HEKS/EPER Thematic Factsheet 2021

Resilience to Climate and Disaster Risk

Swiss Church Aid's strategy and achievements on climate and disaster resilience of people and communities.

Zürich/Lausanne, May 2021

Why Resilience to Climate and Disaster Risks Matters

Global challenges

Climate change is **one of the biggest challenges of our time**. The 2018 IPCC Special Report 'Global warming of 1.5°C' shows that the impacts of climate change such as the increase in frequency and intensity of extreme weather events, sea-level rise or an increase in the variability of rainfall are already painfully felt under the current global temperature increase of 1°C. Any further warming to or even above 1.5°C will intensify these impacts.

Alongside climate change, biodiversity loss and ecosystem degradation are of major concern. The 2019 Global Assessment Report on Biodiversity and Ecosystem Services (IPBES 2019[1]) shows that the health of the world's ecosystem is deteriorating more rapidly than ever, eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide. 75% of the world's land surface has been significantly altered, and around 1 million animal and plant species are threatened with extinction.

Climate change exacerbates ecosystem degradation and biodiversity loss, and the causality goes both ways: many affected ecosystems – such as oceans and forests – are essential for absorbing carbon emissions. Increasingly fragile ecosystems also pose risks to societal and economic stability; ecosystem degradation erodes nature's ability to support human societies. They provide a wide range of services and could escalate competition for food, water and other natural resources, increasing risks for conflict. On the other hand, ecosystem-based approaches that rely on ecosystems to buffer communities against the adverse impacts of climate change allow for natural ecosystems to play an important role in climate change adaptation.

The 'climate and environmental crisis' is also a major driver for further increasing global inequality. Climate and disaster risk and impact are not equally distributed and depend on geographical location (small islands, low-lying coastal areas, and drylands will be worst affected), exposure (people forced to live in unsafe territories, such as floodplains) as well as the socio-economic status of communities and associated vulnerabilities. **Those most at risk are people living in the global South, the ones least responsible for causing the problems in the first place**.



Worldwide hazards such as hurricanes, floods, draughts challenge local rural communities in their survival, livelihood and perspectives.

