



Sustainable Food and Agriculture Systems

HEKS/EPER Global Cooperation's strategy, promising practices, achievements and perspectives on sustainable food and agriculture system towards food security and adequate income.

Zürich, June 2023

Why Sustainable Food and Agriculture Systems Matters

Global Challenges – Context



Niger, Haiti, Senegal: Food systems can vary considerably from place to place. Most important is that they rely on available natural and social resources.

Food systems are under pressure worldwide. Today (April 2023), 828 million people are chronically undernourished and 193 million across 53 countries experience acute hunger¹. The WFP projects 349 million people to be acutely food insecure throughout this year², 70 million more than in 2022, partly due to the long-term effects of the **COVID-19 pandemic** and the **Ukraine war**.

Although internationally, the term ‘food system’ is gaining traction, as the 2021 UN Food System Summit showed, political reality still falls short of it. Besides all lip service to tackling food insecurity more holistically, most financing still goes to siloed approaches and business as usual. However, changing the food systems need necessarily also **systemic approaches**. But still, many food and farming systems worldwide are driving environmental degradation, loss of vital ecosystem services, economic hardship for smallholders, socio-economic inequalities, or food insecurity. Additionally, current food systems fuel climate change. Many of these problems are linked to ‘industrial agriculture’: input-intensive crop monocultures and industrial-scale production practices that now dominate many farming landscapes³.

New paradigms are required, rooted in fundamentally different relationships between agriculture and the environment and between food systems and society⁴. HEKS/EPER promotes a systemic approach encompassing both sustainable production and food systems as a whole, together with inclusive markets to increase food security and generate additional income and economic inclusion. One of these new paradigms is **agroecology**.

Agroecology defines a holistic set of principles for re-designing food systems and captures the essence of this paradigm shift. It can reduce food waste, close yield gaps, reduce greenhouse gas emissions from agriculture, and work against social unrest rooted in food

shortages. Furthermore, agroecology also can provide young farmers with a sustainable income option, lower the risk that young people do not want to work in agriculture anymore and helps adaptation of agriculture to ever-changing climate patterns.

¹ static.hungermapdata.org/insight-reports/latest/global-summary.pdf and hungermap.wfp.org

² <https://www.unocha.org/sites/unocha/files/WFP%20Statement%20to%20GHO%20launch%20November%202023docx.pdf>

³ IPES-Food (2016). From uniformity to diversity: a paradigm shift from industrial agriculture to diversified agroecological systems. International Panel of Experts on Sustainable Food Systems, Brussels.

⁴ IAASTD (2009). Agriculture at a Crossroads. International Assessment of Agricultural Knowledge, Science and Technology for Development Global Report. Island Press, Washington, D.C.

How HEKS/EPER responds

In its projects and programmes, HEKS/EPER strives for customised land and resources governance and production practices under the following ten principles of agroecology (acknowledging the wide spectrum of different understandings)⁵.



Diversity: diversification is key to agroecological transitions to ensure food security and nutrition while conserving, protecting and enhancing natural resources.



Resilience: enhanced resilience of people, communities and ecosystems is key to sustainable food and agricultural systems.



Co-creation and sharing knowledge: agricultural innovations respond better to local challenges when co-created through participatory processes.



Human and social values: protecting and improving rural livelihoods, equity, and social well-being is essential for sustainable food and agricultural system.



Synergies: building synergies enhances key functions across food systems, supporting production and multiple ecosystem services.



Culture and food traditions: by supporting healthy, diversified and culturally appropriate diets, agroecology contributes to food security and nutrition while maintaining the health of ecosystems.



Efficiency: innovative agroecological practices produce more while using fewer external resources.



Responsible governance: sustainable food and agriculture require responsible and effective local and global governance mechanisms.



Recycling: more recycling means agricultural production with lower economic and environmental costs.



Circular and solidarity economy: circular and solidarity economies that reconnect producers and consumers provide innovative solutions for living within our planetary boundaries while ensuring the social foundation for inclusive and sustainable development.

