



Quality Assurance Guide

for Multi-Level Training Processes in Promoting Ecological Organic Agriculture

based on the experiences of the
Knowledge Hub for Organic Agriculture in Eastern Africa (KHEA)



In cooperation with



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I. Foreword

This guide has been prepared as a tool to support diverse initiatives, which are designing, implementing, and assessing extensive capacity development programs in Ecological Organic Agriculture (EOA). It is based in the Knowledge Hub for Eastern Africa (KHEA), funded by GIZ. It applies the methodology of a training „cascade“ system, also known as the ‚training of teams of trainers/facilitators‘ process.

In the cascade methodology, one group trains another group, which then goes on to train others. It is a process in which the participants are both the subjects and the agents of change, known in this experience as Master Trainers – Multipliers – Farmers (according to the three levels of the cascade system). A cascade approach articulates training programs to provide differing levels of competence needed to implement the change. The underlying notion of cascade training is that critical change-related information will flow through the organization in a planned way to facilitate subsequent parts of the institutionalization process. The cascade approach also includes experience sharing, implementation of similar functions, and mindset change, among others. This is why this experience is sustained and supported by crucial country partners, which will further develop this type of initiative beyond a particular project.

Training of trainers/facilitators needs to ensure that those disseminating knowledge and information and implementing the training have acquired the necessary knowledge, attitudes and skills – both to deliver the intervention and to teach others how to do it. There is the well-known problem that when information and knowledge are retransmitted to each level, the chances of dilution and/or misinterpretation of critical messages increase. Not only the key messages but also the elements that underlie the quality of the training should be based on universal principles that are featured and highlighted in an agroecological approach. Therefore, this guide is a tool that will support trainers and organizations in delivering training under this approach, ensuring that best practice is downloaded from the realm of ideas to field practice. This will lead to the most needed changes for sustainable agroecological food systems.

Enjoy reading, harvest valuable reflections and introduce and check the quality of your training with a cascade methodology!

Patricia Flores
Global Academy Manager - IFOAM Organics International

II. Introduction

The Knowledge Hub for Organic Agriculture in Eastern Africa (KHEA) is part of the Knowledge Centre for Organic Agriculture (KCOA) Project, funded by the German Ministry of Economic Cooperation and Development (BMZ) through its executing agency GIZ. The objective of the KCOA is to introduce knowledge hubs successfully as an innovative strategy for promoting organic agriculture with actors in the regions of West, East, Central, North and Southern Africa. For Eastern Africa, the project's overall goal is to ensure the integration of Ecological Organic Agriculture into the various countries' agricultural systems.

The Project in Eastern Africa started its first phase of implementation in 2019. Biovision Africa Trust (BvAT) based in Kenya, is the lead coordinating agency of the project with co-hosting arrangements with Participatory Ecological Land Use Management (PELUM) Uganda.

The project focuses on three main action fields, namely:

1. Collecting/preparing knowledge in organic agriculture: validated technical and methodological knowledge for the promotion of organic agriculture, including processing, is prepared for the context of the participating countries and stakeholder groups and made available through suitable knowledge products.
2. Capacity building and dissemination of knowledge: validated technical and methodological knowledge, strategies and good practices in organic agriculture, adapted to the contexts of the countries participating in the Eastern Africa Regional Knowledge Centre for Organic Agriculture, have been disseminated.
3. Networking within agricultural value chains: key actors in the organic agriculture value chains of the participating countries in Eastern Africa have been networked in an exemplary manner to strengthen markets for organic products.

Based on this 2-year experience, KHEA, with the support of Biovision Africa Trust, national partner organizations and IFOAM Organics International, conducted from March to May 2022 a series of online workshops and one in-person workshop in Uganda with Master Trainers of KHEA from Kenya, Uganda, Rwanda and Tanzania. The content of this handbook was generated through these workshops. It aims to **inform other support organizations and trainers who are willing to design, conduct, monitor and evaluate high-quality multi-level processes for strengthening capacities in ecological organic agriculture**, in which a variety of stakeholders are involved. KHEA Master Trainers have fully developed the contents of this guide. Through a series of collective reflection exercises, they **generously shared and exchanged their knowledge and experiences to create this guide**.

To whom is this guide addressing?

This guide seeks to be useful for diverse organizations interested in supporting processes for strengthening knowledge and capacities broadly in ecological organic agriculture, whether they are already implementing related initiatives or whether training processes are still at a design phase. Both have in common a deep interest in assuring the quality of the processes. Therefore, the guide is elaborated in a way that intends to provide useful insights for initiatives at different stages of development. Main users of this guide are expected to be implementing organizations and trainers at all levels of the cascade system of the process:

1. Master Trainers, who receive the initial training from the support organizations;
2. Multipliers, who are trained by Master Trainers; and
3. Farmers, who are trained by multipliers and in turn, share information and knowledge with other farmers.

TRAIN-THE-TRAINER

TRADITIONAL SCHEME OF A CASCADE SYSTEM





The guide intends to:

- Outline what is meant by quality assurance and why it is important for processes that seek to strengthen capacities in ecological organic agriculture at the community level,
- Point out a series of internal and external conditions that should be in place so that the training process can be successful, in leading to desired outcomes among final beneficiaries,
- Suggest a series of principles that, based on experience and not as a theoretical exercise, should be in place for the process to be successful.

Principles of Quality Assurance in Training Processes

Principles have been selected as entry points for the guidelines because they are inspiring and can fit for universal application. Following them can lead to exciting and innovative approaches and practices throughout the process. Master Trainers of the four countries have identified the principles proposed in this guide. They were trained by IFOAM Organics International and have participated in KHEA. Therefore - and even though particular adaptations or emphasis may be needed for specific circumstances in which training processes are developed- they seek to be inspiring for other countries and processes of the region, as well.

This document proposes two categories of principles: 1) Outcome principles, and 2) process principles, based on other knowledge management initiatives that have taken place in sustainable agriculture working groups around the world.

Outcome principles

These relate to the effects or impacts the training process seeks to achieve. These principles refer to transformational changes that are being fostered in food systems and communities more broadly.

Process principles

These guide every step of the training process, assuring quality through the cascade system, from the design phase to the monitoring and evaluation phase. They contain the values that characterize this training process: inclusion, gender balance, empowerment, acknowledgment of local knowledge, hands-on learning, sustainability, networking, etc.

There is an interconnectedness among the principles, enriching each other and are dynamic. Other principles may also be identified along the way of implementing this guide and shall enrich it. So please, do share your inspiring innovations and contributions!



For each principle, Master Trainers reflected on the narrative that the principle brings along, which describes the approaches and intended effects that the principle seeks to generate. They also reflected on the quantitative and qualitative metrics that may set standards or goals for the follow-up, monitoring and evaluation of the principle implementation.

The Master Trainers share their stories.

The latter section of the guide presents some short stories that Master Trainers shared from real experiences they have backstopped in their countries, which may illustrate the suggested principles or even how they interconnect.

We hope this guide constitutes a useful tool to support organizations and trainers who want to ensure that every effort towards organic agriculture development and dissemination in the region is performed with excellence. It is hoped that this will contribute to improving the well-being of the communities, especially those who need it the most, and their surrounding environment.

Principles of Quality Assurance of ToToF Process – KHEA

A. Process Principles

Design Phase

1. **Inclusivity:** Encourage and facilitate the participation and empowerment of women, youth, people living with disabilities (PLWD), ethnic and cultural minorities, impoverished farmers and other marginalized groups
2. **Appropriateness:** Customize contents to fit into local contexts
3. **Visibilisation of indigenous people's knowledge and wisdom:**
Identify, document, package and disseminate indigenous knowledge

Implementation Phase

1. **Practical utility:** Knowledge in the hands of farmers and trainers.
2. **Evidence-based:** Ensure research and dissemination of information
3. **Community spirit:** Backstopping and cross-learning at all levels.
Building a community of learning and practice.
4. **Scaling-up:** Network with local institutions to gain additional support for the process and for scaling-up
5. **Amplified outreach** Document and widely disseminate the experience.

Monitoring and Evaluation Phase

1. **Participatory, systematic and accessible:**
Continuous monitoring of the process with a learning approach

B. Outcome Principles

1. **Transformational changes:**
 - 1.1. Mindset transformation
 - 1.2. Knowledge co-creation
 - 1.3. Institutional policy changes
2. **Inclusivity:**
 - 2.1. Integration of marginalized groups
 - 2.2. Women and youth empowerment
3. **One health:**
 - 3.1. Improved health and nutrition
 - 3.2. Conservation of biodiversity and quality of ecosystem services
4. **Fairness:**
 - 4.1. Sustainable markets and incomes

III. What is Quality Assurance in the Training of Teams of Facilitators Process and why does it matter?

David Amudavi, Executive Director, Biovision Africa Trust

How do we ensure that the way the training is conducted at the regional level and further conducted at the country level with more partners or more people, the so-called multipliers, and have these multipliers effectively reach the farmers with desired outcomes? We need to see the impact of the ‘Training of Teams of Facilitators’ (a training cascade system) reaching the ground. We can invest much resources, but if nothing is happening on the ground, where we need to see increased production, consumption, and trade, then we are still far on the journey. Obtaining resources to see these changes on the ground would be the ultimate test of the success of the KCOA Program globally.

Why are we doing this? For whom and how? When we train the Master Trainers, they are expected to train Multipliers, who are catalysts — people to help bring about change in processes, change in mindsets, change in the activities we are doing, and finally, change in what we call sustainable food systems or agricultural systems.

So, how can our training ensure that within these cascade approach, what we train at the regional level finally reaches the ground level? How do we ensure that the people at the ground level can either pick up the methodologies, tools, and strategies that make the training effective? How do we ensure that the next generation of multipliers trained are as good as those trained earlier? Master Trainers are the people who have had the

opportunity to be trained first in a program/project and are engaged in launching their own training initiatives. The expectation in a cascade training system is that there is quality in terms of processes, contents and tools that we are applying in training and more importantly, in terms of the impact we would like to see at the ground level. Master Trainers, as agents of change, train for a purpose. Master Trainers train to develop an ability and capacity to do something. Quality control is ensured through a monitoring and evaluation system. Still, we are more concerned with quality assurance, which is critical for the training we are undertaking with a cascade process. The way we are trained at the nucleus level, at the very beginning, should allow us to see something happening at the end. When we train, we are enriching a learning experience among us and ensuring that that learning experience leads to development, support and compliance with the overall objective of this program which is to promote ecological organic



Quality Assurance covers all aspects of the learning experience and the procedures should be an effective blend of **development, support and compliance checks**.

