

# Microinsurance - The Last Mile

An Introduction

Aaron Oxley

Chief Technology Officer, MicroEnsure

# Opportunity and MicroEnsure

Opportunity International is a leading microfinance network, and started microinsurance operations in 2002.

MicroEnsure began life as the Micro Insurance Agency in 2005 as a wholly owned subsidiary of Opportunity.

MicroEnsure currently serves over 3.5 million lives globally.

We were recently given a grant from the Bill and Melinda Gates Foundation of \$25m over 5 years

- To expand into 10 new countries (Currently in UG, GH, PH, IN, TZ)

- To server 25m people by 2012

# What is “WII”?

It is the “last mile” of risk transfer.

In the Microinsurance context, Weather Indexed crop Insurance (WII) primary purpose is to provide compensation to poor smallholder farmers when rainfall during a crop growing cycle is insufficient for them to grow and optimize their yields.

It has also proved to be a valuable tool for unlocking rural credit, increasing farm inputs and investment, and hence improving rural livelihoods.

Microinsurance can also provide life, health, and other property cover.

# Why is WII so Important?

Over 2.4 billion people live on less than \$2 a day, and despite the increasing urbanisation of poverty, the majority (75%) are rural.

In most parts of Africa and Asia, farm sizes have a long-term trend of shrinkage through inheritance and population growth.

For example, in India, farm sizes went from 2.6h (1960) to just 1.4h (2000)

(World Development Report, World Bank 2008)

# Why is WII so Important?

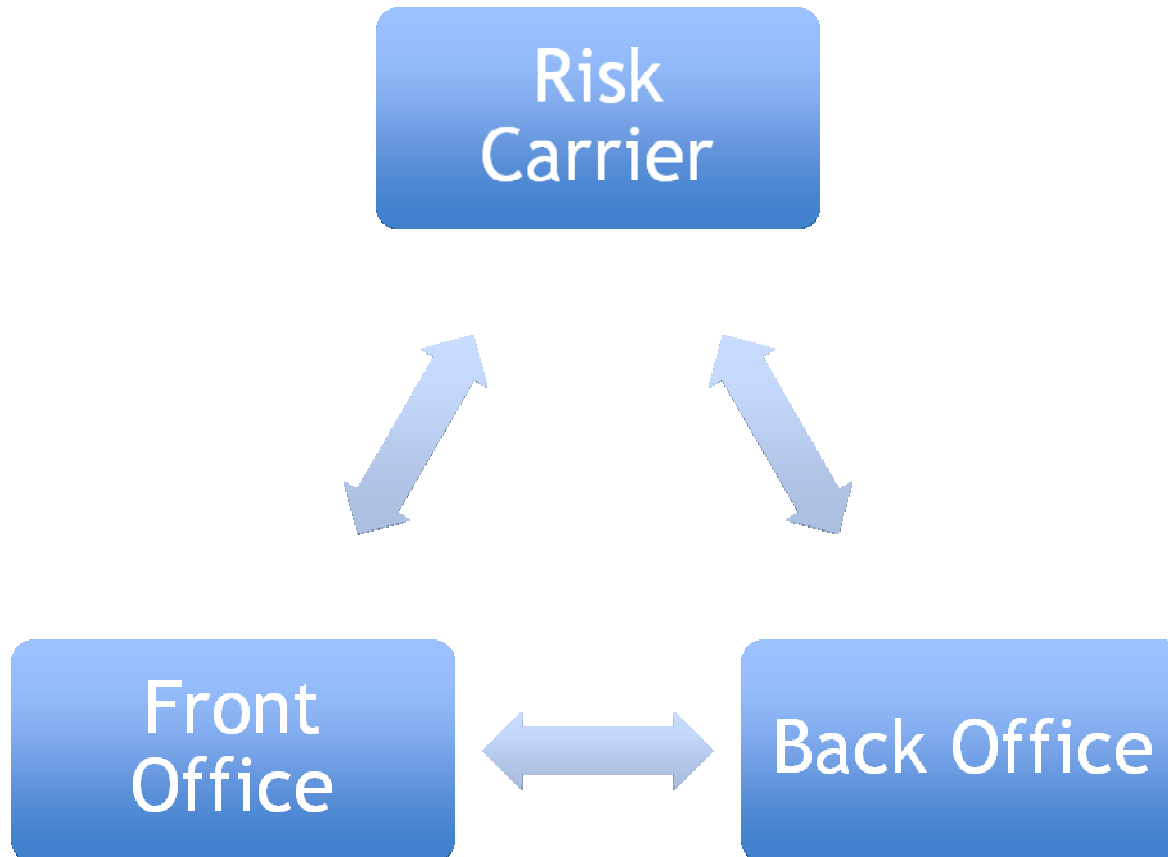
Agriculture has a special power in reducing poverty

