



# Strengthening resilience to threats and crises



## 1. Multi-hazard challenges to agriculture livelihoods

Half of the global food production is produced by around 2.5 billion smallholders who derive their livelihoods almost exclusively from agriculture. They are amongst the most vulnerable to disasters and crises that can wipe out their crops, supplies, equipment and animals within minutes. Strengthening the resilience of their livelihoods will help reduce human suffering and the financial costs associated with disasters. Moreover, it is a key step to achieving the SDGs and reaching the estimated 60 percent production increase the world needs to feed 9 billion people by 2050.

This is why in 2013 FAO embarked on a major effort to increase the resilience of smallholders' livelihoods, their communities and countries to natural hazards, food chain crisis, conflicts and protracted crises and respond to them when they occur. Strengthening resilience is one of FAO's five strategic objectives.

### Natural Hazards

Damages and losses from disasters triggered by natural hazards are increasingly threatening the development gains of many communities in the developing world.

Climate-related disasters such as drought, floods and storms are increasing and disproportionately affecting the agriculture sector (up to a quarter of total damages and losses) and food insecure, poor people. The impacts at country and household levels are devastating with at times irreversible destitution.

### KEY FACTS:

- In 2014, 87% of natural disasters were climate related.
- Between 2003 and 2013, FAO estimated that 22% of damages caused by natural hazards and disasters in developing countries affected agriculture, increasing to 25% for climate-related disasters.
- Agriculture is the sector most affected by drought, absorbing about 84% of the economic impact.

### Food Chain Crises

The globalization of trade, intensive food production systems and climate change have increased food chain emergencies resulting from transboundary animal and plant pests and diseases.

Locust invasions can destroy the crops of entire communities, and animal diseases kill large numbers of livestock, which are often the only assets of poor farmers. Without appropriate measures dedicated to preventing, alerting, preparing for and responding to such crises, they have an increasingly disastrous impact on the lives and livelihoods of vulnerable families and our overall food supply.

### KEY FACTS:

- Over the past decades more than 75% of emerging diseases affecting humans originated in livestock and wildlife.
- Nearly 70% of the world's 1.4 billion extremely poor people depend on livestock.
- Climate change now creates favourable conditions for animal and plant pest diseases spread in new areas.
- Plant diseases such as wheat rust can cause yield losses of up to 80%.
- A locust swarm the size of Paris eats the same amount of food in one day as half the population of France.

## Protracted crises including violent conflicts

Protracted crises are characterized by a combination of recurring causes, such as conflicts, natural hazards, socio-economic shocks, fragile governance and weak institutional capacity. While causes are many, overlapping and persistent, violent conflict is a key and significant driver.

Food insecurity is a common feature of protracted crises with undernourishment almost three times more prevalent than in other developing countries. Levels of stunting and under-five mortality rates are of particular concern.

As these crises persist, countries and communities need effective and longer-term strategies to reinforce their agricultural livelihoods against shocks and stressors. Strengthening resilience is now widely accepted as a means to bring coherence of humanitarian and longer-term development actions in order to benefit the most vulnerable and at risk groups.

### KEY FACTS:

- Almost half a billion people live in over 20 countries and territories affected by protracted crises, mostly in Africa.
- The prevalence of undernourished in protracted crisis is on average three times higher than in other developing countries.
- In protracted crises countries, agriculture accounts on average for 32% of the GDP. Each year of civil conflict causes a 2.2% reduction in the GDP.
- In conflict situations, an average of 87% of those affected are actually residents who do not flee their homes (CREED 2013).

## 2. FAO support to countries on resilience and response for agriculture livelihoods

FAO's work on resilience is centered on supporting people's agriculture livelihood systems before, during and after shocks. It is built on four mutually supportive and complementary elements: i) disaster/crisis risk governance in agriculture; ii) sector-specific information services, early warnings and vulnerability analysis; iii) access to technologies, services and good practices to reduce vulnerability and boost livelihoods and iv) improved preparedness and response for early action and recovery.