- **Plan:** plan and define process-related targets, as well as identify the procedures necessary to achieve a high-quality final result.
- **Do:** process development and testing, as well as „do“ adjustments to the procedures.
- **Check:** process monitoring, process modification, and assessment of whether the processes achieve the set objectives.
- **Act:** a quality assurance tester should carry out the activities required to enhance the procedures.

agriculture in a broad sense. We also want to promote organic agriculture, whether certified or not. We want to promote practices and values under the systems that you could call ecological, organic or agroecological - which in a way is the foundation of organic agriculture.

When it comes to training at different levels, there are things that you have to plan for, there are things that you need to do, and there are things that you need to check. We have to take the necessary actions to ensure that the way we train and the purpose for which we are trained, there are a set of things we would like to achieve at the end. So, we are in the assembly line and the Master Trainers are at the beginning of the assembly line. At the end of the assembly line, we will see more farmers applying agronomic technologies and practices promoted by organizations like our partners in each country. If we would like to see that happen, then we need to ensure that the training we are undertaking at a certain level leads to the whole objective of this project.

So, to be concerned with quality assurance means that we are involved with a process that should look at how this training leads to the ultimate

adoption, application and use of the knowledge products we are developing in ecological organic agriculture. How do you know that the trained Master Trainers are producing or helping to contribute to either knowledge services or products? We are investing resources in a very valuable knowledge platform to be supplied with knowledge products. We also aim to train farmers on how to utilize these knowledge products. To do this, we have designed the ToToF approach, with our international partners supporting us. The question is, what would be expected to happen at the different levels of training? It should be our concern to know what is happening at those steps. It is necessary to come up with a mechanism that will ensure the end products, the end effects, the end outcomes.

We ought to understand the objective of the KCOA, particularly KHEA. What objective are we supposed to achieve with this program? And ensure that every element of the training program – the ToToF - fits that overall objective of the KHEA.

Trainers should be well qualified, and we have first-level trainers who are Master Trainers, and programs should be innovative. It is also imperative to understand the methodologies we have used, the tools



Quality Assurance

“Making sure that every element of the training programme fits the overall objective. Trainers should be well qualified, programmes and methodologies should be modern, training organization should be professional, and training should meet the needs of both the individuals and the local authorities that they serve”.

- Council of Europe & UNDP, 2005



we have used at this level, which ones we can cascade to the next level of multipliers, and which ones we can cascade finally to the farm level. Methodologies used with Master Trainers and Multipliers are at the same level. ToToF approach is like the concept of farmer field schools (FFS). Very few people are trained very intensively in methodologies and tools to use. Those who are the Master Trainers go and teach others who would train the ultimate beneficiaries, the people we want finally to reach. There can be differences in the methodologies on how we can ensure effective training, which is why we need to approach the process in terms of quality assurance. The methods and tools we use and how we deliver products or services contribute to the overall objective of our training program. And of course, the training organization should be professional, and the training service should meet the needs of both the individuals and the local authorities they serve, in our case, the farmers in their communities.

Monitoring and evaluation become very important as part of quality assurance and must be part of the training program. It must help to respond to the question: is the training serving the farmers?

And if not, what do we need to do to ensure that it serves the farmers? Training the farmers requires financial resources. This program selects Master Trainers who are part of organizations and are already working with farmers. When we train them, we are leveraging and creating synergies to serve farmers even better. Resources permitting, we can also reach out to other farmers. Let us bring on board Master Trainers who are individuals or people from organizations that are already working with farmers so that this training adds value to the farmers that Master Trainers are working with and reflect on how to reach other farmers, farmers groups and farmer organizations.

Fundamental aspects of Quality Assurance for Training Programmes

- Creating a favorable environment for the training
- Establishing the process to meet quality training standards
- Evaluating the effectiveness and efficiency of trainings

How do we ensure these elements in the ToToF approach?

Creating a favorable environment for the training

If we want to assure that our trainings have the effects and the impact we intend them to achieve, then paying attention to the environment for the training is very important. It is essential to reflect on guidelines to ensure that we can create a favorable environment for the training at the different levels. If you are training Multipliers, what kind of environment would we like to see at the multiplier level? If you are now training farmers on the ground, what are the guidelines for us to ensure that you have a very conducive environment for engagement with the farmers? After the training, you should be able to answer the „so what“ question. What has happened after some time of training the farmers? If you can go back or continue to engage with them, you can see something is happening as a result. We cannot take this for granted; we need to reflect on what kind of environment we need at the different levels of our training. This is important so that we understand how we can make this happen.

Establishing the process to meet quality training standards

How do you structure the training process to ensure that it brings out the environment for exchange, learning, and changing the mindset of the group you are training? How do you ensure that the training you are conducting, the methodology and the tools you have used allow you to meet the quality training standards you have set? What are your quality training standards? If you would say you conducted a high-level or a high-level quality training, what does that entail? Facilitation is an essential point; we would like to have trainings that have not only meaning but also an impact. And that means, therefore, we need to have some standards set, some standards of training. This will be good not only for this initiative but also for other trainings that we do. As we conduct our various trainings, do we ever establish the standards we want to meet? Those standards will help to ensure quality in training, quality in the development of the products you are making, and quality in the provision of your services.

Evaluating the effectiveness and efficiency of trainings

If we want to have very effective trainings, we need to build a deliberate process of ensuring that we can evaluate the effectiveness. That is the purpose of the training. Efficiency means the resources we invested in achieving the group's training needs. We have to plan for this and it should be part of the training. We know that the ToToF approach is multi-layered. If you want to train, for instance, groups of actors within the value chains we promote, e.g., processors or aggregators for organic products, how do you structure and design that training program and deliver it very effectively?

These three elements should be part of the process for ensuring quality in terms of products, support, and compliance with the project's objectives and more importantly, with the needs of the target groups. If we do that, we will ensure that we have a program with a framework, a set of methodologies, clear tools and that you can cascade, knowing for each level what would be the best to apply. The purpose of multipliers is to ensure that not only a few farmers benefit from the training. We want to scale up and

thousands of farmers to benefit. We need more catalyzers and more multipliers to be part of this process. Using the value chain approach, we can identify the target groups that we want to support: the farmers, the producers, the processors, etc. We need to ensure that these elements of quality assurance are integrated into our ToToF approach.

Within a **quality system**, there is quality assurance and quality control. **Quality assurance** is a process that is deliberately designed, planned and performed throughout every stage of the process to achieve expected quality standards. Quality assurance requires planning and is proactive. **Quality control** is reactive; it has to do with the verification of standards set for specific steps of the process. It involves monitoring the fulfillment of quality requirements in the quality assurance process and acting on gaps. Quality assurance and quality control are very much interrelated.



„We ensure quality assurance when the message or information at all levels is disseminated with the same integrity“

„Quality assurance requires continuous communication flows among cascade teams, as well as continuous follow-up and supervision of adoption of practices and reflection meetings among trainers and farmers.“

„Ensure quality outcomes at all levels, hence sustainability.“

„Quality assurance is like a torch, that enlightens the process, that allows us to clearly see the pathway that we have to follow with farmers and everything that needs to be done in the process. Quality assurance is transparency.“

IV. Enabling Conditions for the Training Process



As mentioned before, a series of external and internal conditions can create an enabling environment for the training process to succeed. Even though not all of them may always be in place, implementing agencies and communities may advocate for progressively generating an enabling environment for the process. According to the experience of KHEA, key conditions for the training include the following:

Policy level

- Favourable policies for organic agriculture to which the training process can align.
- Observance of national and local rules that support organic agriculture.
- National and local government support.
- Support of political leaders.

Implementation level

Competent and committed trainers

- Experienced in ecological organic agriculture (EOA).
- Knowledgeable, motivated, passionate, well-trained.
- Willing to volunteer their experience and ability to link with other actors that may support the process.

Farmer level

- Positive attitude towards learning.
- Committed farmers and communities: ‘Trainable community members.’
- Farmers willing to volunteer demonstration plots, land, and other local resources.
- Appropriate timing/season of the year: favorable weather conditions, agricultural calendar not competing with the training.

Availability of resources

- Human and financial resources.
 - Availability of local resources for the implementation of technologies and practices.
 - If possible, smartphones and connectivity.
 - Access to knowledge platforms and visual educational tools (videos, pictorials).
 - Practices and technologies validated locally.
 - Using farmer experiences and sharing farmer’s success stories.
- 



Methodologies

- Trainings undertaken near demo plots.
- Participatory approach during trainings enabling constant sharing among participants.
- Learning by doing; hands-on learning; integration of theory and practice.
- Language: usage of local languages and familiar terminology.
- Appropriate communication strategies with participants (starting with the initial call).
- Diversified pedagogical tools and approaches aiming to cover all possible ways of learning.

Work spaces

- Accessible and appropriate venue for the training.
- Proper learning place (quiet, well equipped, good services including high-quality food).
- Near demo plots, model farms or Centres of Excellence/Knowledge.
- Ensuring a safe and secure environment for trainings.

Alliances

- Like-minded partners sharing the passion and commitment for EOA.
- Complementary roles and contributions to leverage.

V. Process Principles

Process principles guide every step of the training process to ensure quality through the cascade system, from the design phase to the monitoring and evaluation phase. They contain the values of this training process: inclusivity, empowerment, acknowledgment of local knowledge, gender balance, hands-on learning, sustainability, networking, etc. They have been organized in different phases to inspire other training processes that are in diverse stages (planning phase, already being implemented, almost ending).

As mentioned before, all these principles have been identified based on the two-year experience of KHEA. They are key to ensuring a high-quality process in diverse strategies and elements that the training process comprises. There is an interconnectedness among the principles; they iteratively enrich each other. Letting them inspire training actions should lead to achieving outcome principles. Other principles may also be identified along the way according to each particular experience and shall enrich this guide which seeks to be dynamic.

