HEKS/EPER Thematic Factsheet 2021

Sustainble Food and Agriculture Systems

Swiss Church Aid's strategy and achievements on sustainable food and agriculture systems toward food security and adequate income.

Zürich/Lausanne, May 2021

Why Sustainable Food and Agriculture Systems Matters

Global challenges

In 2020, 957 million people across 93 countries were still suffering hunger with food systems failing[1]. The number of people suffering from acute hunger and malnutrition is on the rise again.

The World Food Programme (WFP) documents that 155 million people in 55 countries suffered acute food insecurity in 2020 – 30 million more than in 2019. Amongst the 10 countries which are most in crises, 6 are countries HEKS/EPER was working 2020: DR Congo, Syria, Ethiopia, South Sudan, Zimbabwe and Haïti. Yet, the **COVID-19 pandemic** may push even more families and communities into more profound distress in 2021. The Global Humanitarian Outlook projects 239 million people in need of life-saving humanitarian food distribution this year.

At the same time, malnutrition, obesity and overweight are increasing and cause significant health issues. In many cases, food and farming systems worldwide are driving environmental degradation, loss of vital ecosystem services, economic hardship for smallholders, socio-economic inequalities, or food insecurity for many. HEKS/EPER promotes sustainable production and food systems and an inclusive market to increase food security and to generate additional income and economic inclusion.

Many of these problems are linked to 'industrial agriculture': input-intensive crop monocultures and industrial-scale production practices that now dominate many farming landscapes[2]. New paradigms are required, rooted in fundamentally different relationships between agriculture and the environment and between food systems and society[3].

Agroecology defines a holistic set of principles for redesigning 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.

Senegal, Georgia, Niger: Modern, yet sustainable productions methods prevail from deterioration of natural resource and secure income for small-scale farmers in the long-term.

Agroecology

'Agroecology offers a unique approach to meeting the needs of future generations while ensuring no one is left behind. With **family farmers**, including smallholder farmers, indigenous peoples, fisherfolks, mountain farmers and pastoralists at its heart, agroecology seeks to transform food and agriculture systems, addressing the root causes of problems and providing holistic and long-term solutions based on co-creation of knowledge, sharing and innovation, including the combination of local, traditional, indigenous and practical knowledge with multi-disciplinary science.[4] '

1 World Hunger Map (2020). https://www.wfp.org/publications/hunger-map-2020

2 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.

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

4 FAO (2018). FAO's work on agroecology. A pathway to achieving the SDGs.

How HEKS/EPER responds

In its projects and programmes, HEKS/EPER strives for customised land and resources governance and production practices in accordance with 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.

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

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

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

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

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

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

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.

Responsible governance: sustainable food and agriculture require responsible and effective governance mechanisms at different scales – from local to national to global.

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.

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, which are rooted in traditional and 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 who contribute to developing sustainable agriculture and more resilient rural livelihoods. The following HEKS/EPER project examples describe how peasants are acting 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.

Brazil – valuing traditional agricultural systems

The governance of territories and natural resources by indigenous and other traditional peoples and communities is at the centre of HEKS/EPER interventions in Brazil.

The Serra do Espinhaço, in the Alto Jequitinhonha territory in Minas Gerais, is home to traditional communities that, for centuries, have developed and practised a complex agricultural production system. It combines the cultivation of highly diversified food production, particularly around their homesteads, and a collectively organised management system of natural resources of their ancestral territories (non-timber forest products). The most important activities are gathering wild fruits and medicinal plants of the Cerrado ecosystem and collecting dry wildflowers and grasses in the upper parts of the region.

Globally Important Agricultural Heritage Systems (GIAHS)

The recognition of the traditional management system of the Serra do Espinhaço in Brazil as GIAHS enables the protection of local sustainable land use, as by the flower picking communities.

The rural communities play an **essential role as custodians of the enormous biodiversity and water resources** of the fragile ecosystem of the savannah rangelands, known as Cerrado. The flower picking, processing and selling is the most important source of income. Without access to these collecting areas, the food security of the communities is threatened, and their vulnerability to the impacts of climate change increases. Today, access to their ancestral territories is increasingly threatened by green grabbing, the implementation of enormous eucalypt plantations and mining activities. All this has led to increasing land disputes and violence in the region.