One cornerstone of HEKS' engagement to achieve its overarching global outcome 3 of sustainable land & resource governance is the yearly held **'Landforum'**. This event has brought experts and the interested broader public together around a specific subject since 2017. In 2022 HEKS decided to dedicate the Landforum to **"Agroecology and Territorial Markets"** and organised it with the 'Agroecology Fund' and the 'Alliance for Food Sovereignty in Africa – AFSA'. Around 90 participants from 20 countries discussed the benefits, challenges and opportunities of linking agroecological production with place-based markets and food systems. See below for more details.



Senegal, Brazil, India: Food security thanks to agroecological small-scale farming.

⁵ FAO (2018). The 10 elements of Agroecology – Guiding the transition to sustainable food and agricultural systems. Rome, Italy.

Promising Practices Worldwide

Worldwide, farmers use agroecological production practices rooted in traditional local knowledge. HEKS/EPER recognises the importance of peasants managing human and natural capital to improve food security, nutrition, and rural development. We see them as constant innovators and researchers contributing to developing sustainable agriculture and more resilient rural livelihoods. The following HEKS/EPER project examples describe how peasants act as the custodians of complex and innovative techniques that, through agroecology, combine local knowledge, traditional products and innovation and follow the ten principles of agroecology.

Haiti – Local seed producer groups and natural resource management



In Haiti, HEKS/EPER's programme interventions are manifold. Different project components and working strategies aim to create synergies to develop local capacities to promote healthy diets and sustainable food systems. An important basis is the production and conservation of locally adapted seeds and the sustainable management of the rich biodiversity of the Grand d'Anse. These are also important measures to enhance the resilience capacities of the communities to face the impacts of natural disasters and climate change. At the same time, the project aims to boost new and innovative value chains and market initiatives in the region.

A **school canteens project** has enabled the operation of community school canteens, where young women entrepreneurs obtain opportunities to start their cooking businesses and prepare meals for the pupils and teaching staff. Almost all the food is purchased from local small-scale producers, valuing local food and enhancing the income of the families as well as the visibility of traditional cooking and meals. In 2023 the community school canteens provide food to students in 20 community schools at the rate of two balanced daily meals over 180 school days planned per year.



HEKS invests in technical support for the functionality of the **seed producer groups** and cooperatives. Different community entities are responsible for producing, marketing and protecting reproducible seeds, fruit crops and livestock. All these activities are based on the principles of agroecology. In 2022 some remarkable results were achieved:

- Collaboration with two universities of agronomy and the enrolment of student trainees with producers practising the agroecological measures taught in the framework of the project.
- Collaboration with the National Seed Service, linked to the Ministry of Agriculture, which has carried out several field missions over the past year to analyse seed quality and to train farmers. Seed certification has just been implemented for all producers of maize, beans and some vegetables.



The school canteen project combines different approaches. Based on local agroecological production, young women entrepreneurs cook and sell food for school canteens enabling food security for children. Local committees manage the local production and market, and are in dialogue with local authorities responsible for the necessary infrastructure.

In addition to these working strategies, the constitution of local committees responsible for the management of the territorial markets in the region has been an important step in facilitating the dialogue with the local authorities responsible for the markets and maintenance of the rural roads, which are crucial to connect the remote peasant communities with the markets and buyers of the products; and finally, to generate income.

5th HEKS/EPER Land Forum – 2022 on ‘Territorial Markets’ and Agroecology’

In its 5th edition since 2017, the 2022 HEKS’ ‘Landforum’, held online between November 16 and 17, brought together more than 90 experts and practitioners from around 20 countries worldwide. They gathered to discuss questions, challenges and opportunities around the topic ‘**Territorial Markets and Agroecology**’. HEKS organised this event in collaboration with two important actors in this field: the ‘Agroecology Fund - AEF’ and the ‘Alliance of Food Sovereignty in Africa – AFSA’.



The discussions took place either in the plenary on a global scale or in regional working groups where partner organisations from AEF and AFSA showcased their experience from so different countries like Argentina, Mali, the Philippines, and Uganda.

Besides all country-specific differences, some common benefits and challenges could be detected. Both agroecology and territorial markets do reinforce themselves mutually. They focus on proximity and locality instead of global dependencies and favour place-based and context-specific solutions instead of one-size-fits-all approaches. And they also complement each other: the territorial approach can learn to be more holistic and based on ecological principles from agroecology, while the latter can also profit by taking power and governance questions even closer into consideration.