When defining metrics for these and other principles, it is essential to consider that:

- Metrics should be measurable and easy to find the information to measure and report on.
- Qualitative aspects should be included. For instance, you should measure not only „numbers“, but also document and report „types of“ / „variety of.“ Also, it is possible to include how improvements in the figures have taken place (how) and what are their positive effects.

Design Phase

V.1 Inclusivity

Encourage and facilitate the participation and empowerment of women, youth, PLWD, ethnic and cultural minorities, impoverished farmers and other marginalized groups.

„If you train women, you build the capacities of the entire family.“

„Women are very interested in organic agriculture and in food security.“

„Women and youth drive the sector and drive sustainability.“

„Young people embrace and sustain the process. Most multipliers are young farmers.“





Bridging existing gaps for marginalized groups through explicit inclusive strategies is a major objective of the training process. These groups include women, youth, ethnic minorities and cultural minorities, farmers with very limited access to resources and impoverished farmers living in marginalized geographic areas, people living with disability (PLWD), people abled differently or people with serious illnesses, among others. Experience has shown these groups have an enormous potential to contribute to organic agriculture if they are given real opportunities to engage in the process, considering their specific situation, needs, and interests.

The intentional targeting of these groups through the process requires specific interventions for reaching them, including:

- **Identify the special groups** that the training process wants to target at all levels (women, youth, PLWD, impoverished farmers, ethnical and cultural minorities, etc.) and carry out **specific needs assessments for each group**, so that their particular **needs and interests can be addressed** through the training process. Prioritize participants interested in organic agriculture and in leading transformations. The call strategy for selecting participants should be gender-sensitive and have an inclusion approach.
- **Design a training curriculum that addresses these needs** and favors the participation of these groups, including identifying innovative training strategies and methodologies and developing specific training materials and knowledge products for these groups.
- **Enable a conducive environment for learning and service delivery and continuously mobilize, monitor and support participation of these groups within communities.** Engage all family members in the process (house-hold approach) to support the participation of marginalized members of communities, for instance, women.
- Increase **continuous access to information for these groups**. Knowledge is power and once informed, they will be empowered.
- Contribute to **increased access, control and ownership of resources**, especially for women.
- Contribute to **increased access to market**, especially for women (including enterprising skills).
- Include all marginalized groups, and especially women, in **leadership and decision-making at all levels**. Being empowered, these groups can be heads of organizations, which is key for the sustainability of support given to them.
- **Strengthening organizations led by these groups**, including cooperatives, agribusiness and enterprises. Sensitize male and female youth to join these associations.
- **Agree on specific goals for participation of targeted groups at all levels** (Master Trainers, multipliers, farmers). For instance, 60% of women, 40% of youth, etc. Build upon existing gender criteria of organizations (cooperatives, Participatory Guarantee Systems - PGS), for instance, internal auditors in cooperatives (according to Internal Control System -ICS- for Group Certification) must include women and youth who lead small groups.

Metrics (concrete quantitative but also qualitative measures) for follow-up, monitoring and evaluation of accomplishment of this principle may include:

- Number and description of marginalized groups for which a critical needs assessment has been conducted to inform strategies of the training process.
- Number and description of methodologies, training materials, knowledge products and curriculum that have been deliberately developed to address the needs and interests of these groups.
- Kind of strategies designed to reach out to women, youth and marginalized groups.
- Number of marginalized groups the process intends to reach throughout the process (disaggregated information per group).
- Proportion of financial resources of the organizations leading or supporting the training process, which will be devoted to these target groups.

V.2 Appropriateness: Customize contents locally

„We have been able to bring this knowledge that connects what is happening locally to what is happening at the global level.“

Training contents should address the needs and interests of participants at all levels and should be relevant and appropriate for users of information and knowledge products. When customizing content locally, it is important to consider the following:

- Identify and address information needs of:
 - Specific geographical regional and agroecological contexts.
 - Farmers involved in specific crops (maize, sunflowers).
 - Marginalized groups.
 - Knowledge gaps of trainers.
 - Ecological and organic agriculture (EOA), based on reviewing secondary information of the sector.
- Incorporate information resulting from baseline study and needs assessments in the design of the contents.
- Social and cultural aspects of participants of the training.
- Validate information locally before disseminating it (for instance, technologies).
- Translate information to local languages and ensure the use of non-technical language in understandable and attractive formats for farmers and groups with special needs.
- Involve local stakeholders (extensionists, local authorities) so that they can be part of the process from the very beginning and develop ownership regarding the curricula and training strategies.

- Integrate and value indigenous knowledge.
- Prioritize practical exercises; farmers learn by doing. Training should not be only theoretical.
- Foster the use of local material (as it will be available and affordable for participants).
- Visit farms to get a good understanding of the reality of farmers.
Take into consideration the specialization of farmers.

Some examples of metrics for this principle can include:

- Types of issues captured in the baseline and needs assessments that have been integrated into training curricula and methodologies.
- Types of training needs of women, youth and marginalized groups that the curricula is considering.
- Types and number of information and knowledge products adapted to the local context, which have been generated and locally validated before dissemination.
- Types and number of training materials translated to local languages.

V.3 Visibilization of indigenous people's knowledge and wisdom: Identify, document and disseminate indigenous knowledge systems

The Indigenous knowledge system is key for the training process, as it constitutes an important foundation of organic agriculture, has been tested and has stood over time and is resilient to climate variations. Identifying and documenting indigenous knowledge is essential because there is little documentation of it and few organizations are engaged in the research and documentation of indigenous knowledge systems. Indigenous knowledge should be collected, tested, synthesized and disseminated. Fundamentally, indigenous knowledge systems should not lag in the training process; instead, the intervention continuously encourages the use of local resources and knowledge. Indigenous knowledge should enrich organic agriculture practices and inform decision-making, e.g., indigenous seed systems access and preservation.

Metrics for this principle can include:

- Type/variety/number of documented and disseminated indigenous knowledge practices and technologies
- Percentage of farmers employing indigenous knowledge systems in their farms
- Variety and number of indigenous seeds that are being preserved and disseminated within communities





Implementation Phase

V.4 Practical utility: Knowledge in the hands of farmers and trainers

Ensuring high-quality, practical training throughout the cascade system (from Master trainers to multipliers, from multipliers to farmers and farmer to farmer) requires:

- Considering principles of adult learning: how farmers learn best.
- Dissemination of information and knowledge that have already been validated locally and that respond to local information gaps, needs and interests.
- Identification and testing of simple, replicable technologies, practices and innovations. Barriers to adoption should be identified and solutions implemented.
- Establishment and strengthening of Centres of Knowledge / of Excellence offer complementary information for facing challenges that farmers face, including strategies and knowledge applications and innovations. Their work must be linked to local demo plots and training centers/farmer field schools, which are more accessible to most farmers. In addition, Centers of Knowledge should show case technologies, be equipped with labs, offer additional knowledge and information and lead research processes.
- Implementation of demonstration plots and model farms at local and village levels, as well as training centers / farmer field schools. These can be institutional or communitarian and ideally should be located at accessible places for farmers or in strategic places of the villages (near hospitals, schools, etc.). Ideally, local labs should be available for soil analysis, for instance, so that that information can be generated at the local level.
- Identification and training of champion farmers interested in establishing demo plots and who may also have indigenous knowledge.
- Implementation of practical and attractive learning strategies that encourage the participation of farmers. These can include hands-on exercises for applying technologies and practices (and videos that showcase them), practical examples, learning tours, exchange visits, sharing of success stories, etc.
- Local availability of inputs and materials that farmers may need for implementing practices and technologies in which they are being trained. *„Inputs for triggering the transition towards agroecology should be available at sufficient scale so that all interested farmers can access required inputs.“* Include solutions for organic food preservation so that farmers can stock supplies for concoctions.
- Backstopping so that information shared and generated by farmers through experimentation processes can be actually used for decision-making processes.
- Training in digital tools so that wherever they are available, multipliers and farmers can use them to access updated information.
- Include key training, such as PGS and training related to access of farmers to specialized organic markets, including export markets.

- Availability of self-learning tools so that trainers and trainees can deepen their knowledge in areas of interest and keep updated. These can be digital tools if connectivity and smartphones are available to farmers. Still, if not, training material in other formats should be made available (printed tools, pictorials, information to be disseminated through local media -radio, television-, SMS messages with key updated information, etc.). It is essential to consider that even power is not always available in certain villages, so information and knowledge packages should be developed accordingly.
- Organization of activities for disseminating EOA information and engaging the community (information exhibits/fairs, school competitions, village debates, field visits to demo plots, etc.).
- Continuous review and improvement of learning strategies and training material. Standardized curricula and training handbooks for facilitators are vital to ensuring quality along the cascade system.

Metrics for this principle can include:

- Number of Centres of Excellence equipped, strengthened and linked to local demo plots.
- Number, types and models of demo plots established at local levels.
- Number of farmer fields established and strengthened at the community level.
- Number of male and women champion farmers leading information transfer at the village level, and type of knowledge they are sharing.
- Local adoption of shared technologies, practices and innovations for fostering EOA at the village level.
- Number and category of local stakeholders supporting the training process and developing ownership for sustainability aims.
- Number and type of self-learning tools developed and levels of usage by farmers.
- Number and categories of farmers training other farmers, based on their training and the available training material.
- Percentage of farmers interested in adopting EOA practices and technologies and can access inputs and materials needed for transition.
- Percentage of trained farmers who declare the utility of the information they provided and generated for informed decision-making processes.
- Percentage of farmers who have been trained and are actively participating in local PGS and accessing organic markets.
- Number and type of training material and strategies reviewed after implementation and updated.
- Among others.

V.5 Evidence-based:

Ensure research and dissemination of information

Apart from their essential role in training activities, Centres of Knowledge/Excellence and demo plots are also expected to be spaces where participatory research can take place. Ideally, they should be equipped with laboratories where basic analysis such as soil or compost can occur. Therefore, it is important to strengthen all these facilities so that research processes can be conducted.