HEKS/EPER supports the *Commission for the Defence of the Rights of the Flower Picking Communities* (CODECEX), a regional movement of local communities, which integrates more than 50 different local organisations to claim their right to land and develop sustainable land-use strategies. In this regard, in March 2020, the specific agricultural system was officially recognised as a **Globally Important Agricultural Heritage System (GIAHS)**, granted by the Food and Agriculture Organization of the United Nations (FAO). These communities (10'800 individuals) won recognition for their crucial role enhancing biodiversity and preserving traditional knowledge in a territory of approximately 100.000 ha.

Brazil: The flower picking communities of the Serra do Espinhaço are custodians of the biodiversity and water resources by sustainably managing their territories.

It is the first time that a Brazilian site won the recognition as a Globally Important Agricultural Heritage System (GIAHS). 'Thanks to their profound understanding of natural cycles and ecosystems, and their vast knowledge of native flora, the local communities manage all kinds of agricultural activities well adapted to each soil type, geographic and climatic characteristics to sustain their lives', said FAO GIAHS Coordinator Yoshihide Endo.

The GIAHS dossier prepared by CODECEX and its network partners included a description and analysis of the traditional agricultural system of the flower picker communities and a dynamic work plan for the use of natural resources. In addition, it proposes a set of participative instruments to promote inclusive lands governance models, such as Biocultural Community Protocols and the regulation of Free, Prior and Informed Consent processes.

Since the start of the GIAHS process in 2015, the agenda has contributed enormously to **strengthening the communities' identities** and understanding their role and responsibilities towards more inclusive land governance based on collective land rights and land-use practices. By putting the regional agricultural heritage in the centre of the political agenda, the GIAHS initiative could invigorate a positive, enabling environment. Various stakeholders became part of the process, particularly governmental authorities at the local and state level, national and regional institutions responsible for cultural and heritage issues, international organisations, civil society, research institutions, and the tourism sector.

Honduras – local seeds production and marketing

In Honduras, smallholder farmers contribute about 80% to the food security of the population. The use of traditional seeds is of great importance for their food sovereignty. On the one hand, the promotion of traditional seeds guarantees independence from transnational corporations, which contractually oblige their customers to buy patented seeds year after year. On the other hand, it promotes the resilience of the smallholder families to the increasing impacts of climate change, such as periods of drought. Thus, a project implemented by HEKS/EPER partner organisation 'Programa de Reconstrucción Rural' (PRR) promotes participatory seed breeding by smallholders. To expand the local seed supply and guarantee biodiversity, the project also promotes the marketing and distribution of these seeds addressing 4'500 farmer family members in 2020.

In 2019, substantial progress was made in expanding the producer groups involved and selecting and multiplying traditional seeds. Making further progress in 2020 was difficult due to COVID-19. Yet 486 farmers and their families were involved in producing native seeds, corn and bean grains and could therefore increase their quality of life and food security. These results are remarkable as Hurricane ETA hit the project area, and overall, the production losses in bean and maise crops were 83%. As a response to COVID-19 and the Hurricane, HEKS/EPER additionally supported 300 families with food packages.

Niger – multi-nutritional fodder blocks as basis for improved livestock production

This project aims to **support food security through agroecological intensification** in 80 villages in the departments of Mayahi and Mirriah. It is implemented by HEKS/EPER's partner 'Sahel Bio' and entered its third phase in 2020. The main objectives are the fight against the negative effects of climate change, agricultural intensification, and the valorisation of agricultural products. In 2020, 1'829 small-scale producers used adapted improved local seed varieties. 1'509 demonstration plots for agroecological production amounting to 338.6 ha were installed, producing 319 tons of niébé, millet and groundnuts. Yields increased from 24 to 48% generating a selling profit of 125'000 CHF.

Niger: Production of fodder blocks.