Niger – Moringa production and consumption as a basis for improved nutrition and income

Diversification is key to filling yield gaps and preventing under- or malnutrition under any climate. In the semi-arid climate of the Sahel in Niger, it is even more important. HEKS/EPER’s intervention, together with a local partner organisation, aims to **support sustainable and healthy food systems through agroecological production**. This is achieved by introducing Moringa (*Moringa oleifera*) and vegetable gardens in 10 villages in Mayahi, Mirriah and Droum departments. The main objectives are to fight against mal- and undernutrition and increase household incomes.

Moringa (*Moringa oleifera*) is a leguminous tree with a double virtue. With its high content of essential amino and fatty acids and a wide range of vitamins and nutrients, it serves as a potent complement to fight mal- and undernutrition, mainly targeted at children and mothers. Especially the leaves can be consumed either fresh or dried, cooked as a vegetable or drunk as tea. Additionally, as leguminous, the planted trees also improve soil fertility by capturing nitrogen.

All producer families participating in the project receive training and further education in agroecological vegetables and moringa production. Among other things, they produce their own compost and organic pesticides and produce their own seedlings for sowing. The current project phase focuses on professionalising the production and processing processes within the existing farms. This contributes to increased production and enables uniform product standards and quality.

The farms are also equipped with drying systems, which allow the moringa leaves to be dried and stored until sold. The producer families are organised in cooperatives and market their products with the support of the project team in their region.

In 2022, the project reached out to 1778 producer families (2021: 1200) with its activities. The moringa production increased by 10%, and the vegetable production even by 19% compared to the previous year due to the inclusion of new families and improved yields.



Niger: Moringa farmer in his field in Kahin Kossaou watering his plants.

Georgia – organic hazelnut production



Georgia: Organic hazelnuts protect the environment and increase household incomes.

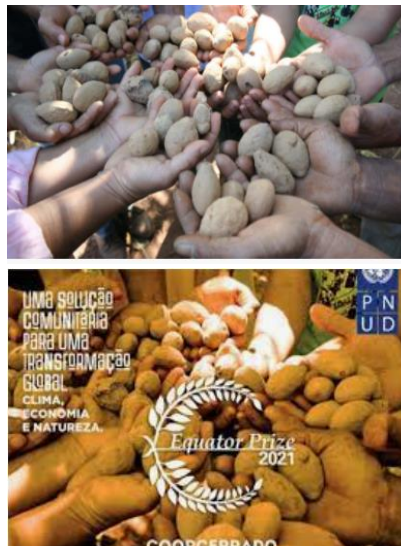
In West Georgia, HEKS/EPER has collaborated with private businesses and the Biological Farmers Association ELKANA since 2013 to develop an **organic hazelnut value chain**. The first phase of the project focussed on the following five areas: i) improvement of product yield and quality through training and extension, ii) mobilisation of farmers in agricultural cooperatives and their technical and organisational capacity building, iii) connecting cooperatives with buyer and organic input provider companies, iv) introduction of group internal control/management system and facilitation of organic and RA/UTZ certification, and v) facilitation of export of organic and RA/UTZ certified hazelnuts to EU and Swiss markets. The second phase of the project (2018-2024)

is focused on upscaling the results achieved in the previous phase, strengthening the institutional and organisational capacity of the organic hazelnut producers' association Caucanut and expanding the green component of intervention by supporting the production and mainstreaming in farming practices of biochar, vermicompost and compost applications. Currently, the association Caucanut registers 639 organic hazelnut producer members.

Brazil – Sustainable management of savanna landscapes and territories in the Cerrado

CEDAC

All its products, marketed under the brand Empório do Cerrado, have the CEDAC's Participative Organic Certification. It has outlets in 12 states and the Federal District, and its customer base includes the supermarket chains Grupo Pão de Açúcar and Walmart, Mãe Terra, a processing company of organic and natural products, and Korin, a retailer of natural products. In 2021 CoopCerrado was one of 10 initiatives selected by the 12th Ecuador Award of the United Nations Development Programme (UNDP).



CoopCerrado, the 'Cooperativa Mista de Agricultores Familiares, Extrativistas, Pescadores, Vazanteiros, Assentados e Guias turísticas do Cerrado'.

