<<Session Title>>

Use of innovations in enhancing communities drought response and resilience.

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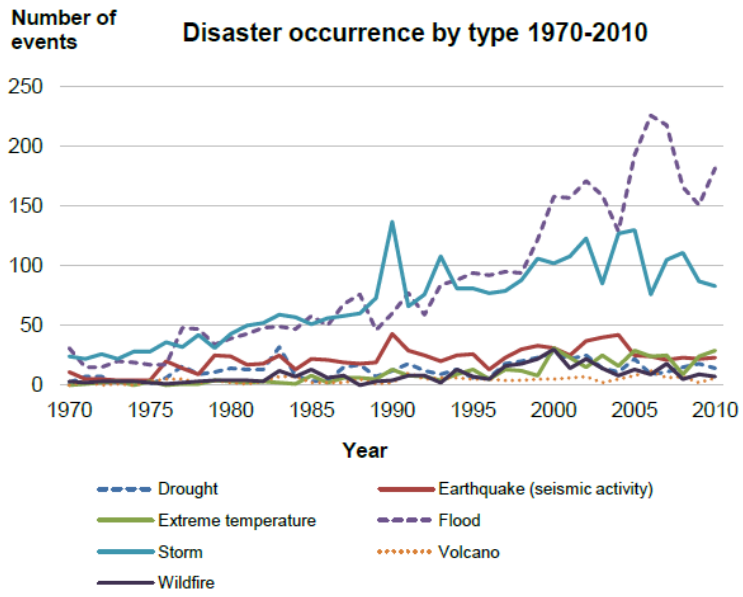
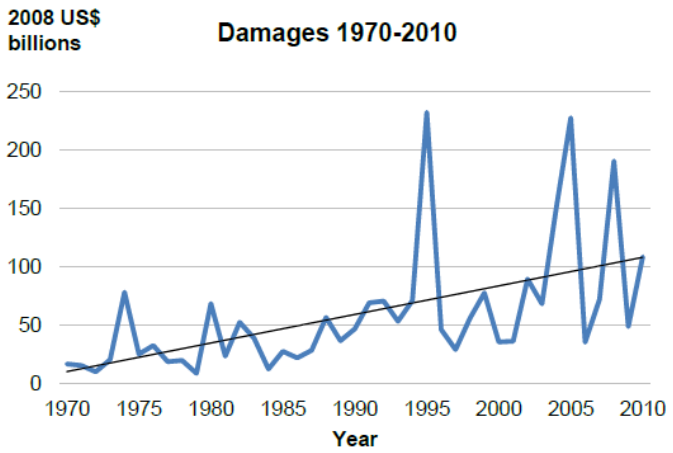
*<<contact info on last slide optional>>

<<Disaster Trends>>



The average annual number of disasters has almost **doubled** since 1980s.

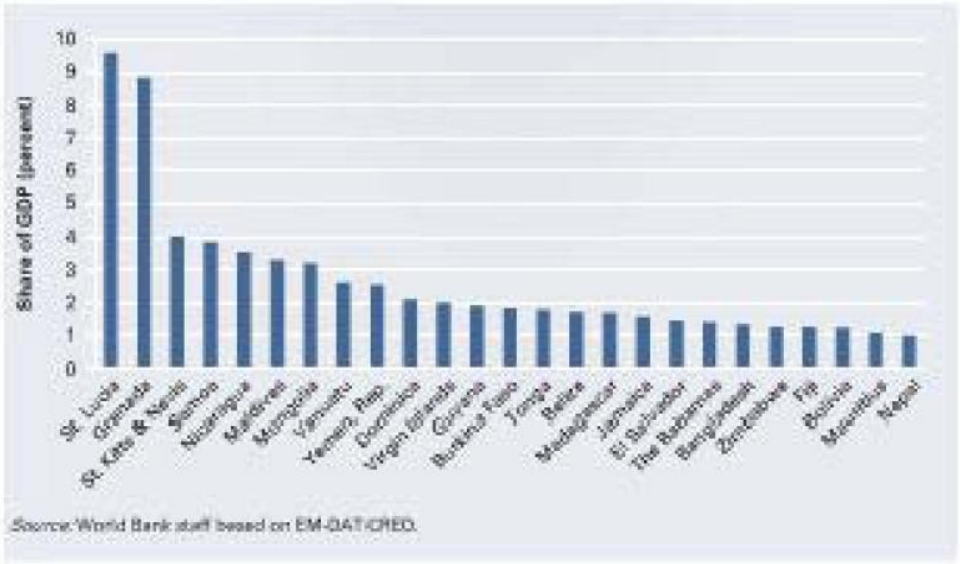


Damages and losses are **increasing**.

Fatalities from natural disasters totaled over **3.3M** between 1970-2010

Source: EM-DAT/CRED

<<Disaster Trends>>



Many among the 25 countries where damage is above 1% of GDP are small island economies

<<ICPAC>>

- Originally established in 1989 under the WMO system, later renamed ICPAC and absorbed into IGAD in 2007.
- The centre is responsible for seven member countries namely: Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan and Uganda as well as Burundi, Rwanda and Tanzania

- **Vision**
- *To become a viable regional centre of excellence in climate prediction and applications for climate risk management, environmental management, and sustainable development.*

- **Mission**
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  Provision of timely climate early warning information and supporting specific sector applications to enable the region cope with various risks associated with extreme climate variability and change for poverty alleviation, environment management and sustainable development of the member countries.

