CLIMATE RESILIENT FOOD SECURITY AND LIVELIHOODS :

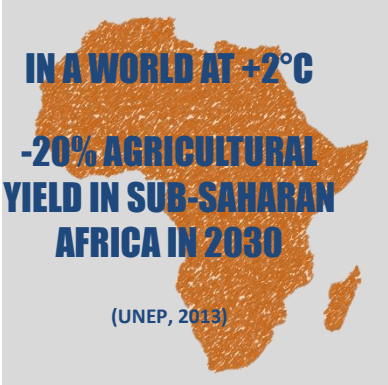
ACTION AGAINST HUNGER COUNTRY EXAMPLES

The impacts of climate change accentuate the vulnerability of populations

Hydrometeorological events such as floods, droughts or cyclones, and other increasingly recurrent extreme weather phenomena have consequences on the health, food security, nutrition, environment and economic development of the most vulnerable populations.

On average, the United Nations Office for Disaster Risk Reduction (UNISDR) estimated that, in 2015, 98.6 million people were victims of disasters, with droughts and floods being the two hazards that affected the greatest number of people.

Climate change affects the seasonal calendar, accentuates the occurrence of extreme weather events, modifies soil structure, imapcts on water sources, and affects agricultural crop cycle, yield crop quality, and the pace and length of hunger seasons in many subsaharian african countries.



The impacts of climate change therefore amplify already existing threats to food security and livelihoods. Already vulnerable populations and households are the first affected by climate change, especially in rural areas where household food security depends primarily on their own agricultural production.

There are two complementary approaches to combating climate change: adaptation and mitigation, which consists of reducing or eliminating greenhouse gas emissions, and adaptation, which consists of adapting to the effects of climate change.

Adaptation refers to the ability of a system to adjust to climate change or its impacts, to moderate potential damages, to take advantage of beneficial opportunities or to cope with the consequences

Mitigation consists of interventions reducing the sources or enhance the sinks of greenhouse gases**.**

Sustainable agriculture can provide both adaptation and mitigation solutions to climate change. Indeed, the dissemination of agricultural and livestock practices based on sustainable agriculture and agroecology help reducing the vulnerability of agricultural systems to climatic hazards, thus strengthening the resilience of smallholder producers and agricultural systems to shocks and disasters.

The agricultural programs developped and implemented by Action Against Hunger in its country of interventions are designed according to the principles of sustainable agriculture, combining the sustainable management of natural resources, the economic profitability of small family farms and the social dimensions of the proposed solutions. Support for small-scale family farming aims to provide farmers with a dignified income, develop rural areas, ensure sustainable food security and wellbeing.

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Agroecology – the sustainable solution

Agro-ecology is defined as both a scientific discipline and a set of agricultural practices. It consists in applying the processes and principles of ecology to the management of agroecological systems, while seeking ways to improve these systems by imitating natural processes, thus creating beneficial biological synergies between the components of the agroecosystem.

Agroecology integrates all the parameters of natural resources management in the farming systems, such as water saving and best management, conservation and management of soil fertility, promotion of drought resistant varieties, bilogical pest and disease management, etc.

In face of climate change, agro-ecology therefore appears as a concrete, sustainable and commendable solution to reduce the vulnerability of rural communities, strengthen their resilience to climate change, and to ensure their food security despite the occurrence of disasters.

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Country examples of good practices

ZIMBABWE : SOIL AND WATER CONSERVATION

One of the projects implemented by Action Against Hunger in Zimbabwe in the country ecologically fragile areas has strengthened the resilience of communities to drought through conservation agriculture practices. The land had suffered environmental shocks leading to declining of soil fertility. Conservation agriculture is a set of farming techniques designed to protect the soil from erosion and all forms of degradation. It contributes to improving soil fertility by enhancing soil organic matter, improving soil structure and promoting biological activity, thus promoting soil carbon sequestration. It also allows a better use of water resources by promoting the infiltration of water into the soil and limiting evaporation, and thus the process of desertification.

