

# DISASTER RISK REDUCTION AND MANAGEMENT AND CLIMATE CHANGE ADAPTATION IN THE AGRICULTURE SECTOR

The Philippines



### Q U I C K F A C T S



**20 strong typhoons** on average enter the country each year, with about eight or nine making landfall. The Philippines is also highly vulnerable to other natural hazards such as drought, flooding, earthquakes and volcanic eruptions.\*



**30.7 percent** of the country's labour force are employed by the agriculture sector and are most vulnerable to disasters.\*\*



#### 1.5 million people (323 360 households)

have received support through FAO's resilience programme in the Philippines in response to disasters such as typhoons, drought and conflict\*\*\*

\*Philippines National Disaster Risk Reduction and Management Framework \*\*Philippine Statistical Yearbook, 2015 (includes agriculture, fishing, hunting, forestry) \*\*\*December 2013 to June 2018

The Philippines is one of the most disaster-prone countries in the world but it is also one of the most advanced in shifting from reactive emergency response to proactive risk reduction. FAO's **disaster risk reduction and management (DRRM) and climate change adaptation (CCA)** work in the country focuses on building the resilience of vulnerable farming and fishing communities to both natural and human-induced disasters, and enhancing the Government's capacity to address threats and respond to crises.

## FAO APPROACH TO DISASTER RISK REDUCTION AND MANAGEMENT AND CLIMATE CHANGE ADAPTATION

Disasters and climate change impacts, including shifts in weather patterns and extreme weather-related events disrupt economic activities and livelihoods, and ultimately threaten food security. Increasing the resilience of agricultural communities to these threats and crises is at the heart of FAO's work in the Philippines.

The unique and strategic integration of preparedness, emergency response, rehabilitation and development into its DRRM and CCA approach enables FAO to comprehensively deliver results and build a solid foundation for promoting short- and long-term resilience. FAO supports the Government's DRRM and CCA agenda through:

- Facilitating an enabling environment by providing technical assistance to the Government in institutional strengthening, risk and crisis management, and mainstreaming DRRM and CCA into national and local plans.
- Responding to crises that affect agriculture, food and nutrition security by distributing high-quality farm inputs and tools to farmers and fisherfolk affected by crisis.
- Safeguarding livelihoods through early warning systems, timely and accurate assessments, and evidence-based planning.
- Applying risk and vulnerability reduction measures such as the introduction of stress-tolerant crop varieties, climate-smart farming and aquaculture methods, good practice options and alternative livelihoods.

#### **Key Interventions**

#### Restoring livelihoods and building resilience in Mindanao.

In addition to supporting the Government in restoring the livelihoods of farmers and fisherfolk affected by conflict, drought and flooding in Mindanao, FAO is helping to increase the resilience of agricultural communities to future crises by engaging them in alternative livelihoods, value-adding post-harvest technologies and community-based DRRM. FAO also provided technical assistance to the Bangsamoro Development Agency in the formulation of the Bangsamoro Development Plans I and II. These efforts are funded by the Government of New Zealand, UN Peace Building Fund and FAO Technical Cooperation Funds.

**Modern geospatial technologies.** FAO and the Department of Agriculture (DA) launched a joint initiative to integrate the use of drone mapping technologies that has the potential to significantly increase the speed and accuracy of pre- and post-disaster assessments, environmental monitoring and evidence-based planning.

**National plans.** In 2015, FAO assisted DA in the formulation of a national DRRM strategy for agriculture and fisheries. Complementing this effort is a German-funded global FAO programme mobilized in 2016 through which FAO is supporting the integration of agriculture in national adaptation plans.

Early warning systems and tools. FAO in partnership with the Department of Health's National Nutrition Council and UNICEF assisted local government units in establishing early warning systems for food and nutrition security. This simplified approach to quarterly data collection and analysis aids LGUs in forecasting and making evidencebased decisions to address or prevent impending crises.

FAO also assists the Department of Science and Technology's Philippine Atmospheric, Geophysical, and Astronomical Services Administration (DOST-PAGASA) and DA in the development of climate risk management tools for agriculture and fisheries, including training agriculture and fisheries officers on interpreting and utilizing climate and weather information at different scales.

