

# Creating Pathways Out of Poverty in Rural Areas: Managing Weather Risk with Index Insurance



The International Fund for Agricultural Development (IFAD) and the World Food Programme (WFP) have joined forces to reduce the vulnerability of poor rural people to extreme weather events that can be devastating to agricultural productivity.

With support from the Bill and Melinda Gates Foundation, IFAD and WFP are working to improve the access of poor rural people in developing countries to index-based weather insurance. This type of insurance can help them cope better when extreme weather hits, and can open the door to other financial services, in particular credit.

**Adverse selection** occurs when potential borrowers or insurees have hidden information about their risk exposure that is not available to the lender or insurer, who then becomes more likely to erroneously assess the risk of the borrower or insuree.

**Moral hazard** occurs when individuals engage in hidden activities that increase their exposure to risk as a result of borrowing or purchasing insurance. These hidden activities can leave the lender or insurer exposed to higher levels of risk than had been anticipated when interest or premium rates were established.



## THE NEED

- **Extreme weather events and natural disasters can trap rural households in poverty, impede development and drain a country's critical financial resources.** Smallholders in developing countries are particularly vulnerable to natural disasters. Of the nearly 1 billion people living on less than a dollar a day, three out of four live in the rural areas of developing countries. Most depend on agricultural activities for their livelihoods. Poor rural people lack the institutional and financial capacity to withstand the impact of extreme weather events.
- **Very few effective ex ante solutions exist to mitigate weather risk in developing countries.** Farmers around the world use a range of strategies to cope with the financial and personal stress of natural disasters. They may forgo opportunities to earn high incomes in order to keep their risk exposure low, or they may remove children from school, or sell their assets, or migrate. But often such measures are not effective. They may put livelihoods at further risk and push families deeper into poverty.
- **None of the typical ex post responses to emergencies – financial bailouts, debt forgiveness or emergency relief – is optimal.** They fail to provide an effective safety net for poor people, they can be inequitable and untimely, and they may create dependency.
- **Traditional insurance does not provide appropriate coverage for poor rural people.** Concerns linked to moral hazard and adverse selection lead to high transaction costs, which would significantly increase the cost of insurance protection for smallholders.

## THE OPPORTUNITY

Weather-indexed insurance is a financial product based on local weather indices that are closely correlated to local yields. Payouts are triggered by a pre-specified independently verifiable index, instead of by actual yields. This reduces the occurrence of moral hazard and adverse selection, and eliminates the need for costly in-field assessments. In addition, weather index insurance can easily be reinsured, allowing insurance companies to effectively transfer part of the risk to international markets. Protection from weather-related risks would put poor rural people in a better position to preserve their livelihoods and engage in activities that could increase their incomes.

Correlated risks require special financing and access to global markets in order to be pooled, rendered diversifiable and priced more affordably. There has already been significant progress in creating risk transfer markets around low-probability, high-impact weather events such as wind storms or severe droughts that can severely affect rural households in low-income countries. By using index insurance to transfer risk, it would be possible to organize systems to the advantage of global markets and to transfer the covariant risks of low-probability, high-impact events away from developing countries. The continued expansion of the market for weather derivatives illustrates the growing interest and appetite for these macro risk transfer instruments.

## THE CONSTRAINTS

Ex ante financing for closely correlated losses can result in lopsided financial exposure for the risk taker. Though insurers and reinsurers have been showing greater interest in covering weather risk in emerging markets, they face many challenges. Many developing countries have weak primary insurance markets and “unfriendly” regulatory and financial systems. Barriers to entry are high and the opportunity costs of developing risks in non-OECD countries can be prohibitive for weather risk market makers and agricultural reinsurers.

As a result, market makers such as insurers and reinsurers look to development organizations to establish the necessary public goods (such as weather data and regulatory systems) and then pilot the approach. As understanding and ability to manage risk develop, the market should expand.

## IFAD-WFP WEATHER RISK MANAGEMENT FACILITY

To respond to the needs and challenges associated with risk management among rural poor people, IFAD and WFP are collaborating on a Weather Risk Management Facility (WRMF) to improve access to index-based insurance products and a range of other financial services.

The objectives of the WRMF are to:

- facilitate access to index-based risk management tools for significant numbers of smallholders
- develop replicable models that are sustainable and have a potential for being scaled up

There are opportunities for collaboration with many key institutions and centres of excellence, including the World Meteorological Organization, the World Bank’s Commodity Risk Management Group, the International Research Institute for Climate and Society, the Micro Insurance Agency and the Consultative Group to Assist the Poor.



## About IFAD

IFAD was created 30 years ago to tackle rural poverty, as a key consequence of the droughts and famines of the early 1970s. Since 1978, IFAD has invested more than US\$10 billion in low-interest loans and grants that have helped over 300 million very poor rural women and men increase their incomes and provide for their families. IFAD is an international financial institution and a specialized United Nations agency. It is a global partnership of OECD, OPEC and other developing countries. Today, IFAD supports more than 200 programmes and projects in 81 developing countries and one territory.

## About WFP

WFP is the world's largest humanitarian agency. In 2008 WFP will feed more than 90 million people in 80 countries. As the food assistance arm of the UN, WFP provides food aid to meet emergency needs and support economic and social development. WFP also provides the logistic support necessary to get food to the right people at the right time and in the right place. WFP has been in existence since 1962 and works to put hunger at the centre of the international agenda, promoting policies, strategies and operations that directly benefit the poor and hungry.

### WRMF Team

The Core Team of the IFAD-WFP Weather Risk Management Facility is led by Ulrich Hess and includes IFAD and WFP staff:

### WFP

Ulrich Hess  
ulrich.hess@wfp.org

Bronwyn Cousins  
bronwyn.cousins@wfp.org

### IFAD

Francesco Rispoli  
f.rispoli@ifad.org  
Jamie Anderson  
j.anderson@ifad.org

## MAIN ACTIVITIES

In the planning phase of this work (from August 2008 to August 2009), the WRMF will conduct three key activities. It will:

### 1. assess ongoing initiatives in index-based weather insurance

- analysing available weather insurance surveys and the results of farmer-demand research to identify the drivers for the uptake and repeat purchase of stand-alone weather insurance
- conducting a thorough assessment of experience with index insurance in India, Malawi, Ethiopia and elsewhere, to identify the constraints and success factors in the uptake, sustainability and scalability of index-based weather insurance. The findings will help shape the Facility's strategy to unlock access to credit and other financial services and take weather index-based products to scale. Peter Hazell, a senior expert in index-based insurance, will provide expert advice.

### 2. identify initial countries for implementation

- assessing possible countries of operation, considering the suitability of their regulatory systems, weather data, financial systems, insurers, delivery channels and potential partners for index insurance designed for poor rural people
- selecting the first four countries of operation on the basis of the assessment. The chosen countries will be characterized by:
  - high levels of poverty
  - significant exposure to extreme weather events such as floods and droughts
  - reasonably functional financial markets
  - skilled technical partners
  - active IFAD and WFP operations

Two of the countries will have the potential to readily develop and deliver index insurance products to significant numbers of smallholders. The other two countries will have smaller or more challenging markets that will give the Facility an opportunity to explore effective ways of introducing insurance products in more complex environments.

### 3. organize a round table with sector leaders for input

- convening a round table with leading public and private sector experts in insurance to review the assessment of the sustainability and scalability of index insurance and discuss the proposed WRMF strategy and potential countries of operation.