A first step can be to identify information or knowledge gaps that the training process is facing and to which research could contribute. Research processes are important for validating technologies, for instance, producing inputs required for triggering agroecological transitions at large scales or ensuring that technologies do not have any negative effects before being rolled out to farmers. Research results can also inform farmers' decision-making processes and national and local policies for fostering EOA. Alliances with research institutions or universities are also key for collecting relevant information that can be useful for responding to the training needs of farmers. Finally, information from the research process can be packaged and widely disseminated for the use of other farmers, for instance, through media support or digital platforms.

Metrics for this principle can include:

- Number and type of Centres of Excellence/ Knowledge/trial and demo plots which are conducting OA research processes that contribute to co-create knowledge with farmers.
- Number and types of agreements with research institutions and universities and description of their contributions to research activities of the process.
- Number and types of information and knowledge products resulting from the research process (handbooks, policy briefs, brochures, etc.)
- Number and types of users of generated information that have accessed research results (through media, digital platforms, etc.).



V.6 Community spirit:

Backstopping and cross-learning at all levels.

Building a community of learning and practice.

Once the initial training at the different levels of the cascade system has taken place, it is essential to follow up on the process and its results and backstop trainers and farmers. It is also key to encourage and backstop the creation of a community of learning and practice at every level of the cascade system and across three levels. Backstopping and cross-learning can include the following strategies and activities:

- Organize refreshing sessions to identify gaps in the training process and additional information or support Master Trainers, multipliers or farmers may need.
- Follow up on training processes organized by multipliers and farmers (for example, by attending some workshops conducted by them) and provide them with the necessary tools and resources to replicate the training properly.
- Routine field monitoring of farmers' fields/farms to track adoption. Check if farmers are implementing the training they have received or if they need additional support.
- Conduct regular reviews of the process through reflection meetings at each level of the cascade system and meetings across the cascade systems.
- Organize exchange of experiences in different formats and across the cascade system (learning visits with farmers of one village visiting another or other demo plots; virtual meetings among Master Trainers; etc.).
- Follow up and strengthen champion farmers' capacities so that they can be agents of change within their communities.
- Provide tools that facilitate continuous communication and learning exchange among the community of practice members (Master Trainers, multipliers, farmers). WhatsApp groups can be difficult to manage; other digital platforms may be needed.
- Make available additional training materials and information resources for the self-learn of all members of the cascade system. Combine digital platforms with other formats (printed, pictorial, radio, etc.) to ensure accessibility to communities with limited power and internet connection.
- Support strengthening cooperatives and PGS groups, especially during the transition phase, so that farmers can assist each other.
- Backstop key processes, such as information-based decision making, recovery of indigenous seeds and exchange, and PGS, among others.



Metrics for this principle can include:

- Number and type of members of the community of learning and practice who actively participate in collective meetings and exchanges through digital platforms and other means.
- Number and type of training backstopping activities organized: refresher sessions, field visits, exchanges of experiences, etc.
- Number of collective initiatives promoted by the learning community for strengthening EOA at different levels.
- Usage (statistics) of additional training material available for self-learn in digital platforms and other means.
- Number and type of champion farmers supported.
- Number and categories of farmers who have been able to train other farmers.

V.7 Scaling-up:

Network with local institutions to gain additional support for the process and for scaling up

A wide variety of stakeholders can contribute in different ways to the training process and its sustainability. „Everyone should be brought on board.“ Key stakeholders can include:

- All players of the value chain involved in EOA: farmers, aggregators, processors, traders and market players.
- Consumers: through awareness campaigns, consumers can join the cause and even follow consumer associations that support the process.
- Policymakers.
- Government institutions.
- Extensionists and rural service providers.
- NGO.
- Private sector.
- Research centers and universities.
- Media.
- Cooperatives and farmer associations.
- Even the conventional „to be converted.“

Awareness creation meetings with key stakeholders and innovative communication strategies are essential for establishing effective partnerships. In addition, networking is key for avoiding duplication of actions, for the collective harvest of available resources, lobbying and advocacy, and sustainability and scaling-up of the process.

Key metrics for monitoring the advance regarding synergy creation and building of strong partnerships and networks can include:

- Number and type of partnerships created.
- Number and types of joint initiatives established and implemented collectively.
- Amount of resources/funding that alliances have contributed to the training process.
- Number and type of scaling-up of the process achieved through partnerships.



V.8 Amplified outreach:

Document and widely disseminate the experience

Documenting the experience and disseminating it is key for learning purposes of implementation organizations, enlarging the training coverage, advocating, gaining new allies, and scaling up the initiative.

Some strategies and activities for implementing this principle may include:

- Develop tools for documenting the experience and strengthening capacities for effective use. Ideally, standardize templates and formats for documentation.
- Collect and document success stories and case studies.
- Use pictorial documentation (pictorials, infographics) and videos (for instance, for documenting good practices, technologies, and innovations).
- Invest in digital technologies for documentation and dissemination.
- Produce materials with „catchy messages.“
- Identify target audiences for documents and material produced and define the most appropriate pathways for dissemination, including innovative ideas such as using media influencers for engaging broader audiences, disseminating information on strategic international days, etc.

Metrics for this principle can include:

- Number and type of documentation products resulting from the process (success stories, case studies, best practices, knowledge products, etc., generated and shared).
- Variety of information dissemination strategies used.
- Number and type of audiences reached.
- Number and type of resulting initiatives of wide dissemination of contents generated (new allies for the process, scaling-up, policy advocacy, etc.)



Monitoring and Evaluation Phase

V.9 Participatory, systematic and accessible:

Continuous monitoring of the process with a learning approach

Continuous monitoring of the training process to ensure quality throughout the cascade system and with a learning approach is key for advancing EOA.

Key strategies and activities for implementing this principle are:

- Collect information of agreed indicators through common tools, analyze it through collaborative, participatory exercises and jointly identify adjustments required in training strategies, as well as success stories to be shared with other groups. Support team capacities for monitoring, evaluating, and reviewing M&E tools and reporting templates periodically.
- Monitor the performance of trainers (Master Trainers, multipliers, champion farmers) and give feedback and backstopping for improvement.
- Monitor adoption of information and knowledge through field visits and give feedback. Monitor if EOA practices are sustained after trainings.
- Conduct periodic M&E workshops with Master Trainers and multipliers.
- Record data on key topics (for instance, soil fertility and other information generated at demo plots).
- Evaluate, using a participatory approach, advances towards implementing outcome and process principles for quality assurance of the training process.
- Evaluate the overall experience, main impacts and lessons learned.
- Generate evidence for advocacy aims.

Metrics for this principle can include:

- Number and type of monitoring visits to multipliers, champion farmers and farmers for tracking adoption.
- Number and type of intervention strategies informed by data collected and analyzed.
- Number of monitoring and evaluation collective exercises and workshops conducted (per level of the cascade system and across levels).
- Number of progress reports developed and shared for learning and continuous improvement
- Number and type of advocacy products developed based on evidence generated (for instance, case studies with facts regarding positive impacts of EOA practices).
- Number and variety of policies influenced by means of evidence generated.

VI. Outcome Principles



Outcome principles relate to the effects or impacts the training process seeks to achieve. These principles refer to transformational changes fostered in food systems and in communities more broadly.

Seven outcome principles inspire the ToToF process:

Transformational changes:

- Mindset transformation
- Knowledge co-creation
- Institutional policy change

Inclusivity:

- Integration of marginalized groups

One health:

- Improved health and nutrition
- Conservation of biodiversity and quality of ecosystem services

Fairness:

- Sustainable markets and incomes

This section describes these principles, including some elements regarding their narrative and metrics, as well as some linkages among several principles. Metrics refers to measures, while narrative describes the pathways for achieving a principle and gives meaning to metrics.

Transformational changes

VI.1 Mindset transformation

Mindset transformation is a process that takes time, a lot of effort and hard work. However, Mindset transformation is key for achieving other expected changes in the process. Social, cultural, economic and environmental factors influence how farmers think, see and do things. Attempting to change mindset through the training process can be challenging, as many stereotypes have been in place for decades. However, the knowledge shared by trainers -with a hands-on approach, the concrete results of the processes that farmers experience and the strategies that are set in place for raising awareness of farmers in several topics related to organic agriculture should progressively induce changes in mindset. This will lead to other relevant transformations of the food systems.



Some changes in mindsets that the training process can lead to include:

- Shift from monocultures to polycultures**
 Farmers who believed that monoculture was the only way to earn money will discover that polycultures and other activities related to organic agriculture allow them to diversify their income sources and ensure proper nutrition for families and healthy soils. „From single staples to colored plates for good nutrition.“
- Prioritizing family safe nutrition**
 Farmers who used chemical pesticides for production and who realize about the importance of producing safe food for the nutrition of their families.
- Making organic agriculture interesting for all people**
 Communities that believed that agriculture was left to the aged and less privileged and who discover that organic agriculture is interesting and that everyone can do it, including the youth. Ensuring children are exposed to organic agriculture topics and activities within their studies is key to ensuring their mindset already includes these learnings.
- Shift from home supply to surplus**
 Farmers who thought organic agriculture was only for self-subsistence will realize they can generate income from selling their surplus production.
- Recognizing the importance of local markets**
 Farmers who always thought that unless they exported, they could not earn money and who realize that local organic markets are accessible and provide them with sustained income.
- Making organic agriculture affordable through fair prices**
 Farmers who introduce technologies that make organic agriculture affordable and consumers who think organic products are expensive and who realize that their cost is affordable and that prices are fair considering all the effort that organic agriculture implies and its social, environmental and health benefits.

A happy story of mindset transformation

What is mindset transformation? When you move a step ahead of the box of what you think and know, your mindset starts transforming. Once, some farmers in a rural area were sitting with some friends when a trainer in organic agriculture arrived and invited them to the training. Some decided to attend, and others decided not to. The farmers lived in a dry place where some food grew by themselves, and they thought: „a fruit is growing there; when it is fully grown, I will go and get it; I don't need to work on it.“ They didn't need to cultivate their farm. They just sat and waited for some fruits to be ready to eat; they knew as well that they would receive support from the government if needed. Farmers who decided to attend the training learned about soil management, water conservation, pest management, animal breeding, entrepreneurship, Participatory Guarantee Systems (PGS), value addition and marketing of their products. When they went back to their farms, they started thinking about the opportunities their families would have if they implemented some of the practices they had been taught: their children would be able to go to school if they sold their products, they would have a variety of food, even good nutrition, they would have a forest and preserve the environment, they would have enough money in their pockets to take their families for a holiday or even buy a car.