Multi-nutritional fodder blocks (BMND) are produced from agricultural residues and are an essential supplement to livestock. They are made up of fodder materials that constitute the main part of livestock feeding habits in Niger. The blocks are nutrients' condensates and essential for the growth and productivity of livestock milk, such as mineral salts, nitrogenous materials, vitamins A and E. There is a significant demand for BMNDs, and its production can improve the income for all involved along the value chain (purchase of raw materials, production, marketing, fattening, etc.).

The project supported the installation of 10 BMND production units to cover the livestock feed needs of the intervention area and diffuse the technology. At the level of each unit, a management committee is set up, composed mainly of vulnerable women. The production/sale of BMNDs generates significant revenues and a sufficient stock of raw materials. In 2020, the 10 units allowed the production of about 3 tonnes of animal feed. The sale of 2.1 tons of BMND generated a turnover of about 1'700 CHF.

Senegal – participatory guarantee system for organic production

The certification of organic products in Senegal is mainly done by foreign companies, which is very costly and unaffordable for most small farming families. Non-governmental organisations have therefore jumped

into the breach and are now carrying out certifications under various labels. Unfortunately, the products' quality guarantee is not officially recognised – neither in Senegal nor abroad. The different NGO labels and certification criteria are confusing consumers, and there is a lack of transparency and not a uniform labelling of organic products.

Together with the 'National Federation for Organic Agriculture' (FENAB), HEKS/EPER initiated a pilot **to introduce a new organic label called 'BIO SENEGAL'**. It is based on a defined standard recognised by 'Organics International' (IFOAM) – the umbrella organisation for the organic world – and set up the Participatory Guarantee System (PGS), which is an alternative **participatory certification system for small producers.**

It allows the producers to market their products under a single organic label, and consumers can be sure that all products with this label have the same quality standard. The certification system is cost-effective and ideal for small farmers. It is based on production control by specially trained producers. There are successful examples of this system in many parts of the world, but it is innovative in Senegal.

In its 2nd phase, the project reinforces the PGS system in the region Niayes and is limited to fruit and vegetables. Despite the COVID-19 crises making production and market access difficult, 224 producers (300 in 2019) have been certified by the local communities and participate in the new system. About 322 tons (440 in 2019) of certified products could be sold on the local markets and generated an income of about 115'000 CHF (160'000 in 2019). Given the problematic situation, it is a success that 25% of the producers stated an increase in income.

Georgia – organic hazelnut production

Georgia: Women collecting hazelnuts.

In West Georgia, HEKS/EPER has collaborated with private businesses and a national NGO since 2013 to implement a **value chain project on organic and fair-trade hazelnuts**. 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 fair trade/UTZ certification, and v) facilitation of export of organic and fair trade/UTZ certified hazelnuts to EU and Swiss markets. By the end of 2020, 679 farmers were part of the UTZ and organic certification system (195 organics among them). 15.3% of farmers reported a massive increase in income through hazelnut sales, 46.6% experienced a medium increase, and the income of 14.7% stayed the same as the year before. The project provided vocational training, demo plots with drip irrigation, windbreaks, and tested different types of organic fertilisers and organic pesticides. As a result of training and extension activities, there was a drastic change in farmers' mindset and practices during these years.