This community network of over 4'600 families in Brazil's Cerrado ecoregion exemplifies the sustainable use of a large-scale vulnerable ecosystem. Through creative marketing of dozens of organic, sustainably sourced products from Brazil's Cerrado ecoregion, CoopCerrado

improves local livelihoods, protects biodiversity, and supports the creation of sustainable-use reserves. CoopCerrado and HEKS's programme partner Center for the Development of Agroecology in Cerrado, work with smallholders in a "farmer-to-farmer" method to sustainably harvest and process fruits, plants and seeds of the Cerrado, commercialising dozens of different certified organic products with creative marketing, elevating both the prestige of Cerrado products and local livelihoods for 26'000 people. Community monitoring prevents overharvesting, while restoration activities improve degraded ecosystems. The network managed an area of 124'000 hectares for sustainable use and created two sustainable-use reserves. The success of the initiative in protecting biodiversity, addressing the climate crisis, and improving local livelihoods has led to its replication in five Brazilian states, showing the impact of community-based management and collective marketing.

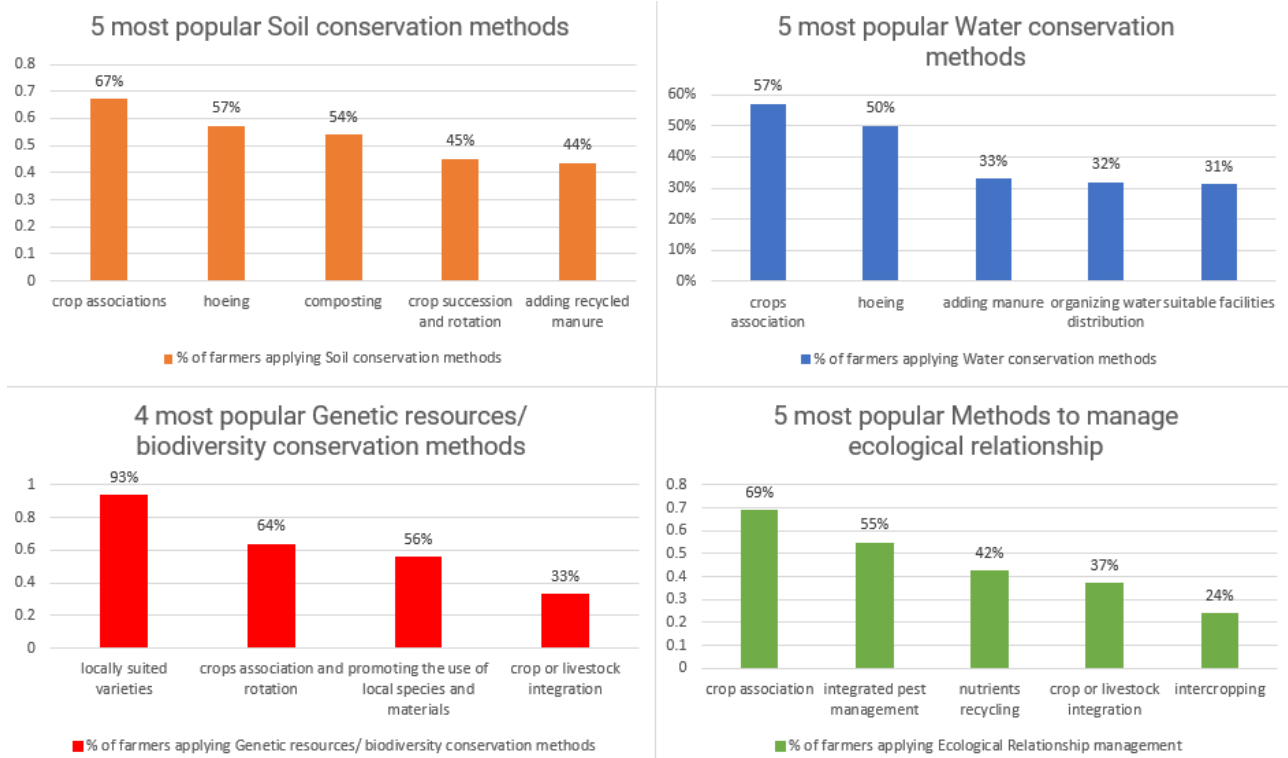
Achievements & Perspectives

Achievements 2022

HEKS/EPER aims to promote food security through access to land and sustainable food systems with agroecological production. A specific key indicator of the application of agroecological production practices by farming households measures progress.