So, the farmers decided to implement what they had been taught in training. After some

time, those farmers have very nice green environments, trees and vegetables have been planted, farmers are milking animals and transforming it into yogurt, there is wood available, and there is a system for water conservation in place. One year was needed to transform their farm. They have also decided to start a PGS and started marketing their products. They go to the market with a variety of products: sweet potatoes, sugar cane, pineapple, bananas, and vegetables, which were not on their farms before the training. They are obtaining income for their families. These farmers are celebrating: „Yes, this organic farming training helped us.“

Maybe the farmers who didn't attend the training are now buying food from the other farmers, maybe now they are interested in agroecological agriculture or maybe they are still in the same box of thinking, with the same mindset.





VI.2 Knowledge co-creation

„We believe in the flow of knowledge in all directions, bottom-up as well as horizontal.“

„Just like water, the knowledge that we share is refreshing to us and is valuable to our target audiences.“

„We ensure that training answers the questions that farmers have so that knowledge transfer is in line with what they expect to learn from us.“

Knowledge co-creation is a process that seeks to share with farmers useful information and skills so that they can change their practices and transform their farms. It is important to locally validate the information and technologies before disseminating them broadly to farmers. Centers of Excellence, Local Training Centres, demo plots, and the family farm are key for knowledge co-creation throughout the training cascade system. Media can also play an important role in disseminating information.

Follow-up and feedback are key after knowledge has been shared. Feedback from farmers to centers of knowledge is key for enriching information and knowledge.

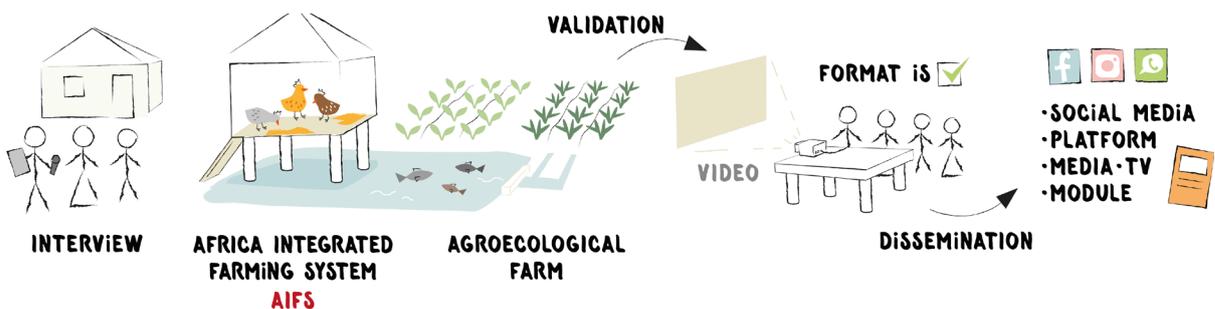
Knowledge transformation can be first measured by the number of people trained at all levels and the number of adaptations, appropriateness, innovation and knowledge products generated.



Knowledge Transformation (ToToF)



Knowledge Transformation (Information)



The pictorials show that there are two levels for sharing information. The first one is Centres of Excellence of Farmer Training Centres or anywhere where knowledge can come from. There is a training hall where many multipliers are trained. Then, the multipliers will share this knowledge with farmers in the villages. Then the farmer will take all the knowledge and skills shared by multipliers and apply them on their farms. Now their farms have diverse crops and animals. Now the farmers have produced enough to take the products to the market with their trucks. There are people around who are shopping. So, this village is transformed.

The Centres have different technologies: demo plots and fertilizers that are organic and replicable. How can fields have technologies that others can implement? For example, an extension officer interviews a farmer about technology and captures it on video. For instance, a technology named African Integrated Farming System integrates everything in the farm: crops, livestock, water, etc. Then the technology is shared, validated and then formatted so that it can be replicated and disseminated by others.

„Participants transform their knowledge mentally, physically and methodologically.“

„The network is full of knowledge that is ready to share with others.“

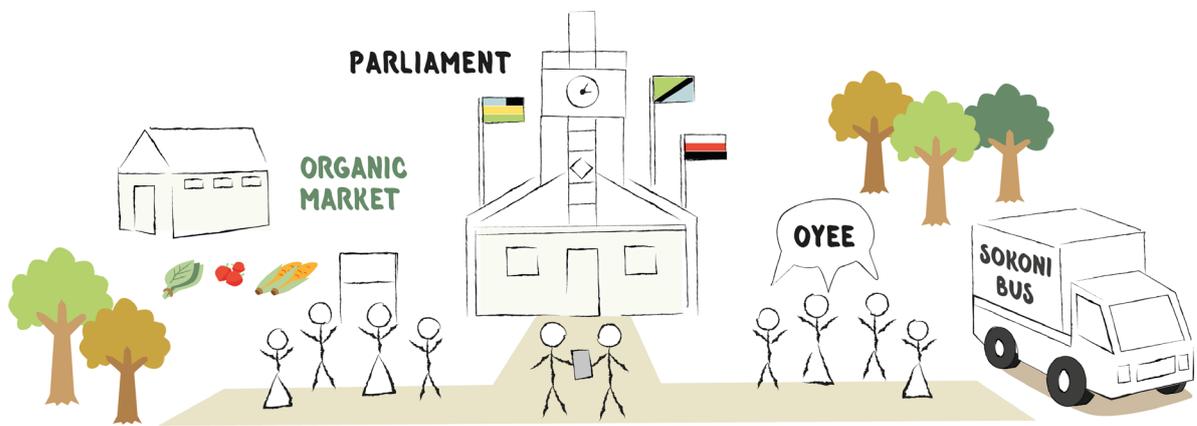
VI.3 Institutional policy change

„Advocate so that organic agriculture can be fully embraced by institutions“

The training process aims at **empowering communities**. „It is only empowered communities who can advocate for policies.“ It also aims at **strengthening institutions** (from farmer level to cooperatives, PGS groups and market associations) so that they can lobby collectively. Involving a variety of stakeholders is key for the advocacy process (farmers, traders, institutions, policymakers, local authorities, national parliamentarians, etc.). It is indeed necessary to **bring everybody on board**. The objective is to have organic agricultural policies, plans and strategies developed and mainstreamed. But also to influence other policies and institutions which may contribute to the development of agroecology. The training process also aims to influence the curricula of other training services. Extension officers are invited to attend the trainings and are provided with tools that foster agroecological transitions.

For influencing policies, it is necessary to identify advocacy areas, topics or issues, identify target groups and develop an advocacy strategy. Preparing case studies that include facts and figures, research results and success stories can be useful for raising awareness and sensitizing decision-makers about the benefits of OA initiatives so that they can „join the cause.“ Publicity is also key for advocacy aims. „At times, we are doing so much but nobody knows we are and when a bill is proposed, it is rejected because few people support it.“ So, publicity and advocacy before bills are passed are essential.

Metrics for this outcome can include the number and variety of policies related to EOA influenced and enacted, as well as resources assigned for their implementation.



NARRATIVE

- **FACTS ON IMPACT**
- **INVOLVEMENT OF ALL STAKEHOLDERS**
- **PUBLICITY**

METRICS

- **NO. OF STAKEHOLDER FORUMS HELD**
- **FACTS ON IMPACT**
- **OA POLICIES-STRATEGIES DEVELOPED-MAINSTREAMED**

For policies to pass, they have to go through the parliament, so the image shows the Parliament Building. In front of it, there are two people. One of them is a farmer, and the other one is a Parliamentarian, who is delivering a bill that has been passed on agroecological organic agriculture to the farmers. There is a celebration on both ends, which happens when you have the right policies in place. Marketers, business people, traders, and farmers are celebrating.

And what does this translate into; good roads and connectivity, private vehicles, meaning that the people's livelihoods improved. The private transport of the product has the name of the market on it, and farmers are so proud of their products. They have learned to reduce losses and contamination as they take their products to the market. The market car has already delivered the products. So, the farmers are also celebrating what comes as income from their products. At the other end, there is a lot of vegetation. When you have the right policies in place, all other things will fall in place. So, there is a great connection between livelihoods and policies.

IFOAM policy toolkit can be a useful tool. Based on the information you provide about the situation in your country, what policies you have, what you would like to see happen, what is the stakeholder engagement, what is the political context, etc., the toolkits suggest the next steps in the process of advocacy.



Inclusivity

VI.4 Integration of marginalized groups

Including marginalized groups should be one of the aims of the training process. This includes women, youth, people with disabilities, ethnic minorities, people who do not have access to resources, etc. Their specific needs and interests should be considered throughout the process and particular strategies may be needed to address them. This includes taking into consideration the physical venues for trainings so that they are accessible and within communities, but also the contents, the materials and the methods selected for training and backstopping them (consider their language, if they know how to write or not). Specific courses for them or some adaptations would have to be done, for instance, adapting the standard design of a demo garden so that participants who are physically challenged can freely move within the garden and easily implement expected activities. The cultural and social characteristics of these groups should also be taken into consideration. Other special needs that marginalized groups may have and to which, in some cases, the process could contribute are:

- Support their income generation: interesting livelihood options for marginalized groups can be mushroom growing, beekeeping, poultry, dairy goats, piggery, and even for people with disabilities. Also, fostering Villages Savings and Loans Associations (VSLAs) can support their fragile economies.
- Increase their social protection.
- Advocate for women's right to own and inherit land.
- Dissipate fears of women attending training activities by including their families.