PROPOSED SOLUTIONS

- Implementation of conservation agriculture in its three principles (minimum tillage, crop associations and rotations, permanent soil cover).
- Provision of organic manure to restore soil fertility.
- Diversification of production, including the integration of agriculture and animal husbandry

Photo © ACF Zimbabwe

The project has benefited to 2,600 smallholder farmers in the Save Valley region who received agricultural inputs and have been trained in conservation agriculture through farmer field schools. In addition, partnerships were developed with beneficiary communities, the International Center for Agricultural Research in the Tropics (ICRISAT) and agricultural extension agencies in Zimbabwe to promote the proven good practices.

In addition to Zimbabwe, Action Against Hunger has developed other conservation agriculture projects in Bangladesh, Syria, Burkina-Faso, and Madagascar.

ETHIOPIA : IMPROVE PREPAREDNESS AND READINESS FOR SHOCKS

Ethiopia constantly faces cyclical droughts and floods that affect the food security of vulnerable communities. Changes in the rainy season, disruptions in the crop cycle, lack of access to water, and lack of information and preparedness for natural hazards all compound the already difficult living conditions of many families living in areas vulnerable to climatic shocks.

PROPOSED SOLUTIONS

- Livestock movement combined with organized and planned community use of pasture and water resources in the event of drought
- Installation of hedgerows to reduce evatranspiration and thus for optimsed use of irrigation water and stone barriers to retain and conserve rainwater in crop fields.
- Setting up early warning systems for farmers and herders in conjunction with the meteorological services and the concerned line ministries, to guide and advise them with right information related to yields, livestock, and weather informations.

Photo © ACF Ethiopia

MADAGASCAR
SUSTAINABLE PRACTICES TO PREVENT LANDSLIDES OR FLOODS

Climatic disturbances such as cyclones, floods and droughts, combined with deforestation and forest fires from slash-and-burn farming practices regularly affect agriculture, livestock and natural resources (water, soil, forests) on the island of Madagascar.

Some unsustainable agropastoral practices such as overgrazing reflect economic problems and lack of adequate structures to protect the ecosystems.

PROPOSED SOLUTIONS

- Implementation of crop succession and rotation techniques that allow the regeneration of soil organic matter and water retention capacity, thus preserving soil structure and texture and enabling it to withstand the effects of climate change.

- Promotion of crop diversification that reduces the risk of crop losses and ensure food for smallholder farmers communities
- Soil fertilization: composting techniques for the production of organic fertilizers
- Reforestation, tree planting, land fixation through the installation of hedgerows
- The construction of dikes and protection canals, stone barriers.
- Training of farmers and other community members in cyclone and flood risk preparedness and warning messages.

PROMOTE LOCAL SUPPLY CHAINS AND LOCAL MARKETS

Small-scale family farming produces more than half of the world's food production. It therefore plays a central role in supplying food products to rapidly expanding urban areas. The development of short value chains remains consistent with diversified and resilient agricultural production systems. This is why Action Against Hunger agricultural strategy encourages the setting up of cooperative organizations to develop markets, set up small processing and packaging units in rural areas, and transport processed products through short supply chains that are less sensitive to shocks, particularly climatic ones, and to variations in food prices. In some of its countries of intervention, Action Contre la Faim is exploring the use of insurance products and systems (including warrantage) for crops, livestock and other risk management instruments related to natural disasters, price fluctuations and the attacks of pests and diseases.

Recommendations and success factors

Establish joint multi-sectoral and multi-level programming in order to have a holistic analysis of the local context and vulnerability to environmental risks, and to put in place coordinated and cross-cutting activities such as multi-sectoral monitoring and warning mechanisms

Promote an inclusive approach by taking into account the involvement of all communities members (women, men, youth) in the planned activities according to the constraints and the social context in which these people live

Promote sustainable agricultural production and food systems respectful of the rights and interests of small-scale farmers.

Ensure a continuous advocacy with donors and local governments to promote climate risk management issues.

Get involved in national and international discussions and consultations in order to influence decisions in favor of small farmers, and contribute to the development of policy frameworks that improve sustainable agricultural practices and food security.

Implement targeted public financing mechanisms dedicated to cope with climate change and ensure food security programs

Promote and disseminate the capitalization of lessons learned and work on the scaling up of good practices allowing a better resilience to climate shocks.

Contact
Bader Mahaman Dioula
Sustainable Agriculture Senior Advisor
E-mail: bmahaman@actioncontrelafaim.org

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