## 1. Disasters triggered by natural hazards

In line with the Sendai Framework for Disaster Risk Reduction, a global framework endorsed in 2015 by the international community, scaled up and concerted efforts are needed to reduce risk exposure and mitigate damage and losses from natural shocks, in particular for those affecting agriculture, food security and nutrition. Reducing risks of disasters is critical, but lacks adequate risk sensitive policies, institutional capacities, and investment for agriculture and its subsectors in four areas:

### Disaster risk governance

FAO supports policies, legal frameworks, programmes, and investment strategies for disaster risk reduction in the agriculture, forestry and fisheries sectors. Examples include plans of action for disaster risk reduction in agriculture, endorsed in 2014 in Cambodia, Dominica and Lao People's Democratic Republic, as well as Vegetation Fire Management prevention activities in Africa, Asia, Latin America and the Near East. FAO also established a facility to mainstream disaster risk reduction in agriculture, with the aim to facilitate access to financial resources, technical expertise and capacity building opportunities.

### Disaster risk information and early warning systems

FAO promotes information systems and aims to improve vulnerability analysis and strengthen hazard specific early warning. Examples include FAO's Global Information and Early Warning System; Agricultural Stress Index; and Global Fire Information Management System.

### Vulnerability reduction measures

Based on many years of field work, FAO is developing and disseminating technical guidance and supporting community-based approaches to reduce exposure to disasters. Taking into account the various types of hazards, and diversities of agro-ecosystems and livelihoods, FAO supports the implementation of a wide range of preventive measures such as producing strategic seed reserves, promoting stress tolerant crop varieties, producing and storing fodder for livestock, promoting water harvesting and soil conservation, etc.



## Preparedness and emergency response

Despite good risk governance, early warning and vulnerability reduction measures, disasters will still happen and FAO supports its member countries to prepare for and to respond to these shocks when they occur. Protecting agriculture-based livelihoods is an essential component of FAO resilience work. Saving livelihoods saves lives, reduces human suffering and decreases the economic cost of emergency response and recovery. Unfortunately today, in countries receiving the most humanitarian aid over the past decade, only 0.62 percent was invested in preparedness. And a small percentage goes for agriculture emergency assistance.

## II. Food Chain Crisis

The Food Chain Crisis - Emergency Prevention System (FCC-EMPRES) is a corporate multidisciplinary approach that integrates prevention, early warning, preparedness, and response. Through FCC-EMPRES, FAO supports member countries and enhances institutional collaboration in the global governance of transboundary threats to the food chain. FCC-EMPRES operates through three systems:

### Animal Health

EMPRES Animal Health promotes the harmonization of global and regional approaches for early warning, rapid detection and timely response to transboundary animal diseases. Through EMPRES Animal Health, FAO works with countries to develop and sustain their capabilities: i) in strategic planning and early warning; ii) to respond rapidly to animal health emergencies; and iii) to coordinate resources, partners and actions to better protect animals, people and livelihoods.

FAO has been at the front line in the control of H5N1 avian influenza since its emergence in 2004. Through its country field work in over 130 countries, FAO's emergency response with partners, progressively controlled and eliminated the infection, and mitigated the risk of emergence of a human pandemic influenza. Today, only a handful of countries are still affected. The Emerging Pandemic Threat Programme now addresses zoonotic diseases such as Ebola, Middle East Respiratory Syndrome, as well as avian

influenza; focusing on capacity development of the veterinary systems in Asia, Africa and the Middle East.

### Plant Protection

EMPRES Plant Protection focuses on transboundary threats with the highest impact on food security, livelihoods and national economies. These include plant pests such as locust, armyworm and fruit flies; and crop diseases such as wheat and coffee rust diseases, banana, cassava and maize diseases.