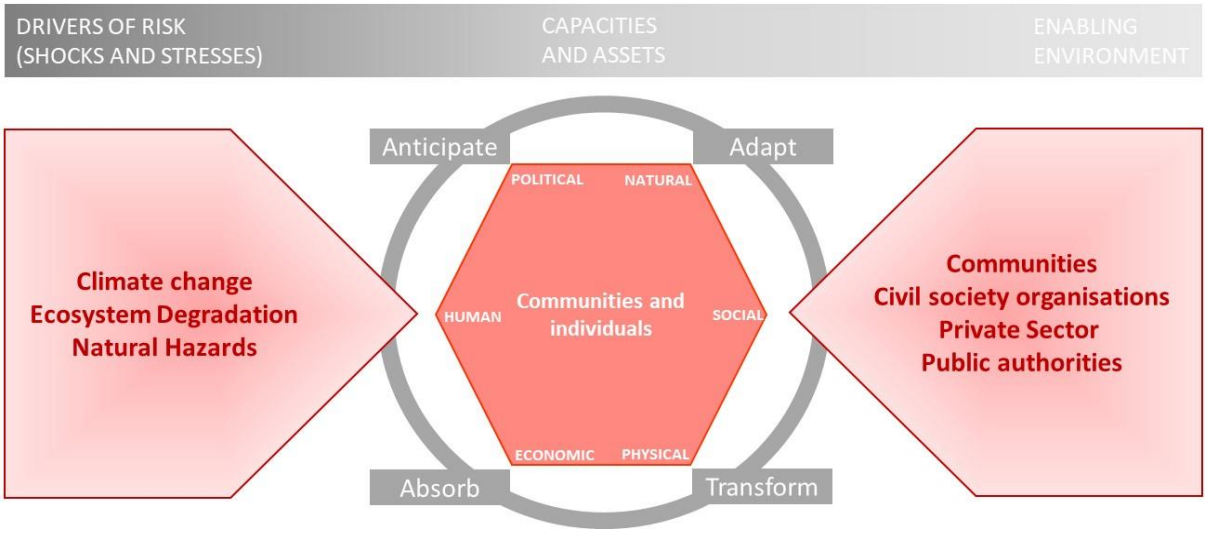
How HEKS/EPER responds

Successful and long-term **risk reduction** and effective **resilience building** to climate and disaster risks are both imperative to sustainable development and key components of poverty reduction. HEKS/EPER has a human rights-based understanding of climate and disaster resilience. Risks result from unbalanced power relations, unequal and unsustainable development that create vulnerability and allow the burden of risk to fall first and foremost on the most vulnerable people. For HEKS/EPER, building resilience to climate and disaster risk means **more than the mere ability to simply recover from shocks and stresses**. It also needs to also **address the underlying causes of vulnerability** of different groups of people and improve the social, economic and ecological systems and structures that support them.

[1] IPBES, 2019: Global assessment report on biodiversity and ecosystem services: https://www.ipbes.net/global-assessment-report-biodiversity-ecosystem-services

The resilience to climate and disaster risk can be built in three ways (see figure below):

- **Capacities** (*anticipatory, absorptive, adaptive* and *transformative*) **and assets** to deal with shocks, stresses and uncertainties have to be built and supported.
- **Drivers of risks** need to be reduced.
- A supporting **enabling environment** strengthened.



HEKS/EPER conceptualisation of **resilience building** (adapted from CARE 2017).

In HEKS/EPER' programme, **securing and respecting the land and resource rights of local communities and indigenous peoples** plays an important role to build climate and disaster resilience. Areas traditionally managed, owned, used or occupied by indigenous peoples are home to much of the world's terrestrial wild and domesticated biodiversity. Compared to other lands, the nature of those areas is declining less rapidly[2]. High biodiversity and healthy ecosystems are essential prerequisites for future adaptation to changing climatic conditions and for buffering the impacts of climate risks, such as storms, floods, landslides or sea-level rise. Indigenous peoples' and local community lands have great climate change mitigation potential, like forests, grass- and peatlands that are communally managed are some of the world's most important carbon sinks. The knowledge, innovations, practices, institutions and values of indigenous peoples and local communities are crucial elements for successful conservation, restoration and sustainable use of nature which is also relevant to the broader society in building resilience against climate and disaster risks. HEKS/EPER supports indigenous peoples and local communities in making their voices heard and fosters dialogue between them and local power holders to ensure that rights are respected. Local and indigenous knowledge is taken into account in decision making concerning climate change solutions, the environment or disaster risk management.

Besides strengthening the governance of indigenous and local communities in using and managing their territories, HEKS/EPER invests in ecosystems conservation and restoration to reduce disaster risk and help people to **adapt to the adverse effects of climate change** and **increase livelihood resilience**. As part of climate-resilient farming techniques, HEKS/EPER promotes **agroecological farming practices**[3] and the transition to agroecological food systems. By diversifying production systems, agroecology increases the resilience to climate extremes. Local production and consumptions systems based on traditional species, local markets and social safety nets are less prone to market volatility caused by climatic shocks. Moreover, agroecological production helps to avoid greenhouse gas emissions.

Human rights-based approach is central to resilience building. Through advocacy in programme countries and in Switzerland, HEKS/EPER lobbies that climate and disaster resilience is available to all socio-economic groups and facilitates dialogue between vulnerable groups and authorities (from local to national level) to lobby for **more equitable and climate-responsive planning and budgeting** and supports access to adaptation technologies for the most vulnerable people. HEKS/EPER advocates for Climate Justice and lobbies that Switzerland pays its fair share towards international climate finance and disinvests from the fossil fuel industry.

2 IPBES, 2019: Global assessment report on biodiversity and ecosystem services; and IPCC 2019: Special Report on Climate Change and Land, https://www.ipcc.ch/site/assets/uploads/sites/4/2020/02/SPM_Updated-Jan20.pdf

3 FAO, The 10 Elements of Agroecology, http://www.fao.org/3/i9037en/i9037en.pdf

Promising Practices Worldwide

Ethiopia – Borana pastoralists: custodians of biodiversity and healthy ecosystems

Ethiopia: Traditional Borana Gada Leaders.