Metrics for this principle can include:

- Number of participants of marginalized groups actively participating in the training process.
- Number and categories of participants of marginalized groups who are continuously accessing information, taking into consideration their particular needs of strategies/formats in which they can access the information.
- Number of participants of marginalized groups (with emphasis on women and youth) in leadership and decision-making positions at all levels. The number of participants of marginalized groups heading associations, cooperatives, agro-business, enterprises and related initiatives and projects.
- Number and categories of participants of marginalized groups (with emphasis on women and youth) who are accessing, controlling and owning resources and how.
- Number and categories of participants of marginalized groups (with emphasis on women and youth) who are accessing markets and how.
- Number and categories of participants of marginalized groups whose income have increased (and how they are contributing to improving their lives).
- Number and types of jobs created for marginalized groups by means of which they have been empowered.

Marginalized people should also be part of the associations for which the training is provided. The image represents work done by a particular group of organic farmers in terms of inclusion. In the initial stage, this group has a planning meeting in one of the community meeting venues. In this case, it is under a big tree in the community. This is a way of ensuring that they preserve nature and use the available resources.



In that meeting, there is a representation of the women as one of those marginalized groups in terms of access and control to resources. There are also persons with disabilities in the meeting. There are also youth, elders, and there is a facilitator. They are doing a participatory planning meeting for their organic group in a venue accessible to everyone, even women, so that they can return to their homes in time and prepare meals for their households nearby. In that meeting, everyone is given a chance to share their views and discuss.

After they plan, they also have the demonstration place or demonstration plot, where they do their learning, still within the community, not far from their venue. We know that the training of farmers is that they learn by doing. So, most of the work they are doing is in their garden so that people can adopt those practices; a garden is next to the road, also next to their homes. All these categories of people (women, disabled, youth) are all learning together as a team. The garden has to be very close so that if they have any doubts, they can go back to the garden. Inclusive learning has to involve everyone and use methods familiar to everyone, including appropriate information and dissemination of technologies. They have their own fields for practicing within the community. Community demonstration gardens and sites are key to the learning process.

Ideally, there should also be inclusive organic markets. For example, in this market, there is a ramp so that people who use wheelchairs can access the market, but there are also disabled farmers selling their organic products. In these organic markets, we need to include everyone; they should all be aware. An aspect that is also included is the importance of taking care of the environment. There are trees, and butterflies flying around. Even near the market is vegetation, the aspect of biodiversity because it benefits all the people, whether they are disabled, elderly, women, or youth. They all depend on the ecosystem that is interconnected

One health

VI.5 Improved health and nutrition

Improved health and nutrition start with healthy soil and ecosystem. Conserving a green and clean landscape allows the harvesting of clean rainwater, which ensures clean water for crops and for human use. Enriching the soil with organic matter and maintaining biodiversity in the soil leads to healthy crops. Diverse healthy crops are key for a diverse nutrition and improved health of farmers and consumers. Integration of crops and livestock in the farm and diet is also important.

Food systems sanity should consider six components: food production, post-harvest (storage facilities is a critical issue), also food losses have to be considered, (pest and diseases challenges), food transport, consumption, external factors of the system (climate change, covid, food exports-imports). Food safety must be guaranteed from production to consumption and standards for each component should be agreed on and monitored (through PGS groups, for instance). The accomplishment of these standards is key for the certification process. „Healthy products are key for achieving fair prices in the markets and consequently for improving farmers' income.“

Ensuring food safety should also consider:

- Pesticides: pest disease management should avoid pest residues in food.
- Value addition: not processing which leads to nutrient loss, but food preservation through washing and steaming.
- Waste management: to avoid polluting water.

Metrics for this principle can include:

- Food diversity (crops and livestock).
- Nutritional indexes and Women Diet Diversity Score (WDDS) applied in Nutrition Sensitive Agriculture.
- Reduction of the number of patients in hospitals with diseases related to nutrition.
- Children who attend school who have a good nutrition index.

The picture presents healthy crops which grow in healthy soils. Food must be diverse to ensure health and nutrition. There are carrots, tomatoes, onions, fish and clean water that comes from the ecosystems, which are not polluted. The person is very healthy and proud, has energy for working and walking and is happy because of good nutrition. The hospital has few patients because the population is healthy due to diverse and safe food. Many babies are born because of the community's good reproduction rate. At school, healthy children play and can study. People are very happy and proud because they eat well.



„One-health: looking after the health of all living beings, including nature.“

„Production of own food without harmful chemicals constitute a good example for neighbor families.“



VI.6 Improved biodiversity and ecosystem services

Several strategies promoted within the training process seek to contribute to improved biodiversity and ecosystem services. These include:

- Crop diversification.
- Species conservation.
- Diverse ecological land use systems.
- Water conservation systems.
- Integrated pest and disease management.
- Soil fertility management.
- Nutrient recycling within the ecosystem (carbon sequestration, nitrogen fixation in the soil system through certain tree varieties).
- Introduction of technologies that interconnect with natural ecosystems and are aimed at increasing productivity (such as biogas, solar drying, solar power, energy-saving stoves, etc.).
- Introduction of pollinators and related plants.
- True cost accounting to evidence the positive environmental effects of agroecological products.

All these elements contribute as well to climate change mitigation and adaptation.

Several elements in the drawing represent biodiversity and ecosystem services. The sun is a source of energy that powers the whole system. There are also proper rain patterns. The landscape has mountains and a river, with very clear water. Various vegetation covers the hillside, including trees, bushes, palms, and vegetables, also considering the market's needs. There are monkeys and other small wildlife that inhabit the ecosystem around the river. Some specific areas of the landscape have been left for them. The champion farmer in the drawing has his family livestock and a rice pad on the other side of the river where monkeys live. He is also implementing some soil conservation practices. Even his neighbor is conserving the river ecosystem.



The house harvests rainwater and has compost toilets for recycling family wastes and other wastes of the farm. In addition, livestock waste is being used as biogas for the household's cooking and warming. There is also beekeeping around the area.

Fairness

VI.7 Sustainable organic markets and incomes

Farmers should go organic, knowing that the market is there, that communities are embracing organic products.

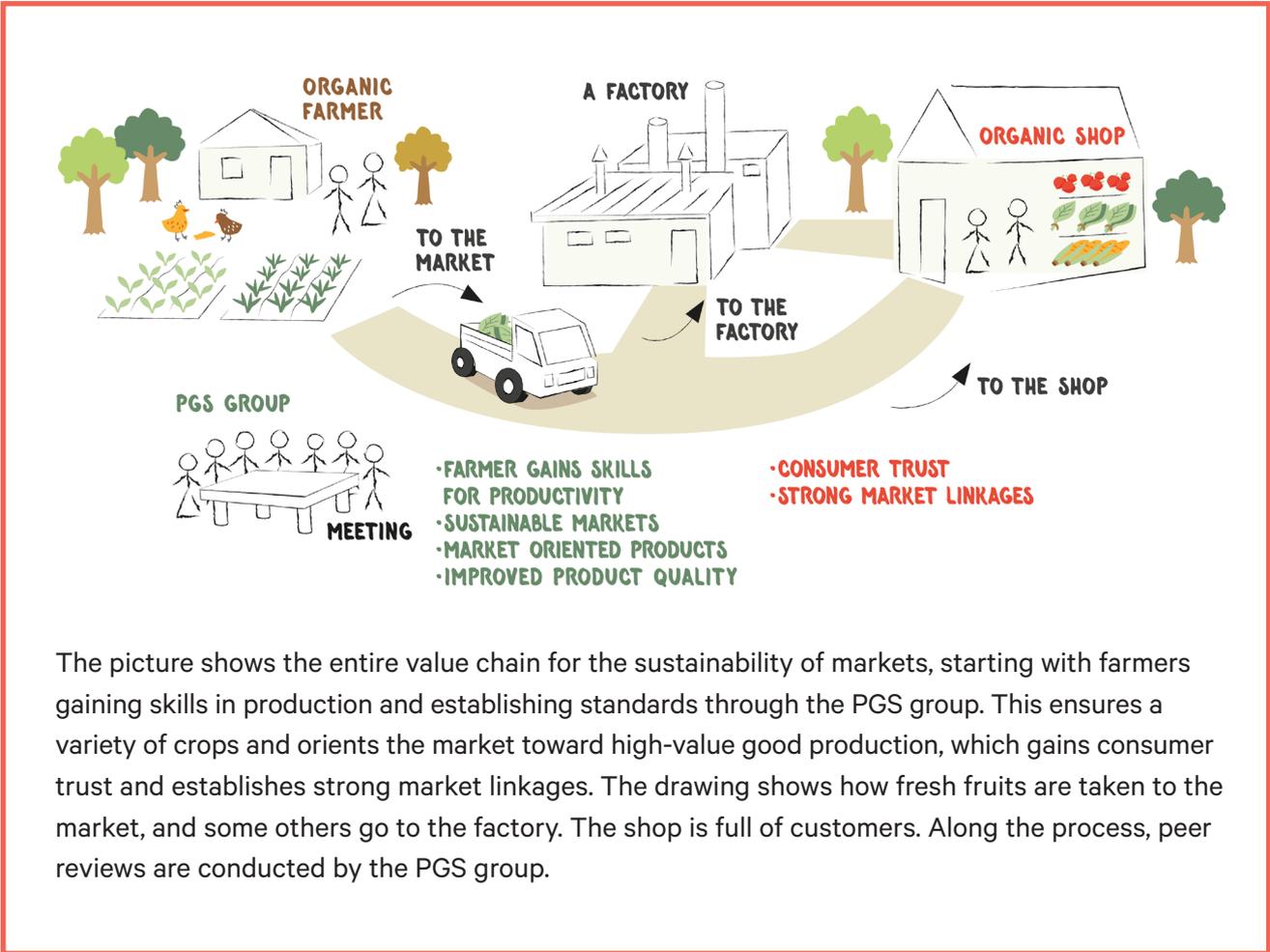
Surplus production in organic farms should lead to the emergence of organic farmers' markets (local markets, earth markets). It is key to establish linkages among production networks and specialized markets, both national and international because farmers are encouraged to target crops that can also attract international markets. A first step is to establish production standards and to make sure that farmers can supply high-quality products to local organic markets and then advance towards international markets. PGS system and conformation of farmer cooperatives can facilitate this process. Certification processes must be made affordable and easy for farmers, as nowadays, they are expensive and complicated.

