

# UNDP Workshop

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## Climate Change Adaptation and ICT (CHAI)

## CHAI Experience in Innovative Products and Services

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# CHAI Pilot

A photograph of a man in a white and blue polo shirt standing in a field of tall green crops, possibly sorghum. He is looking down at a mobile phone in his hands. The background shows more of the field and some trees under a bright sky.

Jan 2012 – June 2014

## Research Objective

To determine the role and potential of ICTs in enhancing the adaptive capacity of communities in Uganda to climate change-induced water challenges.

## Development Objective

To strengthen the adaptive capacity of “cattle corridor” communities in Uganda to climate induced water stress and hazards through the use of ICT



# Research Design

## Research Questions

1. What are the major water-related vulnerabilities in the cattle corridor?
2. What are the impacts of the water-related hazards in the cattle corridor?

## ... Research Questions

3. What are the information and communication needs of communities?
4. How accurate, timely and relevant are the existing mechanisms for sharing climate-related information at community and government levels?



# Design and Operation of the Climate Information System

## Livestock and crop market info

- Collected using mobile devices
- Transmitted to server over cellular network
- Automatically aggregated at sub-county level on a server

## Weather data

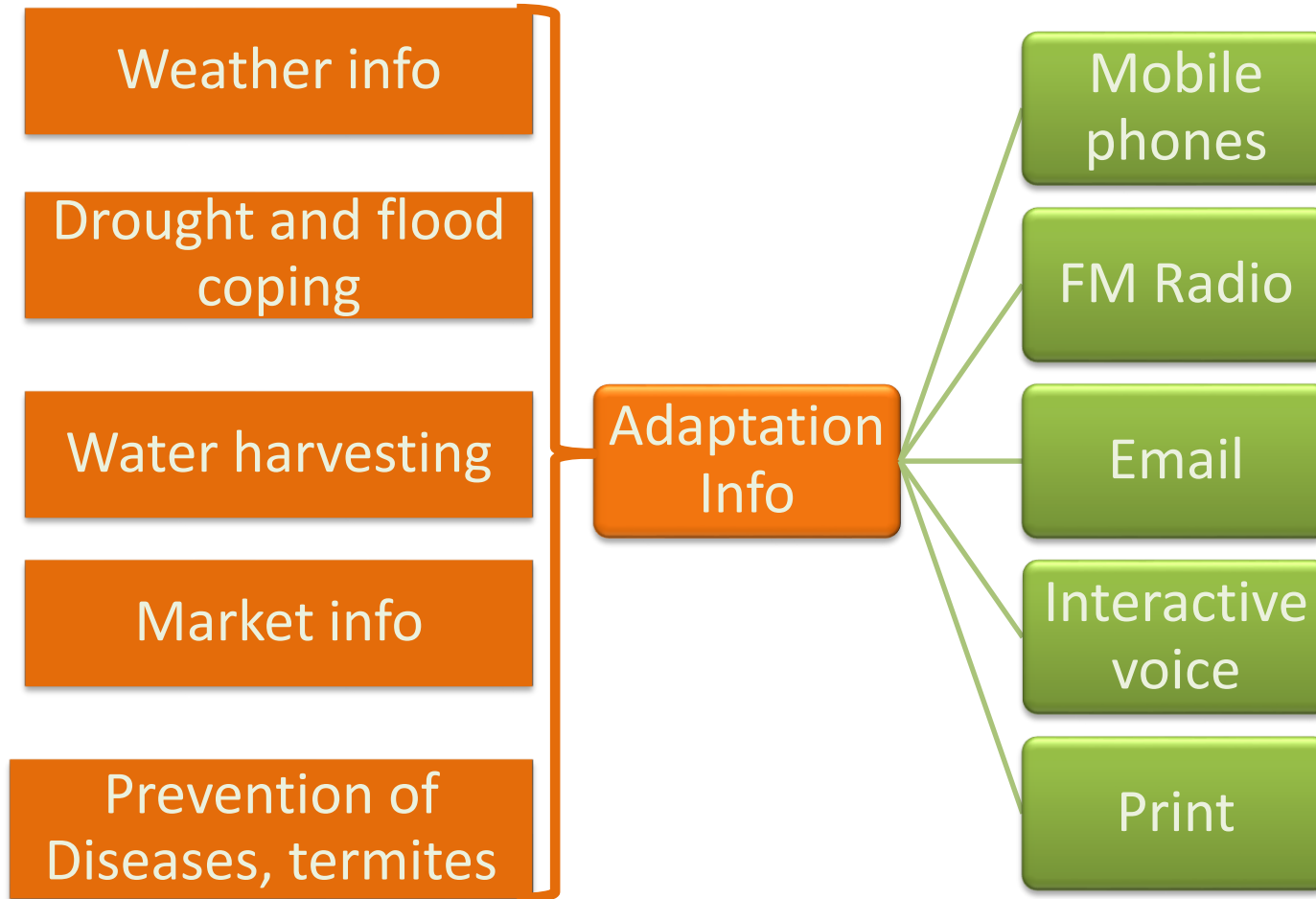
- Collected using mobile devices on a daily basis
- Transmitted to server at Meteorology (daily)
- Used for generating and improving seasonal forecasts

## Other spatial data sets

- Satellite imagery, river flows, historical rainfall data, digital elevation model, etc.
- Generate exposure maps, rainfall and temperature projections, drought and flood scenarios (using GIS)

Data  
Collection  
and  
Reporting

# Design and Operation of the Climate Information System



Information  
Dissemination

A woman with dark braided hair and glasses is looking at a smartphone. She is wearing a black sweater over a floral patterned shirt. Next to her is a red rain gauge. The background is a field of tall green grass.