For the Borana pastoralists, who live in the semi-arid lowlands of Ethiopia, prolonged dry periods and droughts have always been part of life. Over centuries the Borana people have developed a common production system that makes sustainable use of the scarce grazing and water resources in the region and is very resistant to climatic fluctuations. Certain parts of the pastureland are reserved as grazing land for the rainy seasons. In other parts, cattle are only allowed to graze during the dry season. In a transhumance pattern, the Borana people move their livestock to different areas depending on the season. As a result, the pasture and water resources can regenerate sufficiently so that sufficient fodder and water are again available during the next grazing season. Thanks to their traditional knowledge and way of life, the Borana are protecting essential rangeland ecosystem services, such as providing food and water and protecting biodiversity. These are all essential prerequisites to mitigate climatic shocks such as heavy precipitation events or extreme drought. However, the upkeeping of this traditional management system is challenged.

On the one hand, due to changing climatic conditions, widespread rangeland degradation and population increase. On the other hand, the Borana lack formal recognition of ownership or user rights to their rangelands. Moreover, the Borana traditional customary institutions are losing authority. They are rarely consulted for decisions taken by the formal authorities concerning the conversion of the land that they depend on to make a livelihood. Over the past 30 years, Borana has seen massive land use changes for settlement, agricultural production, or commercial ranching, limiting the free movement of cattle and their herders.

With the Borana grassroots organisation '**Gayo Pastoralist Development Initiative' (GPDI)**, HEKS/EPER implements a comprehensive resilience-building project in the Borana rangelands. The project **supports Borana customary institutions in emphasising the vital importance of their traditional production system** for the resilience of the Borana region and people. Towards zonal and regional governmental institutions, the project advocates for the inclusion of the customary institutions in any planned or ongoing land governance processes. Besides the *governance* component, the project also intends to strengthen the *anticipatory, absorptive* and *adaptive* resilience capacities of the Borana pastoralists. Degraded rangeland is rehabilitated through different sustainable land management measures such as erosion control, grass and shrub, and tree plantation. To better prepare Borana pastoralists, the project brings together traditional weather forecasters and meteorologists to produce **climate forecasts** which are then communicated to the broader population to plan for the season and make appropriate decisions (e.g., regarding cropping or selling livestock). Communities are also supported to **improve their livestock feed management** practices, such as hay making or the establishment of forage banks to be used in the dry season. In addition, the project **links pastoralists to existing risk transfer initiatives** such as the 'Index-Based Livestock Insurance Programme' set up by International Livestock Research Institute (ILRI). And finally, in the spirit of the nexus approach, the project **establishes an emergency fund**, which is released to the most vulnerable pastoralist households in case of a drought catastrophe. This will ensure that productive assets can be protected in times of crisis and pastoralists are not drawn into the vicious cycle of ever-growing vulnerability.

Ethiopia: Natural Resource Management in the Borana rangelands.

Bangladesh – advocacy for Adibashi to be included in Bangladesh's climate change strategies

Bangladesh: Mapping of local hazards and risks by village community, including Adibashi.

Bangladesh has been repeatedly listed as one of the most vulnerable countries to climate change around the globe. The susceptibility and vulnerability of the country to climate change impacts are shaped by its geographic and climatic characteristics and exacerbated by the socio-economic situation of large parts of the population living in poverty.

Adibashi (ethnic minority) communities living in the high Barind Region in Northwest Bangladesh, where temperatures are increasing, and droughts are on the rise, are disproportionally vulnerable to the impacts of climate change due to their social, economic and political exclusion. Raising awareness among the Adibashi communities about climate change and its impact on their lives and livelihoods is one crucial component of the climate change adaptation activities in the HEKS/EPER Bangladesh programme. Together with the communities' hazards, vulnerabilities and capacities are assessed and their needs for a strengthened resilience analysed. Based on these assessments, HEKS/EPER **facilitates dialogue with local authorities to lobby for pro-poor and climate-responsive planning and budgeting**. Furthermore, Adibashi communities are capacitated with knowledge and skills to uptake alternative, climate-resilient livelihoods. HEKS/EPER lobbies with microfinance and insurance institutions to **grant Adibashi access to finance and insurance** so that they can finance climate-resilient livelihood activities. HEKS/EPER also lobbies with local, regional and national authorities to **include minority communities into** the existing and upcoming **climate change strategies, policies, action plans and investments**, in the sense of leaving no one behind.