Achievements & Perspectives

Achievements 2020

Global results

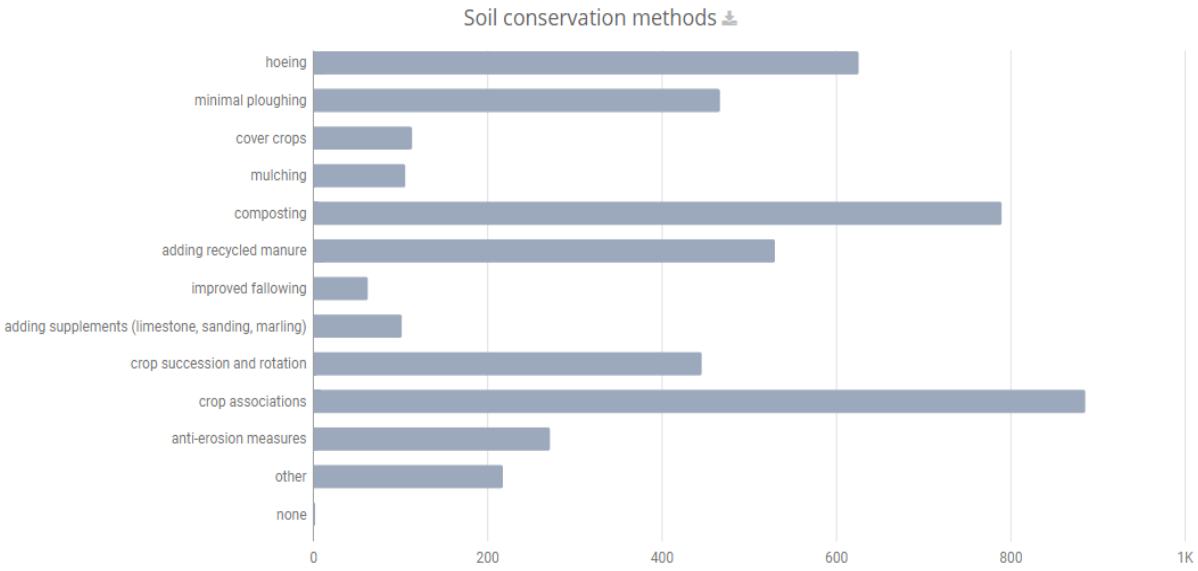
Increase in agricultural yields

About **55.4%** (2019: 71.4%) of targeted population state that they **could increase their agricultural yields** with contribution of HEKS/EPER project work.

Change to agroecological production

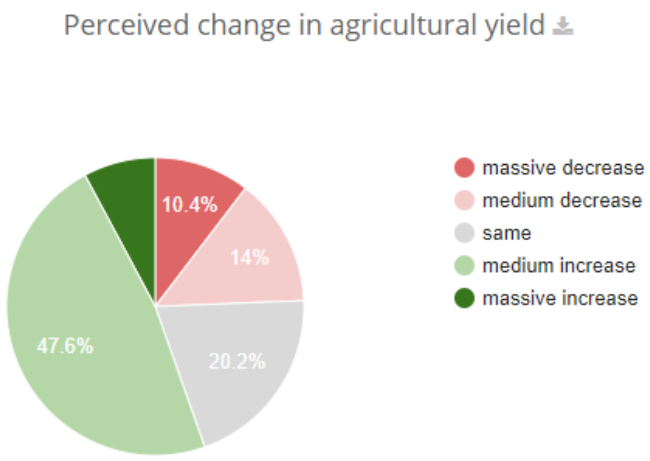
Targeted farmers within monitored HEKS/EPER projects applied on **83%** (95% in 2019) **of the productive surface** all of the 3 defined criteria of **agroecological production practices**.

HEKS/EPER's ambition is to promote food security through access to land and sustainable food systems with agroecological production. Progress is measured by a specific key indicator on the application of agroecological production practices[6] by farming households. Throughout 2020, this indicator was monitored by 6 selected projects in 3 countries, which all aim to increase knowhow and application of agroecological practices. These 6 projects cover a total production area of 1'353 hectares. In 2020, **83% of these surfaces (1'125 ha) fulfilled all three set criteria of agroecological production practices[6].** All producers applied soil conservation measures, and more than 93% applied measures to manage ecological relationships such as integrated pest management, crop association, or intercropping. Nearly no producers uses Genetically Modified Organisms (GMO) on its plot. Only about 12% of the producers use synthetic pesticides and fertilisers. The most prevailing soil conservation methods applied compared over different contexts are crop association (by 88% of producers), composting (79%), and hoeing (62%). 90% of the farmers use locally-suited crop varieties.



Six projects worldwide: Soil conservation methods used by supported famers.

