



**ETHIOPIA**

EARLY WARNING – EARLY ACTION

# **LEAP**- Livelihoods, Early Assessment and Protection

Innovative Climate Risk Management for Food Security | **September 2013**

Partnership between the World Food Programme and the Government of Ethiopia

## From Managing Disasters to Managing Risk

Natural disasters are a leading cause of hunger, affecting all dimensions of food security, including economic and physical access to food, availability and stability of supplies, and nutrition. In Africa alone, 650 million people are dependent on rain-fed agriculture in marginal environments affected by water scarcity and land degradation.

Climate change will exacerbate existing threats to food security and nutrition, including by worsening environmental degradation and leading to more extreme weather events. Projections suggest that the number of people at risk of hunger could increase by up to 20 percent by 2050 due to the adverse impacts of climate change.

The Government of Ethiopia and the World Food Programme (WFP), in collaboration with other partners, have developed an integrated early warning- early response tool to help manage the risks posed by climate hazards to food security: the Livelihoods, Early Assessment and Protection (LEAP) system.

## LEAP within Ethiopia's Climate Risk Management Framework

Ethiopia is particularly vulnerable to drought and floods, and may become increasingly so in light of climate change. In 2004, recognizing the need to address the impact of climate risks on food security, the Government of Ethiopia established the Productive Safety Net Programme (PSNP), as part of its comprehensive National Food Security Programme. The PSNP is a national social protection system which provides predictable, multi-year assistance to millions of chronically food-insecure rural households. It allows households to transition away from emergency food assistance dependency by participating in community disaster risk reduction and asset-building works, in exchange for food and/ or cash transfers.

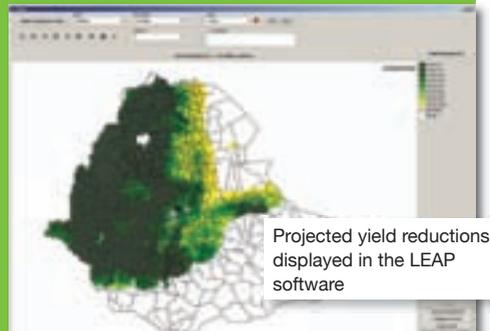
LEAP, developed by the government in 2008 in collaboration with WFP, allows the PSNP to be scaled-up immediately in case of a climate disaster. LEAP is an early warning-early response tool which triggers contingency funding ahead of severe droughts or floods, to provide food or cash to the people projected to need early assistance.

Early assistance is therefore key to preserving the PSNP's developmental gains and preventing more households from falling into chronic food insecurity due to shocks. An effective disaster risk management framework, of which LEAP is a pillar, is central to the sustainability of the overall PSNP and to achieving the aims of the National Food Security Programme.

## The LEAP Tool

The LEAP software uses crop and weather information to estimate future crop yields reductions. It then converts these estimates into the number of people, by district and region, projected to be in need of assistance. This can then trigger the immediate disbursement of contingent funds, thus enabling households to receive early assistance to protect lives and livelihoods.

The meteorological information used in LEAP comes from satellite data as well as from a network of automated and conventional weather stations. To improve the quality of this data, the LEAP project is investing in the national meteorological infrastructure, with 57 automated weather stations having been installed throughout the country as of 2013.



## LEAP Milestones

- As of 2013, LEAP has officially reached the point at which it can reliably anticipate the number of people, by region and district, in need of early assistance in the face of an impending drought.
- Work is under way to enable LEAP to predict beneficiary numbers in case of flood, as well as in pastoral areas - which do not depend on crops. Seasonal weather forecasts are also being added to enable even earlier warnings.
- A cost-benefit analysis is being carried out to evaluate the financial benefits of LEAP's integrated early response system, compared to conventional emergency aid in case of climate disasters.
- Finally, WFP and the government of Ethiopia are exploring ways to support other countries to implement LEAP-like systems.