Senegal – mangrove protection and restoration to face rising sea levels

Senegal: Planting mangrove seedlings to fight erosion.

In Senegal's Saloum Delta, HEKS/EPER and the 'Association pour la Promotion des Initiatives Locales (APIL)' contribute to conserving and restoring mangrove forests. Tropical mangroves are among the most productive and valuable ecosystems on earth. They provide coastal residents with food, clean water, raw materials and increase resilience against impacts of climate change such as increasing storm intensity, sea-level rise, salt intrusion and coastal erosion. Moreover, mangroves are essential for climate change mitigation as they are absorbing five times more carbon than terrestrial forests. Mangroves forests in the Saloum Delta are declining at an alarming rate due to destructive human action and accelerated by impacts of climate change. Economic opportunities have significantly been reduced in recent years and pose a threat to people's livelihoods.

The project aims to build the capacity of Saloum Delta's coastal population, particularly women, to **conserve, restore, and sustainably use their coastal ecosystem** as a livelihood source and make them more resilient to future impacts of climate change. Facilitated by APIL and HEKS/EPER, each village negotiates a **protection and restoration plan** in a participatory process. Village committees are set up which are responsible for the implementation and compliance of the plans. To protect the mangroves from logging, each village plants fast-growing trees as firewood at the household level. The project also promotes locally available energy-efficient stoves to lower the amount of wood used for cooking and the carbon emissions. To further increase the resilience of the coastal population in the Saloum Delta, the project also promotes the ecological production and processing of seafood and its fair marketing.

Niger – increasing food security despite rising temperatures and proceeding desertification

Niger: Harvesting millet.

In the semi-arid region of Maradi, in the South of Niger, people always had to deal with water scarcity. However, in the last 40 years, drought events have become considerably more frequent due to a steady temperature increase. Recurrent drought events, coupled with increased rainfall variability, proceeding desertification and increasing pest infestation due to higher temperatures, lead to decreasing yields of the two main staple foods, millet and cowpea, crucial for food security in Maradi. On top of the climatic impacts described above, high population growth puts a lot of pressure on the already limited amount of arable land in the country.

To adapt to increasing temperatures, HEKS/EPER and the local partner 'Sahel Bio' support 1'500 pilot farmers in testing improved **local millet and cowpea varieties** using different **agroecological farming practices** and monitoring their success. The tested varieties are early and fast maturing and more tolerant to heat stress. The adapted varieties are planted with different cultivation methods, either in monocultures, mixed cultivation, or by using the traditional Zai planting technique in which a planting hole is dug to increase the water retention capacity. Furthermore, the use of compost is promoted to improve soil fertility. Regarding pest control, the farmers produce and apply a natural pesticide made from the Neem tree. They also release a parasitic wasp to biologically control the devastating caterpillar of the millet head miner moth. All pilot farmers document the plant development, growth and yields in their fields. The applied measures are promising: With the used techniques, farmers could **quadruple their yields**, now having sufficient millet from their harvest to **feed their families for up to nine months in a year**. Before the described measures were applied, their harvest lasted only for three months. In addition, there is even excess in cowpea yield which can be sold on the market for additional income.

Switzerland – advocacy for climate justice

Together with other Swiss non-governmental organisations, HEKS/EPER runs advocacy campaigns in Switzerland to raise awareness of how the climate crisis affects people living in the Global South. Although they did not cause the problem in the first place, they are often the ones who are hit the hardest by the consequences. HEKS/EPER calls on decision-makers and investors to make necessary changes to foster a low carbon and resilient climate future.

In 2018, the 'Swiss NGO DRR Platform' a network of 17 Swiss-based organisations working in the development sector, launched the '**Facing Climate Change' Campaign** (https://facingclimatechange.net/), led by HEKS/EPER. In three short videos, the campaign **portrays three people from three continents** whose livelihoods are threatened by the impacts of climate change and how they face the challenge of adapting to new climatic circumstances and threats every day. The videos were shown at different public events and gatherings in Switzerland.

Campaigning: With HEKS/EPER in the lead, Swiss NGO DRR platform launched the campaign 'Facing Climate Change' to sensitize the public in Switzerland and abroad on the effects of climate change.