“Cross-country estimates show that GDP growth originating in agriculture is at least twice as effective in reducing poverty as GDP growth originating outside agriculture”

(World Development Report, World Bank 2008)

Additionally, the poor are disproportionately affected by climate change and adverse weather

# The Three Roles in Microinsurance



# The Three Roles Explained

## Risk Carrier

- Local and International
- Reinsurers, especially for agriculture



## Front Office

- MFI's, SACCO's, Susu, VSLA - from most major networks
- Aid Agencies - such as child sponsorship and disaster reduction
- Retail - white label, mobile phone kiosks



## Back Office

- Systems
- TPA - claims mgmt
- Product Design
- Front Office
- Training and Education

# A Basic Product

A basic product covers a single crop, and for a single seed variety of that crop.

The WII is tied to purchasers of these seeds and the necessary fertiliser, usually through an existing sales channel, growers cooperative, or other rural finance mechanism.

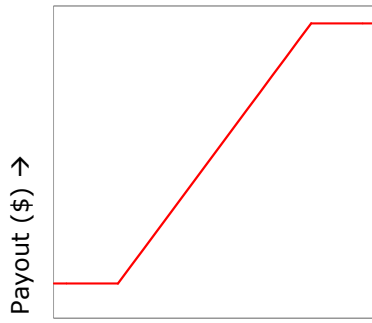
It is highly beneficial for the crop to be part of a well-established value chain.

For farmers to be eligible, they need to be within a 20km radius of a ground-based weather station or rain gauge.

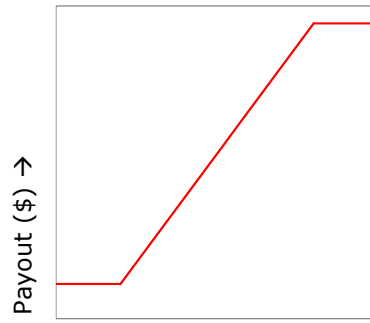
Rainfall at the weather station is then used as a proxy for rain experienced on the farm.



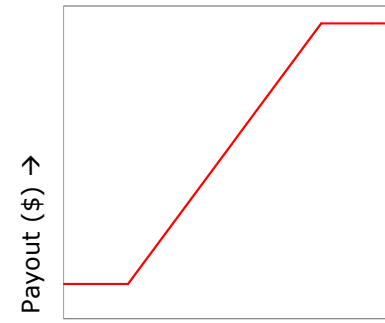
# How It Works



Rainfall (mm) →



Rainfall (mm) →



Rainfall (mm) →



## PHASE 1

Sowing & Establishment

## PHASE 2

Growth & Flowering

## PHASE 3

Yield Formation to Harvest



Dekadal Cropping Calendar\* →

Sowing Window & Dynamic Start Date

\* Cumulative rainfall per dekad is capped to prevent excessive rainfall impacting the phase-wise total

# Why Link to a Value Chain?

We only insure known seed/fertiliser combinations as in order for the WII pricing to be accurate, we need to have a full understanding of the agronomy of the crop.

It is also important if we are aiming for the best outcomes of the farmers.

If the crop is part of a well-established value chain, there is more stability in the price of the crops, more chance the farmer is following good practices, and more likelihood that farm support services exist.

It also allows for multi-year investment.

# Why a 20km Radius?

We use a 20km radius as this is a good compromise between reaching large numbers of farmers and keeping basis risk low.

“Basis Risk” - the chance that the experienced loss does not match the calculated loss.

In this case, rainfall may be substantially different on the farm than at the rain gauge if the farmer is more than 20km away.

Remote sensing solutions are not fully understood/accepted by the industry, but this is changing.

**Given the number of functional rain gauges in developing countries, this greatly restricts the scope of WII.**

# Prerequisites for Success

In order to have successful WII, the following need to be in place:

A competent local manager to provide project management, coordination, documentation, and training.

An adequate weather infrastructure for broad coverage.

Historical data for pricing (30y+).

A committed meteorological service or other supplier of real-time weather data, on the same basis as the data used for pricing.