Ensuring organic products are attractive for increasing their demand is key. It is important to raise awareness of the importance of fair prices for agroecological products. In many countries, they are still the same as conventional products; therefore, agroecological farmers' efforts are not recognized. Promotional events such as food fairs or field days are important for gaining support for the process and building trust, strengthening linkages with consumers. Innovative markets should bring closer farmers and consumers for more equitable urban-rural connections.

Regarding markets it is also advisable to:

- Involve value chain actors.
- Put in place value addition systems.
- Appropriately manage the value chain.
- Have in place public infrastructure that facilitates operations of the value chains.

Increasing the uptake of EOA products in specialized markets and improving their income supports the mindset transformation of farmers.



The picture shows the entire value chain for the sustainability of markets, starting with farmers gaining skills in production and establishing standards through the PGS group. This ensures a variety of crops and orients the market toward high-value good production, which gains consumer trust and establishes strong market linkages. The drawing shows how fresh fruits are taken to the market, and some others go to the factory. The shop is full of customers. Along the process, peer reviews are conducted by the PGS group.

VII. Short stories that illustrate some of the principles

Seeds of change by Mithini S.H.G

By: Samuel Nderitu and Bathseba Ratemo, Kenya



Mithini Self Help Group (SHG) is situated in Machakos, a semi-arid and arid land (ASAL) country. The farmer group has 25 farmers (19 women, one man, with five youth) practicing organic farming. The group was registered in 2021 after its formation in 2020. Through GBIACK trainings by their multipliers, the farmers learnt about OA principles and practices, which they incorporated and adopted.

To be a member, one has to practice crop diversification within their small farms, targeting crops that are adapted to climatic conditions and environment, for example, sorghum, indigenous maize, indigenous vegetables, mangoes, etc.

In addition, each member must establish a kitchen garden that will be able to supply vegetables, not only for subsistence but also for marketing, which is a collaborative venture between GBIACK and the Kenya Organic Agriculture Network (KOAN). Also, they are in the process of constructing a community seed bank. The plan for the group is to supply organic vegetables in an organic market they want to establish after undergoing PGS certification.

Practical, tested simple innovation

By: Aringo James Hill, Uganda

As a passionate organic farmer who had moved to live in an urban city, the thought of continuing with farming and producing clean food at my homestead was constantly ringing in my mind. However, I knew in my heart that I needed to figure out a way of producing my own food using the small space I had within the rental property.



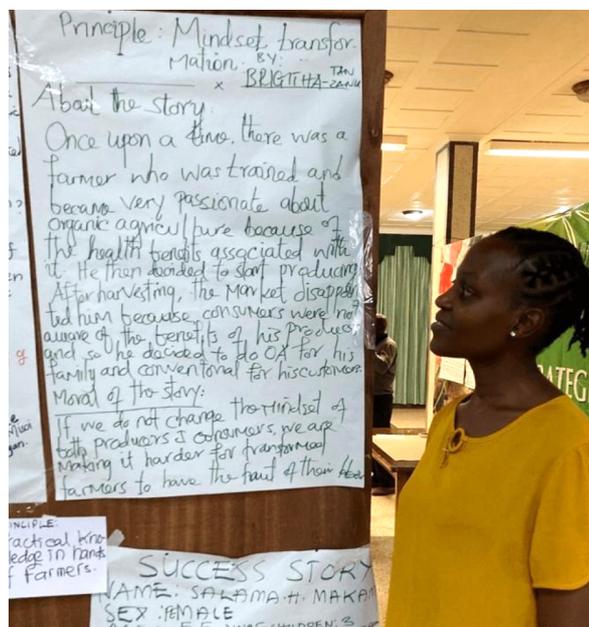
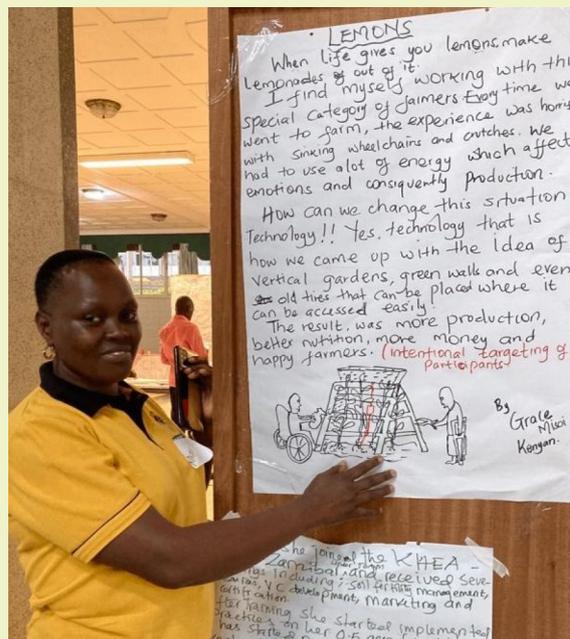
During the trainings, I saw a simple innovation of utilizing permanent „wet gardens,“ in which I can plant various crops throughout the year and have a constant supply of vegetables in and out of season organically. I adopted it instantly. Indeed, my problem has been solved and I am one of those lucky farmers enjoying the benefits of this simple innovation.



When life gives you lemons, make lemonade out of it

By: Grace Misoi, Kenya

I find myself working with this special category of farmers. Every time we went to the farm, the experience was horrific, with sinking wheelchairs and crutches. We had to use a lot of energy, which affected emotions and, consequently, production. How can we change this situation? Technology! Yes, technology, that is how we came up with the idea of vertical gardens, green walls and even old tires that can be placed where they can be accessed easily. The result was more production, better nutrition, more money and happy farmers.



Mindset transformation

By: Brigitha Didas, Tanzania

Once upon a time, there was a farmer who was trained and became very passionate about organic agriculture because of its health benefits. He then decided to start producing. However, after harvesting, the market disappointed him because consumers were not aware of the benefits of his products, so he decided to do OA for his family and conventional for his consumers. Moral of the story: if we do not change the mindset of both producers and consumers, we are making it harder for transformed farmers to have the fruit of their work.

Success Story

By: Valentine Kyage and Yohana Malecela, Tanzania



The story is about Salamha H. Makan, aged 55, with three children, one male and two female. She is a widow and lives in Unguja, Zanzibar. She is a member of Tirdmi, a farmer group engaging in producing fruits and vegetables. She started farming activities in early 1990, where she practiced conventional farming. However, she experienced negative impacts from using conventional farming, including high input costs, soil deterioration, and contamination of vegetables and fruits, hence losing the valuable market to her local community and existing tourist hotels. All of these led to the loss of income to buy alternative food and improve her household's livelihoods.

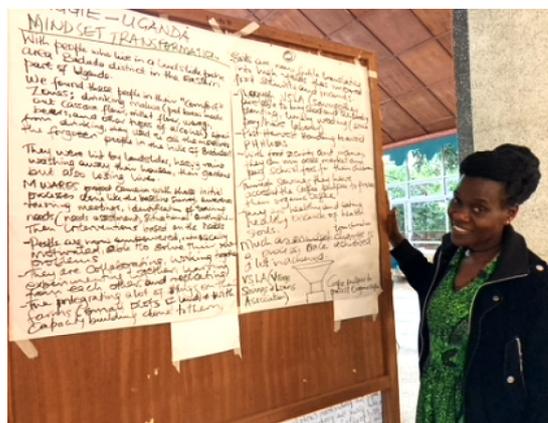
In 2021, she joined the KHEA Project in Zanzibar and received several trainings, including soil fer-

tility management, seeds, value chain development, marketing and PGS certification. After training, she started implementing the practices on her 0.5-acre farm, where she started preparing and applying bokashi, which takes 12 to 13 days to be ready to use. She says the production costs have decreased and the production of vegetables and fruits has increased. She has managed to start a drip irrigation system on her farm. Given that her income has increased through the sale of organic veggies and fruits in the tourist hotels and local markets, she can afford the needs of food and improvement of the livelihoods of her family members. She has also been able to pay for the fees of her daughter, who is now attending university.

A story about the forgotten people in the hills of Budunda

By: Maggie Kabuye, Uganda

We found people who live in a landslide area of Budunda District in the Eastern part of Uganda, living in their ‘comfort zones’, drinking malwa (pot brew made out of cassava flour, millet flour, warage and other types of alcohol). Apart from drinking, they used to call themselves the forgotten people in the hills of Budunda. Landslides hit them, heavy rains, washing away their houses and their gardens, but also losing lives. M Wares Project came in with those initial processes like the baseline survey, awareness-raising meetings, identification of training needs and situation analysis. Then interventions based on the needs.

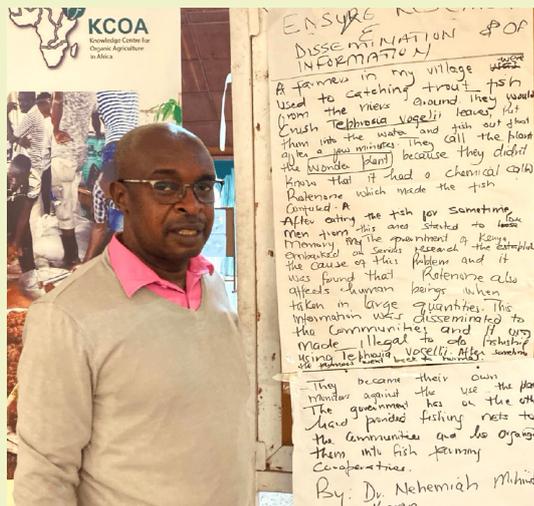


People are now empowered, intrinsically motivated and able to solve their problems. They are collaborating, working together, experimenting, learning from each other and replicating. They are integrating a lot of things into their farms (small plots of land) and with capacity building, soils are now fertile, translating into high yields, which has improved food security and incomes. Through VSLA savings, they can buy seeds and ultimately plant. They are better able to take care of weeds, with some even paying and hiring labor. They also do post-harvest handling (PHH) to avoid PHH losses. With food security and income, they can now access the market and pay their children’s school fees. Through savings, they have acquired a coffee pulper to process their organic coffee. They are healthy and eating healthy because of healthy soils. Much as mindset transformation is a process, once achieved, a lot is achieved.