Achievements & Perspectives

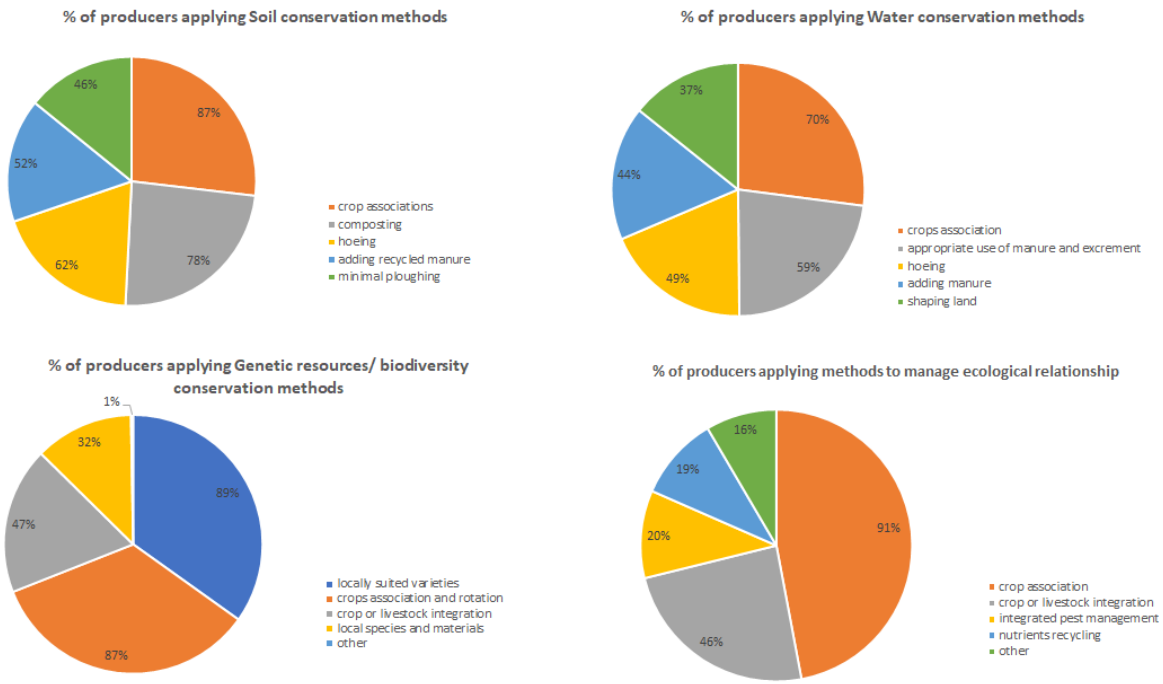
Achievements over the past years

Since 2014, HEKS/EPER systematically analyses climate and disaster risk and integrates resilience-building measures into its programmes and projects. HEKS/EPER, 'Bread for All' (BfA) and 'Bread for the World (BftW)' jointly developed the '**Participatory Assessment of Climate and Disaster Risk' (PACDR) Tool** (https://pacdr.net). It allows assessing natural hazards and climate change impacts, vulnerabilities and capacities at the community level and identifying means to build assets and capacities. Between 2014 and 2017, HEKS/EPER held capacity-building workshops on climate and disaster resilience for HEKS/EPER office staff and partner organisations in all focus countries. With a systematic integration, the awareness for climate and disaster risks was considerably raised. Resilience-building measures in the Latin American and African programmes comprise sustainable natural resources management, soil and water conservation measures and climate-resilient agroecological farming techniques. Another area is the conservation of traditional seed varieties, which show greater resilience to extreme weather (e.g. increasing heat stress and drought).

In the Asian context, the focus of the implemented resilience-building measures lies in awareness-raising of climate change issues for minority communities, their integration into governmental disaster risk management and climate change adaptation programmes and financing, as well as supporting them in diversifying livelihoods to become more resilient to shocks and stresses.

Achievements 2020

In 2020, HEKS/EPER further strengthened its project portfolio regarding **nature-based solutions**. Regeneration of degraded ecosystems and their sustainable use, management, and protection gained importance in the HEKS/EPER portfolio to adapt to climate change impacts and build resilience in the long term. Examples of such projects are the mangrove regeneration and sustainable use projects in the Sine Saloum Delta in Senegal and the Grand Anse in Haiti, forest regeneration in Brazil, Niger, Senegal, and rangelands in Niger and Ethiopia.



