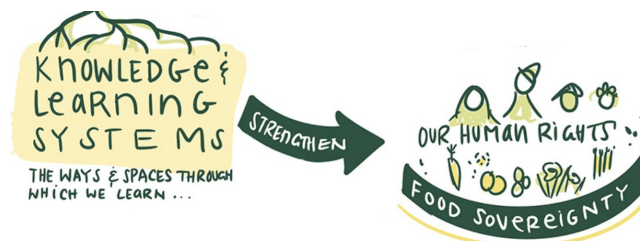


"We are an Assembly of grassroots organizations and networks, rooted in agroecology (Nyéléni Declaration on Agroecology (2015), worldwide working to strengthen, defend and share food producers' knowledge, tools and innovations. We believe in and value grassroots actors' capacity to develop tools, machines, digital technologies and all kinds of innovations that address their

needs and increase their autonomy in producing, processing and marketing food in their territories. Grassroots innovations are happening in very different ways across our diverse territories worldwide." - GIAA Charter

The defense and promotion of grassroots innovations and knowledge has much to gain from GIAA to ally with agroecology schools, such as those implemented by La Via Campesina organisations. Agroecology organisations and smallholders unions are pushing for **agroecology knowledge systems** that values local wisdom, experiences and knowledge generated out of the scientific frame by non formal researchers and welcomes diverse ways of knowing, understanding, analysis of the surrounding environment; recognizes the importance of traditional knowledge for finding solutions to actual challenges.

Food Sovereignty as a Common Political and Ethical Foundation



Food sovereignty forms the foundation of the vision that unites many GIAA members and forms the ground of GIAA. Formalized in part by La Via Campesina and the International Planning Committee for Food Sovereignty (IPC), the principles of food sovereignty are now supported by over 300 million food producers worldwide.

La Via Campesina defines Food Sovereignty as "The right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems. It puts those who produce, process, and consume healthy and local food at the heart of our agriculture and food systems, instead of the demands of market and transnational companies".

Shared principles provide a clear starting point for action and offer common ground to represent the positions of

farmers, agricultural workers' unions, and social movements.

The session also covered The Right to food as a central element for advancing agroecology in our territories, where our innovations can thrive. The Right to food guarantees everyone access to sufficient, nutritious, and culturally appropriate food, regardless of income, status, or background. Those who produce and provide our food deserve respect, protection, and fair compensation. I

Social Movements

Interference of political and corporate interests in the food system underscores the need for bottom-up social movements to reclaim food systems. Movements that actively dismantle agricultural discrimination, such as that based on caste or gender, are vital to the movement.



Session 7

Governance

of grassroots innovations, organizations and of GIAA

This session aimed to identify how GIAA will function as an international collaborative network with the appropriate governance model, decision-making processes, roles, and digital infrastructure. The session focused on affirming the purpose of GIAA, clarifying its operational framework, and laying a foundation for a functional and flexible assembly moving forward.

Membership

The assembly has reached a stage of maturity in which it is ready to define what it means to be a member, how new members are added, and what the expectations are for its members. Membership should be based on alignment with the values and charter of GIAA. Developing clear criteria will ensure transparency. In developing efforts to amplify farmer's voices and foster better representation from currently underrepresented regions, particularly Africa and South America, the Assembly can better serve its vision. Piloting regional coordination models and decentralized meetings as an alternative or in addition to full assembly meetings will strengthen membership and collaboration.

Digital Infrastructure

Consistent use of digital infrastructure that would allow for the growth of the assembly, collaboration, and sharing of information among members and to a broader audience, out of the problematic mainstream digital and web infrastructures. The website intends to

serve as a central hub for resources, communication, and documentation of shared innovations and working group outputs. By understanding individual skills in the group, such as technical maintenance, digital facilitation, or documentation, individuals can help to strengthen this as a resource.

Governance Structure

GIAA has functioned as an informal network with central organizers as decision-makers. After gaining some footing, the assembly is ready for clear decision-making facilitation that embraces the needs and voices of its members in their diversity. This will allow the assembly to be responsive and scale as needed. There is a desire to avoid institutional rigidity while remaining an informal network, yet still coordinating efforts. GIAA will evolve at its genuine rate, through active contributions and shared goals rather than rigid geographic boundaries and ambitious work plans.

GIAA's initial governance structure was established during the in-person meeting in early 2025, with a pop-up office open every afternoon for GIAA participants to discuss the governance structure. The

agreed governance model is proposed as follows:

General Assembly (GA): The decision-making authority lies with the GA, which is organized into working groups. The working groups are autonomous in their functioning, yet remain accountable and responsive to all participants. Decision-making power should be held by participants who are actively engaged.

Secretariat: An organization that serves as the 'backbone'. The Secretariat facilitates the flow of information. The organization of the meetings ensures understanding between working groups, sends regular updates to the General Assembly (GA), and maintains the website as a platform for both internal and external communication. It works to ensure transparency, inclusivity, and respect for the charter.

Working Groups

These groups are centered around themes and areas of action rather than geography. The current working groups consist of the following:

Communication Working Group: focused on building the GIAA brand, improving communication strategies, and creating a strong online presence. They aim to make GIAA easily recognizable and accessible to a broader audience.

Governance & Partnerships Working Group: focused on developing transparent governance processes and structures for

GIAA, as well as fostering strategic partnerships with other organizations.

Research & Development Working Group: involved in strategic scanning, internal capacity building, and exploring potential alliances and projects. They aim to enhance GIAA's research capabilities and partnerships.

Enabling Infrastructures Working Group: focused on creating shared resources, databases, and legal templates to support and protect innovations within GIAA. They also work on developing assessment tools and exploring alternative communication tools.

The Next Assembly Working Group: responsible for planning and organizing future gatherings and events for GIAA members.

Vision

GIAA is a living, value-driven network that brings individuals and organizations together across continents, sharing common values. To reflect that, the governance and membership structures should remain adaptable and responsive to emergent processes. By creating a minimum viable structure, we enable coordination and accountability as the assembly expands. Before expanding the network, GIAA aims to encourage participation over expansion, starting at our grassroots level and building from a solid foundation.

What's Next?

Facing in our diverse contexts the increasing pressure to modernize agriculture, we realized that we were not alone in reflecting and promoting agricultural innovations from the grassroots. We created GIAA to make possible the mutual reinforcement of our initiatives while making it heard that innovations for farming that are developed in the grassroots do exist in every part of the world, relying on ancestral and cultural knowledge and made invisible and undervalued by a pressing corporate-driven technology and research system.

With two in-person gatherings and various online meetings attended by a variety of grassroots organizations and local networks from all over the world, we could unveil the complex topic of Innovations for Agroecology, identifying four major dimensions:

- 1) Knowledge system or Grassroots learning
- 2) Risk and harms of the digitalization, automation corporate-led wave
- 3) Concrete activities of co-designing and developing, testing and disseminating innovations at grassroots level
- 4) The social, legal, financial, technical infrastructures needed for grassroots innovations to grow.

In the coming years, we will continue to share our experiences, pedagogies innovations and methods; find safe digital space where to share our innovations; explore collectively how to protect our innovations when wanting them part of the Commons; improve our internal mechanisms of functioning while bringing to institutional spaces and social movements new evidences that another narrative on innovations is possible, the one of Agroecology.