Ensure research and dissemination of information

By: Dr. Nehemiah Mihindo, Kenya



Farmers in my village were used to catching trout fish from the rivers around. They would crush Vogel Tephrosia (*Tephrosia vogelii*) leaves, put them into the water and fish out trout after a few minutes. They call the plant the wonder plant because they did not know that it had a chemical called rotenone which confuses the fish. After eating the fish for some time, men from this area started to lose memory. The government of Kenya researched to establish the cause of this problem and it was found that rotenone also affects human beings when taken in large quantities. This information was disseminated to the communities and it was made illegal to do fishing using these leaves. After some time, farmers went back to normal. They become their own

monitors against the use of the plant. On the other hand, the government has provided fishing nets to the communities and has organized them into fish farming cooperatives. Even natural plants can be dangerous if not consumed properly.

Improved health and nutrition

By: Felicien Ndagijimana and Divine Icyimpaye, Rwanda

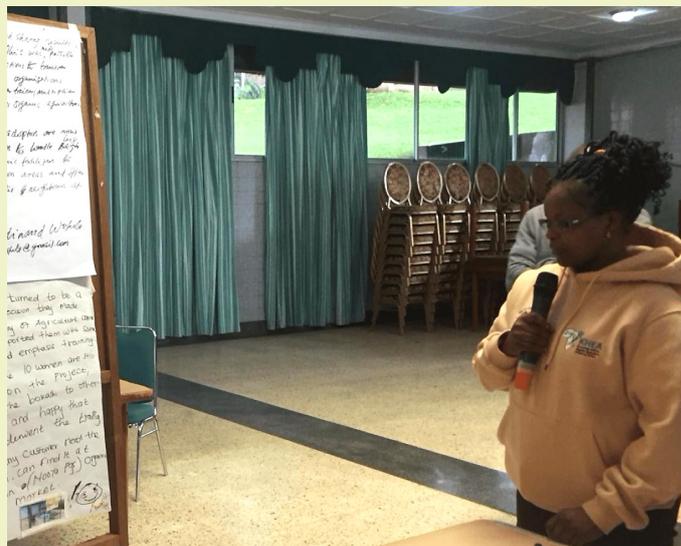
We have a company called SINAGERALD – Urwibusto, an agro-processing enterprise. We launched the project to support the citizens around the company. It has two objectives: improve livelihood and well-being of the village and increase raw material used in the factory. We started providing plant material, including seeds, livestock (cows, pigs, chicken) and technical assistance (veterinary, agronomist). Some of them were poor, so they started to sell all their materials to the big farmers. After that, the company has been changing its strategies. They built a school around the village, where school fees is not paid (it's free), with the ultimate condition: if you don't cultivate what the company advises, then you have to pay school fees. Farmers started cultivating according to the agreement with the company. Now they can pay for health insurance, build houses, and have free education even for high school and their savings have increased.



Practical knowledge in the hands of farmers: a story of a farmers group in Kiserian (Olanana Group) trained by CSHEP during KHEA project

By: Esther Kiruthi, Kenya

There is a group of 10 farmers who CSHEP trained in 2016. They have been doing organic farming, mostly kitchen gardening because they are in the peri-urban areas of Kajiado County in Kenya. They also bake cakes for sale and have a merry-go-round as a group for sustainability.



In 2021, they got the opportunity for training from one multiplier of KCOA-KHEA Project. So they decided to make ,bokashi' and package it for sale. This turned out to be an excellent decision they made. The Ministry of Agriculture came in and supported them with some funding with an emphasis on training. Today the ten women are still selling the ,bokashi' to other farmers and are happy that they took part in the training. If any customer needs the ,bokashi,' you can find it at Kiserian Organic Farmers Market.



Cutting the rope to failures

By: Daniel Aliddeki Ssajjabi, Uganda

The different hurdles communities face in changing mind-sets: breaking chains of poverty, captivity, and success. St. Jude, over the years, has trained farmers in dire situations to break loose from situations holding them back. „Failure slaps in public, and Success hugs you in private.“



My story

By: Ferdinand Wafula, Kenya



The thought of how food works was always on my mind after attending an international workshop in Kenya. I kept relating this with soil fertility improvement activities and how farmers could harvest from the rich knowledge gained from the workshop.

An idea to establish small farm trials and make general comparisons suddenly became real. Ruth Okalo was one such farmer who was excited by the idea and immediately allowed the training on biofertilizers to take place at her farm at Emmakunda village. It became the focal point for many farm exchanges and trainings that placed our interventions with farmers on a global stage, sharing our experiences on healthy food, from healthy soil to fermented biofertilizers.

Results of more pest-resistant local maize and vegetable varieties were evident. Demand for more training and sharing results soon became high. This was made possible through good collaboration to transfer training through other organizations through the Master Trainer/Multiplier KHEA. The early adopters are now putting up structures to handle large volumes of organic fertilizers to expand crop production areas and offer surplus to their neighbors at a cost.

Improved biodiversity and ecosystem services

By: John Berchmas, Rwanda

Abakunda Inzuki Coop. is a farmer group with 50 people and produces honey and Irish potatoes. Their working area was around the V.M. Park. The problem faced was the lack of production.

Testimony:

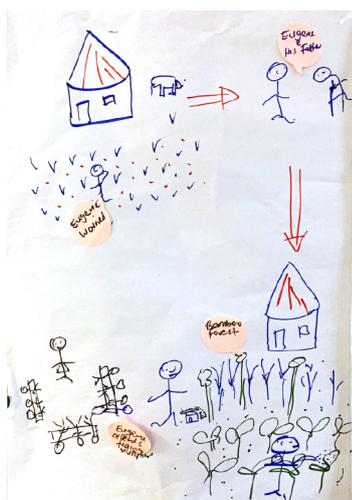
Every season the cooperative harvested 500 kg of honey. They supply the honey to five big supermarkets in Kigali. The first ten years of production were good but now they harvest 100 kilograms. The issue is the use of chemical inputs increased in the area. The population of bees decreased, which affected the pollination of the crops. The wild animals coming out are more sensitive. Through the PGS group created now, the production is getting higher. The farmers use organic input in their farms.

Mindset transformation: life is like a ladder, as you grow their changes

By: Faizo Wasswa, Uganda

As a child, I was vulnerable in my thinking but very curious about farming. When I attained education, more confusion arose as to which farming practices I would consider. Still, I decided to be more practical, learning from many people how to make better decisions. As a result, I attained wider knowledge and experiences that have enabled me to transform many farming communities and individuals, including myself.





Document, package and disseminate indigenous knowledge

By: Diane Uwimpaye and Dieudonne Sindikubwabo, Rwanda and Kenya

Introduction

Eugene is a smallholder farmer based in the northern province of Rwanda, Musanze. He cultivates seed potatoes, cassava, and vegetables and has livestock on his farm. Eugene lives in a small village in the Kinigi sector with his family. During his normal farming operations, he realized that there were many pests affecting his vegetables and other crops.

Journey to change

Musanze district forms part of the extensive Volcano Mountains of Rwanda. The region has deep rich soils and hosts farmers who grow diverse crops. Most farmers here use conventional farming methods, chemicals, and pesticides. In a departure from the other farmers, Eugene started practicing some methods of pest management, which he had learned from his parents. The methods include using bamboo extract and tithonia to control various pests and crop diseases. In addition, Eugene has been doing experiments to improve the technologies to make them more effective. For example, using fire to extract the sap and mixing different ratios of different extracts.

Agent of change

Eugene attended KHEA trainings facilitated by Master Trainers as a multiplier. From the training, he realized the value of his pests and disease control knowledge and how it can help other farmers. Through ROAM, his innovation has been collected and packaged as a video. The video has been disseminated to many farmers and has been used as a learning tool. The video has also been uploaded to the Access Agriculture Platform for wider dissemination.

Conclusion

Think locally and act globally as Eugene. This is a classic example of how indigenous knowledge can be documented, packaged and disseminated for big impact.

The transition of epicenters to agroecology centers of excellence

By: Robert Guloba, Uganda

One of the member Organisations of Pelum Uganda, The Hunger Project- Uganda, established Centres of Excellence, „The epicenters.“ One of which is in Namayumba. This epicenter had space for agricultural activities, but also some fruit trees were planted; mangoes, jackfruit, oranges, and pawpaws.

The epicenter was practicing the conventional mode of farming, using inorganic fertilizers, herbicides, synthetic pesticides, fungicides, and growth hormones. In the beginning, the yield of crops, especially maize and beans, was high. However, as the years went by, the soils developed hardpans as the soils were dead (No living organisms in the soil). It was becoming hard to till the soils and consequently, the yields dropped. On the other hand, for many years (5, 8, 10 years), the mangoes and oranges could flower, but very few miserable fruits were harvested. In 2018, PELUM Uganda introduced agroecology to the epicenter. It implemented the elements of agroecology, ranging from increasing biodiversity, where rabbits, goats, apiary, trees like calliandra, ficus sp, Lucina, albizzia, and other plants like marigold, tithonia, sunflower, etc. However, after two years of project implementation in 2018, there were no visible positive impacts on the site.

However, during this period, the other elements of agroecology of synergy, recycling and efficiency automatically came into play. For example, there was pollination from the bees, soil fertility improvement from the use of animal wastes (goats and rabbits), recycling of matter in the form of mulching and colonization of the epicenter by many other micro and macro-organisms to create a balanced ecosystem.

By 2021, many positive results were visible because of agroecology implementation; high yield of crops, soils gained back life with increased organic matter and improved soil structure. Others were texture and increased soil life facilitated by earthworms, dung beetles, and termites, low pest incidences due to an increase in the population of natural enemies at the epicenter. But most of all, the mangoes and oranges that were not fruiting well were now producing many beautiful, healthy fruits. This was attributed to the presence of pollinators at the site. This wasn't the case before, as toxic chemicals were being used that killed almost everything.





Epicentre in 2018



Epicentre in 2020



Epicentre in 2021



Apiary at the epicentre



Mangoes bearing fruits in 2021