Promoting climate change resilience: data of different conservation methods in 2020.

With regard to more climate-friendly agricultural cultivation techniques, projects analyses revealed that conservation or agroecological farming techniques also gained importance in the 2020 portfolio. A wide range of **conservation methods** is applied in different contexts, ranging from soil and water conservation measures to genetic resources, biodiversity conservation and methods to manage ecological relationship (see pie charts). During 2020, **83%** (95% in 2019) of monitored surfaces **fulfil all 3 criteria of**

agroecological production practices. Soil conservation measures are applied by all of the producers. More than 93% of the producers apply measures to manage ecological relationships such as integrated pest management, crop association or intercropping, and nearly 100% of the monitored producers do not use GMO on their plots. About 88% of the producers also do not use synthetic pesticides and fertilizers. The most prevailing soil conservation methods applied compared over all different contexts are crop association (by 88% of the producers), com-posting (79%), hoeing (62%). 90% of the farmers use locally suited varieties of crop.

Other resilience-building measures integrated into HEKS/EPER projects are the **building of storage facilities for grain, seed and fodder**; informal and formal **risk-sharing mechanisms**, such as grain/seed/fodder banks on the community level or the linking of communities to **insurance schemes** for livestock or harvest. Furthermore, the diversification of income strategies plays an essential part in resilience-building so that people have different income sources to fall back on in case one of them fails. Particularly in humanitarian aid, projects also contain more **technical approaches to resilience-building.** This can be disaster-proof (re)construction of houses and infrastructure, building or rehabilitation of evacuation routes, or strengthening of early warning mechanisms. Another approach is **awareness-raising** and the establishment of **local disaster preparedness committees** and **plans**.

Concerning the strengthening of transformative capacities, HEKS/EPER facilitated dialogue between the most vulnerable, often minority communities and local authorities to make them aware of their susceptibility to climate change and disasters impacts and the importance of adaptation measures and finance (Bangladesh, Niger, Senegal, Ethiopia, Brazil).

Perspectives

HEKS/EPER's most **significant experience** regarding climate and disaster resilience lies in **governance and management of natural resources** and the **promotion of climate-resilient agricultural farming practices**. Here, HEKS/EPER should explore across the programme portfolio how to further strengthen the link between land governance and resilience as a solution for the climate and environmental crisis and make this more visible. Another strength of HEKS/EPER that should be applied across the entire portfolio is the **application of a rights-based approach in resilience building**. On the one hand, to raise awareness among the concerned people to what kind of shock and stress protection they are entitled to. On the other hand, to hold authorities accountable for their responsibilities of protecting people from disasters linked to natural hazards and prepare them for medium to long term changes.

A more systematic application of a risk lens is key to integrating **resilience building in all projects** – this calls for a broader application of **community-based risk assessments** in the project planning phase. Also, projections of changing climatic conditions should be taken into account, particularly when it comes to projects in agriculture or market system development. To show more evidence regarding HEKS/EPER activities in the field of resilience, further systematic integration of the topic into programme and project reporting is needed. To achieve this, climate and disaster resilience became a separate output in the new HEKS International Programme (HIP) 2021-2024, which the organisation will be measured against. Through the merger with Bread for All (BfA) as of January 2022, HEKS/EPER will increase its voice for climate justice in Switzerland.

Niger: Sustainable land governance helps to protect environment and to secure long-term access to scarce resources for pastoralist with their cattle and small-scale farmers.

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 focusses 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 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 'Resilience'

- Building Resilient Communities (2014). HEKS/EPER Guideline.
  https://drive.google.com/file/d/1LPw0UOlU-Et8LEsN6LRiOP5rInhwdyFd/view
- Facing Climate Change (2018). Impact of Climate Change.
  https://facingclimatechange.net
- Where People and Their Land are Safer (2017). A Compendium of Good Practices in Disaster Risk Reduction.
  https://drrplatform.org/wp-content/uploads/2020/03/2017_WOCAT-DRR_Where_people_and_their_land_are_safer.pdf
- DRR & Climate Change Adaption (2019). Mainstreaming Guideline – Overview of Key Tools.
  https://drrplatform.org/wp-content/uploads/2020/03/DRR-CC_Mainstreaming_guidance_130519.pdf

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)