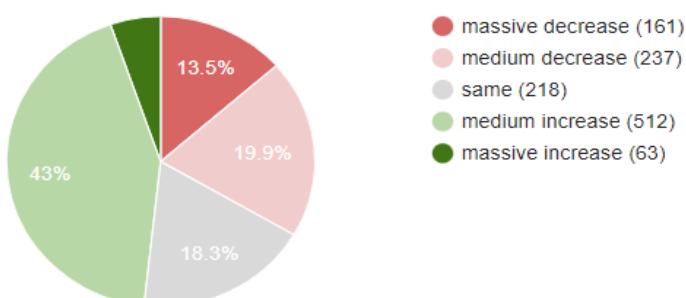
In the 2022 portfolio of HEKS/EPER projects, a wide range of conservation methods is applied in different contexts. We measure different soil and water conservation techniques, methods to increase the conservation of biodiversity and genetic resources, and methods to manage the ecological relationship (see charts below).

62% (2021: 59.1%) of monitored surfaces (2202 ha) and 83,8 of the farmers (2021: 86.3%) within HEKS/EPER projects **fulfilled at least 3 criteria of agroecological production practices**.



Data of different conservation methods in 2022. (One respondent can apply several conservation and management methods.)

The most prevailing **soil conservation methods** applied compared to all different contexts are crop association (by 67% of the producers), hoeing (57%), and composting (54%). 93% of the farmers use **locally suited varieties of crops**. Organising water distribution and suitable facilities are the most applied water conservation methods. Locally suited varieties and crop association plus rotation are mostly used to maintain biodiversity. Of the applied measures, crop associations and hoeing are the most popular soil conservation methods used by 992 and 844



Yields: 48.3% of the project participants stated an increase in agricultural yields – mainly thanks to better techniques.

farmers. More than 97% of the producers apply measures to manage ecological relationships, such as integrated pest management, crop association, or intercropping. 99% of the monitored producers do not use GMOs on their plots. About 87% of the producers also do not use synthetic pesticides and fertilisers.

Another HEKS/EPER key indicator measures the **self-perceived change in agricultural yields** and its explaining factors. Data from 6 projects in 6

countries show that **48.3%** (35.4% in 2021) of the asked producers state a medium or a massive increase in their agricultural yields compared with their last agricultural season.

The explaining factors for these increases in yield are quite diverse. About 29% of the producers' state that the increase in yield can be explained by improved technical factors such as better soil management, pest management, irrigation practices or generally improved production skills. Additional factors mentioned are favourable weather conditions or investment possibilities due to savings from last year.

About **33%** of the asked producers in the different regions state a **decrease** in their yields. Here, the main explaining factors are **27 %** loss due to **unfavourable climatic conditions**.

Perspectives



DR Congo: Diversity is a key asset for sustainable food systems. A woman taking care of her cassava field.

Agriculture production and food systems play a key role for every human being, whether we know it or not. In most countries where HEKS/EPER works, people are much closer to this reality because they rely directly on their production or they purchase their food at the closest markets. For them, well-functioning agriculture and food systems play an essential role in their livelihoods, independent of being smallholders, indigenous or local communities. Since many of these systems are market-based, they must function well to serve all. But unfortunately, the most vulnerable face considerable challenges accessing these markets or are even excluded from them. This exclusion can have different faces: lack of access to

land or other relevant resources like inputs and know-how. Additionally, changing rain patterns or other climatic conditions, along with needing more extension and support services, aggravate the situation even more.

Physical access to and the sustainable governance of land and natural resources is the precondition for agricultural production. HEKS/EPER always strives to secure land tenure for farmers and local communities, individually or communally, where appropriate. Secure access to land is a prerequisite to making farmers willing to invest in agriculture. At the same time, making productive use of land and natural resources can help secure land tenure. For HEKS/EPER, these two topics go together, and we try to combine them where appropriate.



DR Congo: small-scale farming.