## Setting Standards in National Climate Risk Management

LEAP, which enables assistance to be delivered in a timely and cost-effective manner in anticipation of an impending food crisis, plays a central role in the Government of Ethiopia's strategic shift from disaster management to risk management.

LEAP is an excellent example of how WFP helps governments improve the effectiveness of disaster response by integrating early warning and risk transfer mechanisms (including contingent finance, but also potentially index-insurance), into conventional social protection schemes. It is also a powerful illustration of the importance of capacity building in constructing effective climate risk management frameworks at the national level: a strong emphasis was placed from the start on ensuring that the Government fully owns and coordinates LEAP.

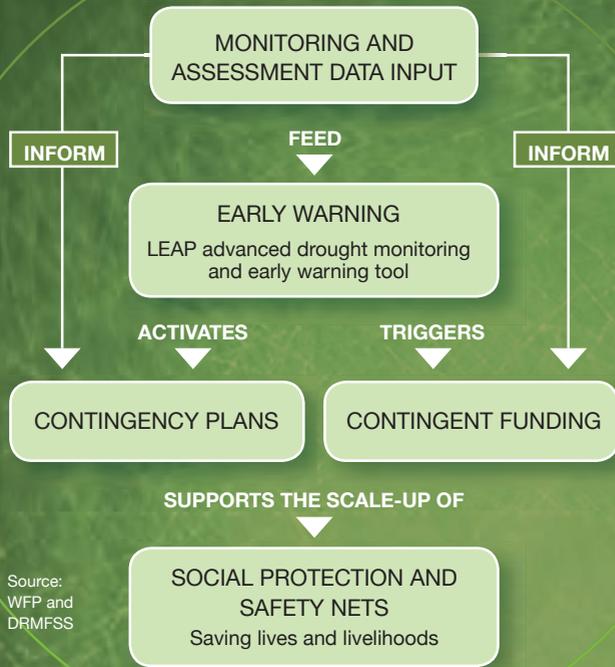
Since 2011, over 200 people have received technical training, including representatives from the Disaster Risk Management and Food Security Sector (DRMFSS) of the Ministry of Agriculture, the National Meteorological Agency, as well as others.

Building on the success of LEAP, WFP continues to provide support to build comprehensive risk management frameworks that address food insecurity in a more cost-effective and sustainable manner.

Working closely with governments and partners, WFP can tailor interventions which enhance local risk management systems, including by building on safety nets and livelihood protection schemes.



# Climate Risk Management Mechanism



*“LEAP is an innovative tool that has been instrumental in strengthening Ethiopia’s early warning and response system.”*

H.E. Ato Mitiku Kassa, State Minister, Ministry of Agriculture, Disaster Risk Management & Food Security Sector, Ethiopia

*“The LEAP software has greatly helped us in improving our capacity in providing timely and objective based early warning information to our users.”*

Ato Dula Shanko, Director General Meteorological Agency, Ethiopia

Source:  
WFP and  
DRMFSS

The World Food Programme is the world’s largest humanitarian organization fighting hunger worldwide, providing assistance to about 97 million of the most vulnerable people. As a result, WFP has amongst the deepest pools of technical expertise in disaster risk reduction and management for food security. This expertise ranges from early warning systems to vulnerability analysis, emergency response, and resilience building.

DRMFSS is the nodal agency of the Government of Ethiopia within the Ministry of Agriculture mandated to coordinate and manage all pillars of Disaster Risk Management in Ethiopia, in addition to addressing acute and chronic food insecurity. DRMFSS leads the national DRM coordination forums and the design and implementation of risk assessments, Early Warning Systems and Contingency Planning, in addition to leading the Risk Financing Mechanism.

This initiative is supported by the World Bank and the Government of Spain.

## For more information:

Disaster Risk Management and Food Security Sector  
Government of Ethiopia  
[www.dppc.gov.et/Pages/leap.html](http://www.dppc.gov.et/Pages/leap.html)

Ethiopia Country Office  
World Food Programme  
[www.wfp.org/disaster-risk-reduction/leap](http://www.wfp.org/disaster-risk-reduction/leap)