**Installed**

**22**

**Rain Gauges**



Market Data

46

Market Outlets



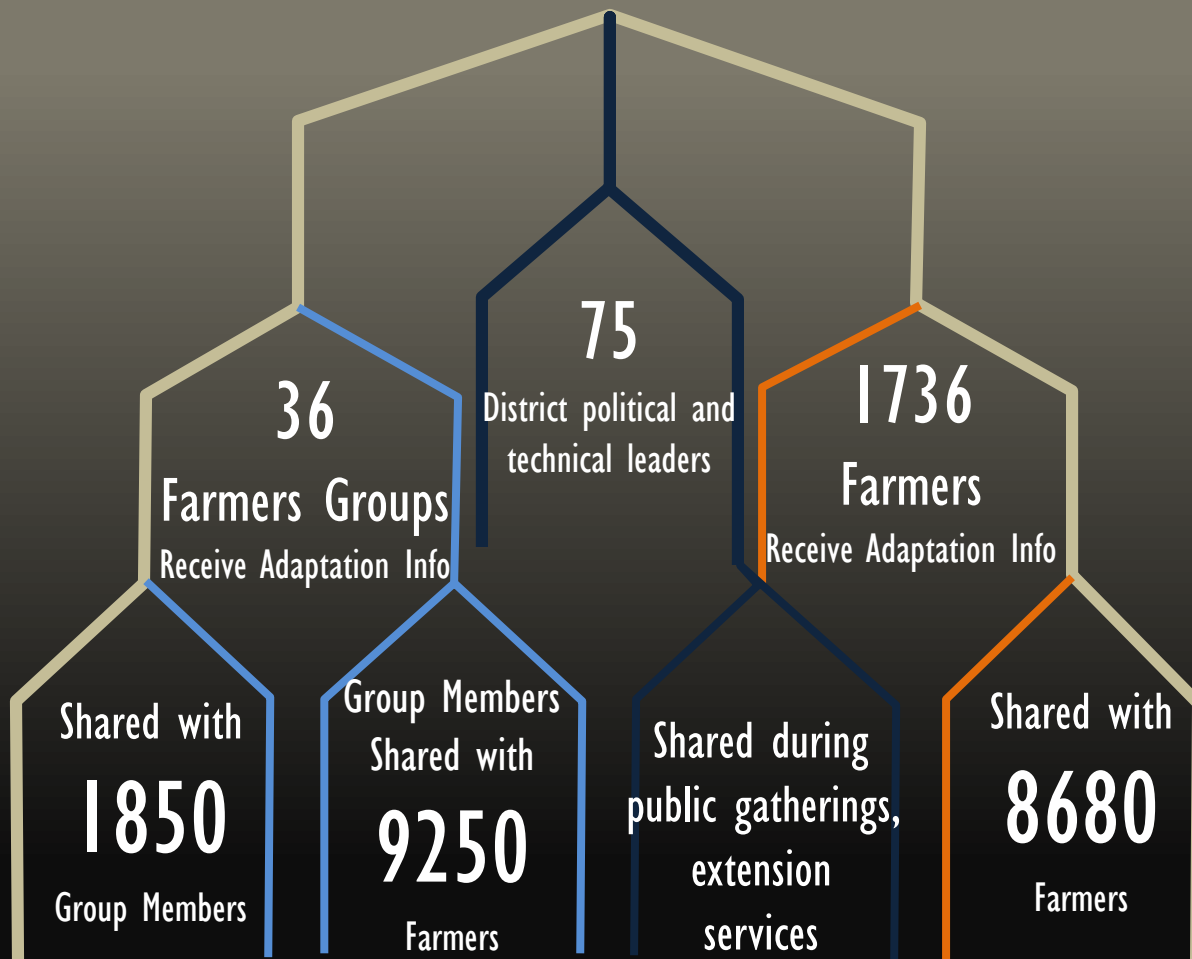
# Dissemination Outlet: Local FM Radios

Monthly Talk Shows  
Weekly Broadcast

100,000  
Farmers



# Dissemination Outlet: Mobile Phones



19,780  
Farmers

# Key Conclusions and Recommendations

- Improved access to locally relevant adaptation information, such as agricultural advisories, protection of plants from extreme heat and guidance on low cost water harvesting structures reduced crop loss and damage by 50% - 67%
- Linking communities to local institutions, which are able to support the communities with resources, is critical to enable households take action from the information they have received.

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- Increasing funding for the generation, dissemination and use of relevant climate-adaptation information will improve agricultural productivity and food security of communities in the face of climate change.

# Some Lessons Learnt

- Ability/possibility to pay for Information
- 1. Perceptions that it is a common good, therefore has to be provided free
- 2. Evidence that WHEN it ADDS value to a subsistence farmer – CHAI is looking at providing evidence where SUBSISTENCE farmers who use the information and increase productivity/reduce loss would be willing to PAY
- Bottom line – there are no FREE things, someone pays

# Some Lessons Learnt

- STRENGTHS
- 1. Institutional Framework – bringing different stakeholders to work together – CHAI works with diverse institutions across the value paths
- Supporting communities/individuals to access resources to address the gaps identified by the information they have received

# CHAI II

- Study the longer term benefits of ICT-mediated adaptation in improving the adaptive capacity and resilience of the communities assessed over a long period of time.
- Assess communities' and community support organizations' willingness to pay, and the role of the private sector in the dissemination of adaptation information.



**THANK YOU!**