Internationally the 'UN Declaration of the Rights of Peasants and Other People Working in Rural Areas highlights the principles of 'agroecology' and 'food sovereignty' to help to empower smallholder farmers and people living in rural areas. The Landforum 2022 highlighted the great potential of **territorial markets** to strengthen the resilience of place-based, context-specific food systems. These markets focus on agricultural land, forests, savannas or marine ecosystems managed by local communities that help maintain resilient and sustainable structures, often developed over a long period. They are easier access to the people due to their proximity and local knowledge. They tend to be less susceptible to disruption, as the poly crises (pandemic, Ukraine war etc.) showed for many markets and food systems based on global relations. To strengthen existing territorial markets or foster new ones, HEKS/EPER and its partners facilitate access to sustainable agriculture-related knowledge, inputs, services, and finances and help to develop and market products. Where needed, HEKS/EPER invests in additional direct interventions to lift people into agricultural markets based on agroecological production (e.g. providing training or assets).

In 2022 an internal co-creative process on **agroecology** will foster mutual learning and exchange on successful practices and interventions as well as from difficulties and challenges encountered. The results will feed into the formulation of HEKS' new strategy, especially in the fields of 'right to food&land' and 'climate justice'.

Other HEKS/EPER publications related to 'sustainable food and agriculture systems

- HEKS/EPER (2015). Market Systems Development. Guideline to plan and facilitate market system changes. October 2015.



This is HEKS/EPER



HEKS/EPER is the aid organisation of the Swiss protestant churches. It operates towards a more equitable and peaceful world (and Switzerland) with resilient communities, focusing on four topics: **Climate Justice, Inclusion, Right to Land & Food, and Refuge & Migration.**

In 2022, HEKS/EPER supported more than 60 projects in Switzerland, the inclusion of 98'000 people, and with 232 projects in 30 countries, 2.5 million people directly in economic, social or humanitarian need. The operating income of the whole organisation has risen to 114 M CHF and expenditure to 108.13 M CHF – of which 54.54 M CHF were net costs spent for the international programme.

In the Global Cooperation division, HEKS/EPER ameliorated with 17.8 M CHF (net costs) spent on 96 **development projects** for the life of 946'267 people focusing on access to land and resources, securing basic services, fostering sustainable production and inclusive market systems. It also promoted the social inclusion of marginalised, inclusive governance structures and conflict transformation. 23.4 M benefitted indirectly – e.g., through successful advocacy for new rights or policies (e.g., right to land, water, education, health, market access).

HEKS/EPER's **humanitarian aid** spent more than 29 M CHF (net costs) in 72 projects in 18 countries directly reaching 1.522 M people affected by conflicts and disasters; another 2.4 M were indirectly reached with health prevention campaigns or rebuilt public sanitation, road or health infrastructures.

In the frame of **Church Cooperation**, HEKS/EPER enabled with 2.26 M CHF social work of Reformed Churches in Eastern Europe and the Middle East, reaching out to almost 35'000 people through 29 projects; another 30'500 were reached indirectly.

HEKS/EPER sensitises on the needs and rights of people and communities worldwide, addressing causes of global inequalities. To **influence the public, media, politics and other stakeholders in Switzerland** to achieve a transition to a more equitable, peaceful world, preserving the limited natural resources, HEKS/EPER spent 4.5 M CHF on advocacy and policy work.

HEKS/EPER Global Cooperation strives towards systemic change with its human rights-based approach, promoting ownership, innovation, and the nexus between humanitarian aid and development activities. Together with competent partners and well-interconnected alliances, HEKS/EPER fosters constant dialogue between civil society, the private sector, and Government actors enabling people and communities to advocate for their needs and rights. The international divisions' conflict- and gender-sensitive programming is risk-informed and evidence-based. A proficient institutional governance framework allows effectiveness and transparency.

In Switzerland, HEKS/EPER supported with 34.2 M CHF net costs of more than 60 projects in 15 cantons disadvantaged people in becoming socially and economically integrated by promoting equal opportunity and assisting jobless people, refugees, and other individuals by providing day structures, legal advice, vocational training, language courses, dialogue platforms, etc.


The nine core values of HEKS/EPER: Justice / Self-Determination / Participation / Respect / Solidarity / Support without Borders / Close to People / Effectiveness, / Accountability.

Strategies, policies, guidelines, and reports published on ID's Governance Website: https://en.heks.ch/Institutional_Governance

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