Another HEKS/EPER key indicator measures the self-perceived change in agricultural yields and its explaining factors. Data from 9 projects in 6 countries show that **55.4%** (2019: 71.4%) of the asked producers state a medium or massive **increase** in their **agricultural yields** compared with their last season. The explaining factors for these increases are diverse: about 60% 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 general improved production skills. Additional factors mentioned are favourable weather conditions or investment possibilities due to savings from last year. About **25%** of the asked producers in the different regions state a **decrease** in their yields. Here, the main explaining factors are loss due to unfavourable climatic conditions (77%!).



Nine projects worldwide: Perceived change in agricultural yield.

[6] The indicator defines three criteria to be fulfilled for agroecological production practices: Application of at least one resource (soil, water, biodiversity) conservation method; application of at least one measure to manage ecological relationships such as integrated pest management, intercropping, crop/livestock integration; and guarantee that no GMO and no synthetic / inorganic pesticides and inorganic fertilizers are used.

Perspectives

In most HEKS/EPER countries, agricultural production and agriculture-based markets play an essential role in the livelihoods of smallholders, indigenous and local communities. Many markets dp not work well for the most vulnerable or even exclude them. Production is difficult for many reasons: Lack of relevant knowhow, changing climatic conditions, lack of access to inputs or lack of physical access to the workplace or the land plot.

As outlined in the 'UN Declaration of the Rights of Peasants and Other People Working in Rural Areas', HEKS/EPER's projects and programmes are guided by the principles of 'agroecology' and 'food sovereignty. HEKS/EPER includes strategies to empower smallholder farmers, other people living in rural areas, and people who facilitate access to sustainable agriculture-related knowledge, inputs, services, finances and who 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).

Sustainable governance of land and natural resources is vital for agricultural production. Securing land tenure for farmers is a precondition for them to be willing to invest in agriculture. In turn, making productive use of land and natural resources can help with securing land tenure. HEKS/EPER, therefore, sees the two topics as interlinked and will try to combine them where appropriate.

DR Congo: Producer groups jointly process maize producing flower for the local market.

This is HEKS/EPER

HEKS/EPER is the aid organisation of the Swiss protestant churches and campaigns for a more peaceful and equitable world supporting in 2020 jointly with 100 partner organisations and strategic global alliances with 143 projects in 33 countries people and communities in economic and social need, investing worldwide 37.58 million CHF.

HEKS/EPER is active in **development cooperation** ameliorating in 2020 with 16.14 M CHF the life of 205'000 people directly – indirectly, 2.63 M people were reached. HEKS focuses on access to land and resources, securing basic services, fostering agroecological production and inclusive market systems. It promoted conflict transformation and inclusive governance structures in the countries as well as social, economic and political inclusion of disenfranchised people.

With a budget of 17.49 M CHF, HEKS/EPER's **humanitarian aid** supported 3'388'000 people affected by disasters with emergency interventions, to save lives, restoring livelihoods and rehabilitating infrastructure. In the frame of **Church Cooperation** HEKS/EPER enabled with 3 M CHF social work of Reformed Churches in Eastern Europe and the Middle East reaching out to 38'700 people. Additional 0.94 M CHF were invested in cross-sectional IC activities such as capacity building of partners and communities. **Systemic change** and the **human rights-based approach** are guiding principles, also promoting the **nexus** between humanitarian and development activities. HEKS/EPER cultivates constant dialogue with all relevant development and Government actors, protecting civil society actors and enabling them to advocate for their needs and rights.

In Switzerland, with a budget of 28.8 M CHF, HEKS/EPER supported disadvantaged people in becoming socially and economically integrated by promoting equal opportunity and assists jobless people, refugees and other individuals with providing day structures, legal advice, vocational trainings, language courses, dialogue platforms etc. in 14 cantons.

Other HEKS/EPER publications related to 'Sustainble Food and Agriculture Systems'

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

All strategies, policies, reports published on ID's Governance website: https://en.heks.ch/Institutional_Governance

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HEKS/EPER is a member of actalliance, CHSAlliance

Published by HEKS/EPER thematic advisory and MEL units, May 2021, Zürich (Switzerland)