Actuarial resources to correctly price the product.

# Prerequisites for Success

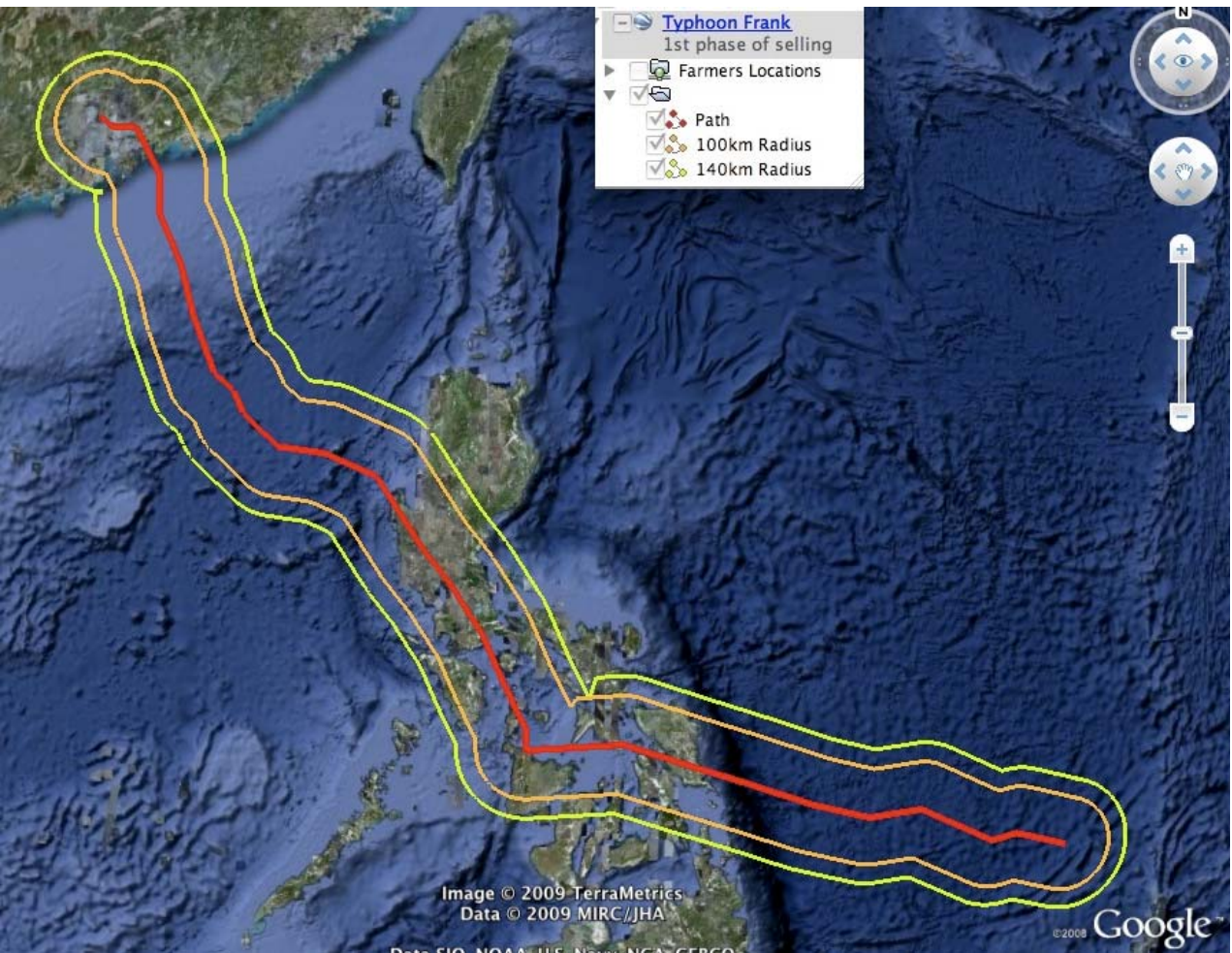
A solid distribution model/front office, which will involve partnerships with many existing entities.

Well capitalised risk carriers that understand the risk - primarily at the global level.

A supportive regulator that understands the product.