Impact and vulnerability assessments on agriculture and household food security. FAO assists government partners in the conduct of inter-disciplinary analysis and mapping of climate change impacts on crops (rice and corn), surface water availability for irrigation and farm gate price (rice). FAO also provides advisory services for the analysis of household vulnerability to food insecurity using different datasets. FAO is also working with the government in enhancing the country's social protection programs and early warning systems to make them more responsive to the needs of vulnerable communities.

Good practice options and technologies. Since 2009, FAO has been assisting the Government, farmers and fisherfolk in the identification, implementation and evaluation of risk-reducing location-specific practices and technologies for agriculture and fisheries. Learnings from these practices and technologies are also used to inform DRRM and CCA-related planning at different levels.

Innovative multi-hazard protocols. FAO assisted DA and the Provincial Government of Albay in the preparation of a livestock DRR operations manual for volcanic eruptions and climate-related hazards that considers the interaction between geologic and climate hazards and their differential impacts on livelihoods.

Restoration of affected livelihoods. FAO supports the restoration of agriculture and fisheries livelihoods affected by natural and man-made calamities. Assistance is provided on the request of the Government to augment resources in responding to the immediate recovery needs of farmers and fishers affected by typhoons drought and conflict throughout the country.

#### PAST DISASTER RISK REDUCTION AND MANAGEMENT AND CLIMATE CHANGE **ADAPTATION PROJECTS**

#### **Enhanced Climate Change Adaptation Capacity of Communities** in Contiguous Fragile Ecosystems in the Cordilleras

Donor: Millennium Development Goals Achievement Fund (funded by the Government of Spain) 2009-2011

#### **Analysis and Mapping of Impacts under Climate Change for** Adaptation and Food Security (AMICAF)

Donor: Government of Japan 2012-2014

#### **Enhancing Capacities for Disaster Risk Reduction in Agriculture** in Cambodia and the Philippines (DIPECHO) I

Donor: European Commission - Humanitarian Aid and Civil Protection (ECHO) 2012-2013

#### **Typhoon Haiyan Experience**

After Typhoon Haiyan (locally known as Yolanda) devastated the agriculture sector in 2013, FAO responded to the Government's request for support in addressing the emergency and livelihood rehabilitation needs of more than 230 000 farming and fishing families.

Emergency response activities enabled rice and corn farmers to meet the imminent planting season after the typhoon and produce much higher yields than pre-typhoon harvests, helping to cut their reliance on food aid.

In the rehabilitation and recovery phase, farmers and fisherfolk were equipped with skills and start up tools to engage in climate-smart production and post-harvest methods that will increase their productivity and minimize production losses. They also learned value-adding techniques, basic business planning and entrepreneurship, and asset building through savings that will further improve their incomes and allow them to work towards financial stability. In the process, they also learned how to work in harmony with the environment and have gained better perspectives on soil and water management and coastal resource management, which they now recognize as contributors to the longevity of their sources of livelihood.

#### FAO's Post-Haiyan Strategy

(Building Resilience of Farming and Fishing Communities to Threats and Crises through the Upscaling of Integrated Disaster Risk Reduction and Climate Change Adaptation Approaches for Improved Food Security and Sustainable Livelihoods)

The Typhoon Haiyan experience, combined with FAO's learning's from other projects such as the DIPECHO-funded DRR programme (Consolidating Capacities for DRR in Agriculture in Southeast Asia) and Japan-funded Analysis and Mapping of Impacts under Climate Change for Adaptation and Food Security Project, are captured in FAO's post-Haiyan strategy. The follow-on plan seeks to integrate DRRM and CCA approaches for improved food security and sustainable livelihoods.

**Enhancing Capacities for Disaster Risk Reduction in Agriculture** in Cambodia and the Philippines (DIPECHO) II

Donor: ECHO 2014-2015

**Strengthening Capacities for Climate Risk Management and Disaster Preparedness in Selected Provinces in the Philippines** (Bicol Region)

**Donor: FAO Technical Cooperation Funds** 2009-2011

#### Typhoon Haiyan Emergency, Recovery and Rehabilitation **Programme**

Donors: 22 projects funded by the Governments of Belgium, Brazil, Canada, Finland, Germany, Ireland, Italy, Japan, New Zealand, Norway, Switzerland and the United Kingdom, and the European Commission, United Nations Central Emergency Response Fund and FAO Technical Cooperation Programme funds 2013-2015