Over the years, desert locust plagues have had major consequences on the food security and nutrition of vulnerable populations. However, today the reduction in the frequency, severity and duration of Desert Locust plagues and their associated food losses has been possible thanks to the adoption of a preventive control strategy relying on early warning and early reaction by locust-affected countries and FAO, including key tools such as the FAO Desert Locust Information Service (FAO DLIS).

#### BOX 1: Making the difference at country level

Together with the Government of Madagascar and its resource partners, FAO successfully supported a three year locust control campaign which averted the plague, protecting the agriculture livelihoods of about 13 million people.

### Food Safety

Globalized trade means that food-borne pathogens, like food, travel further and faster. EMPRES Food Safety assists countries and regions in developing prevention-oriented food control systems and effective strategies for mitigating adverse food safety events and managing food safety emergencies (i.e. dioxin, radio nuclear contamination, etc.). FAO also guides countries and regions in improving their early warning and rapid alert capabilities for food safety in line with the One Health approach and in collaboration with the International Food Safety Authorities Network (INFOSAN).

## III. Protracted Crises including violent conflicts

Reinforcing resilience in protracted crises requires innovative policy frameworks, better understanding of structural causes, as well as coordinated and coherent





efforts to reduce communities' exposure to shocks. FAO works with governments and other partners to strengthen resilient livelihoods and food systems in protracted crises through:

#### **Policy support to improve food security and nutrition**

In October 2015, the Committee on World Food Security endorsed the Framework for Action for Food Security and Nutrition in Protracted Crises (FFA). The FFA comprises 11 principles that highlight the need for coherent and integrated humanitarian and development efforts, thus taking a resilience approach to address both the immediate and the longer-term livelihoods, food security and nutrition needs of people in protracted crises. FAO has supported the FFA drafting, the related consultations and negotiations, and now supports its implementation – transforming policy into action.

#### **Crisis information, warning and vulnerability analysis**

FAO leads efforts to better understand, measure and inform decision-making for resilience through the Resilience Index Measurement and Analysis (RIMA) model. The Organization also works with regional authorities (e.g. IGAD, CILSS) to establish Resilience Analysis Units and promotes the use of a common approach for food security analysis through the Integrated Food Security Phase Classification (IPC) in over 29 countries.

#### **Stabilization and vulnerability reduction through livelihoods support**

FAO supports efforts to enhance agriculture livelihoods and communities' access to social protection and safety nets, land and resources, including SAFE – a multi-disciplinary approach to fuel and energy needs in conflicts and protracted crises. In Central Africa Republic and in the Sahel sub-region, FAO also implements the "caisses de resilience" approach, combining technical, financial and social assistance for the most vulnerable farmers or herders groups.

#### **Preparedness and emergency response**

FAO also develops technical standards and guidelines for preparedness and emergency response and supports their application in protracted crises and conflicts in order to safeguard agriculture livelihoods and support communities to implement their own solutions, through empowerment and dignity.

### **3. Why partner with FAO?**

As a neutral broker and convening authority mandated to fight hunger, poverty and the erosion of natural resources, FAO's work on agriculture, food and nutrition is at the heart of the global and local resilience agenda.

FAO combines the development and application of high quality technical standards across agriculture, livestock, fisheries, aquaculture, forestry and other renewable natural resources for resilience, which are key for sustainable development. It has a global knowledge network of regional, sub-regional, country and field offices deriving its strength from the dedication of its highly qualified staff and the support of its membership.

FAO's ability to rapidly respond to its member's disaster and crisis needs is demonstrated by its emergency response capacity. In the last 20 years, the Organization has responded to all the major humanitarian crises building a strong role for agriculture in humanitarian context, including a unique role in the response to food chain emergencies.

FAO helps coordinate humanitarian response in the framework of the FAO-WFP co-led food security cluster.

FAO's current work on resilience carried out in partnership with the Rome-based Agencies (IFAD, WFP) illustrates the shift needed from just crisis response to preventive and early proactive measures, a shift that saves human lives and livelihoods, reduces economic losses and suffering and decreases the cost of humanitarian response.