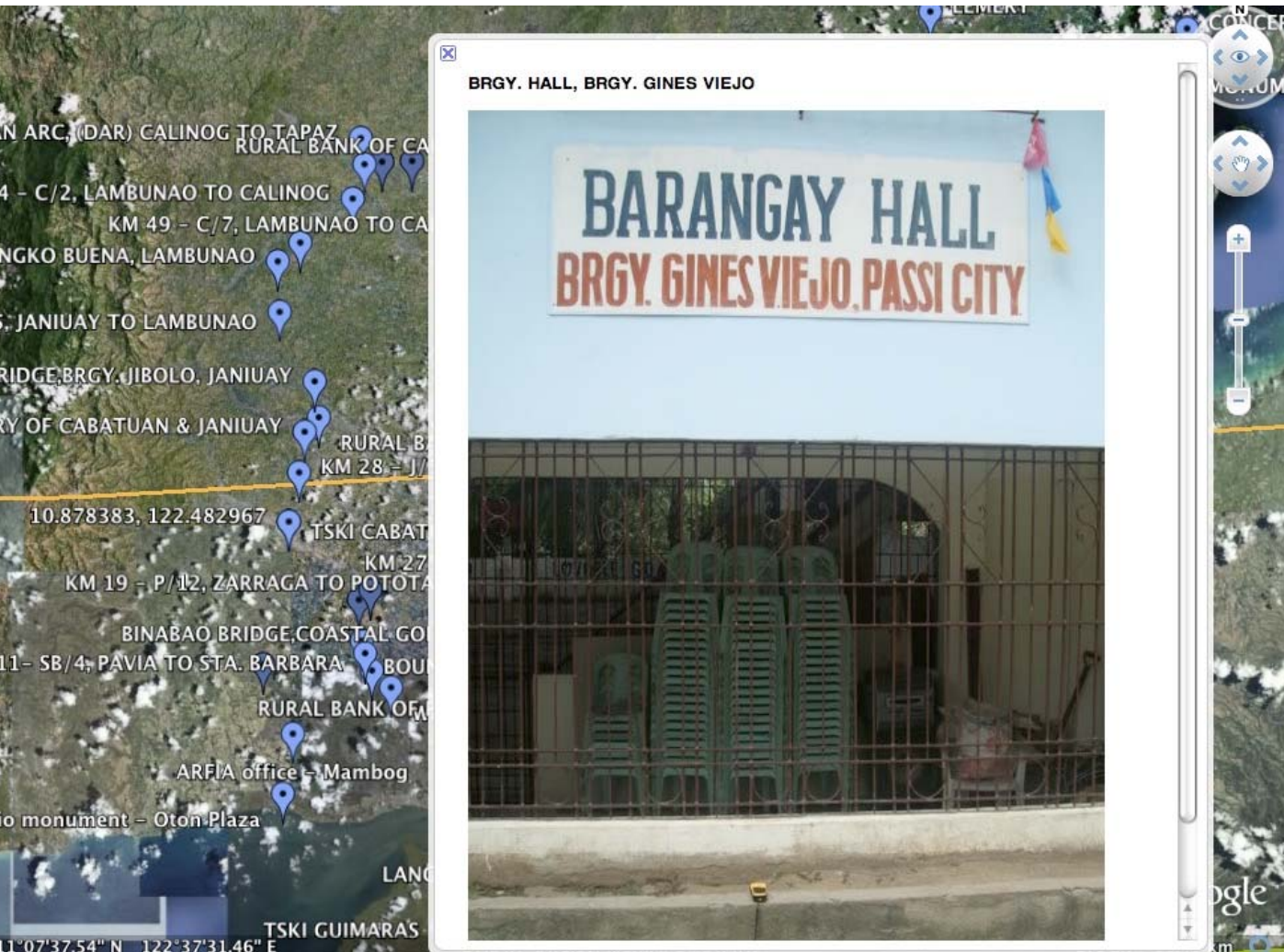
Thank You

# Philippines: Typhoon Frank





# Typhoon Frank and Farmers





# Outcomes from WII

Based on a (non-rigorous) survey of WII outcomes in Malawi:

All farmers surveyed increased production and diversified their crops.

Nearly all increased land under cultivation.

Two-thirds bought Oxen, Ox-carts, or both.

Half increased the amount of schooling for their children.

One-third improved their housing.

One-third planned or implemented irrigation to increase the growing season.

# Harry Kafakaluanda's Old House



# Harry Kafakaluanda's New House



# Harry Kafakaluanda's Words

“The benefits for me are a better living standard, better food, I have been able to build a better house, and I have bought an ox cart from last year’s earnings. This would not have been possible before.”