<<Objectives of ICPAC>>

- I) To provide timely climate early warning information and support specific sector applications for the mitigation of the impacts of climate variability and change for poverty alleviation, management of environment and sustainable development;
- II) To improve the technical capacity of producers and users of climatic information, in order to enhance the use of climate monitoring and forecasting products in climate risk management and environment management;
- III) To develop an improved, proactive, timely, broad-based system of information/product dissemination and feedback, at both sub-regional and national scales through national partners;
- IV) To expand climate knowledge base and applications within the sub-region in order to facilitate informed decision making on climate risk related issues; and
- V) To maintain quality controlled databases and information systems required for risk/vulnerability assessment, mapping and general support to the national/ regional climate risk reduction strategies.

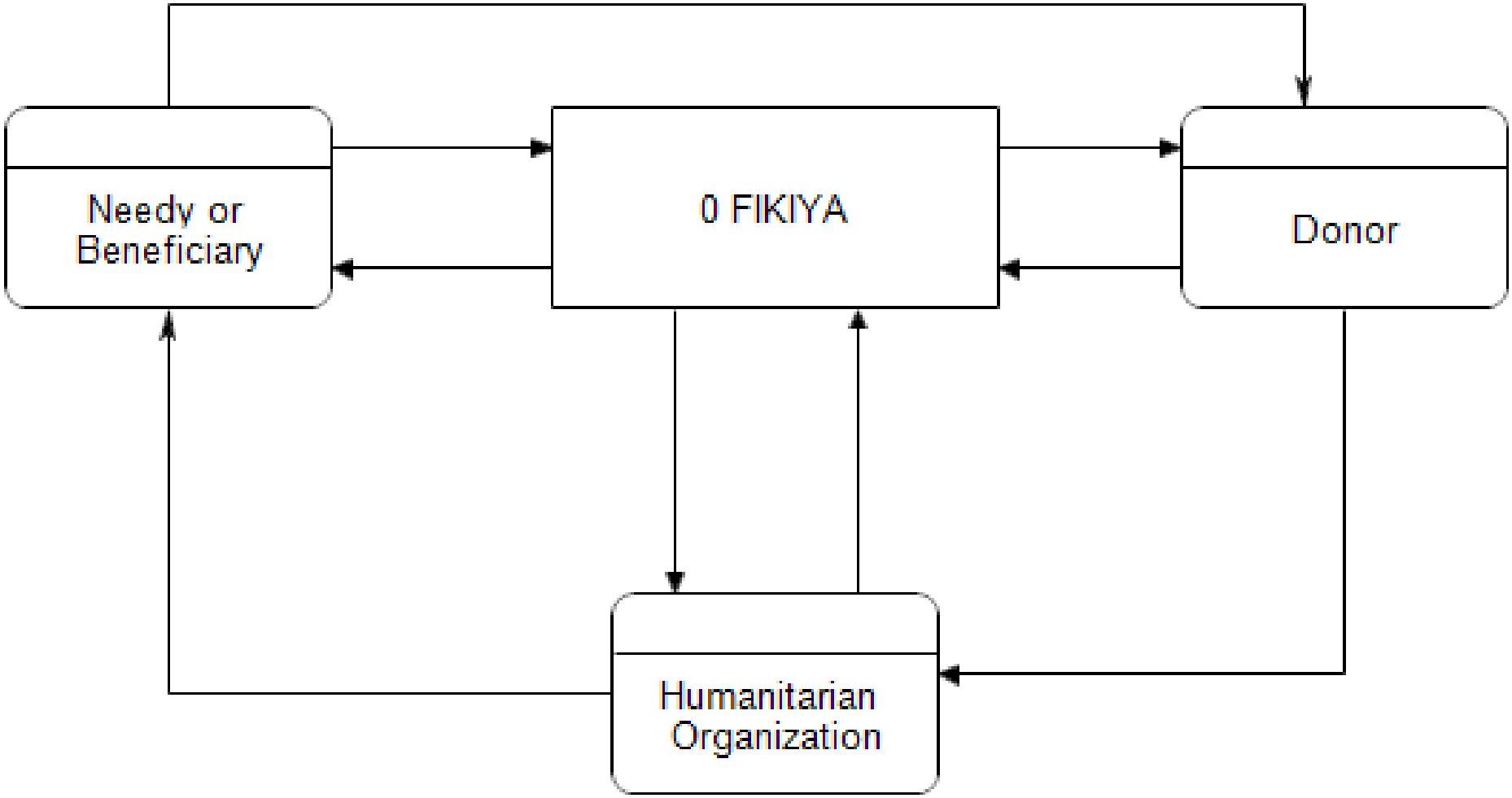
<<FIKIA software developed by Arcel Maendeleo, RHOK intern at ICPAC>>

- The software is a disaster management software currently undergoing tests.
  - A Web and Mapping System
  - An SMS Based System
- Future Platforms
  - An Android Application
  - A J2ME App
  - USSD

<<OBJECTIVES OF THE FIKIA>>

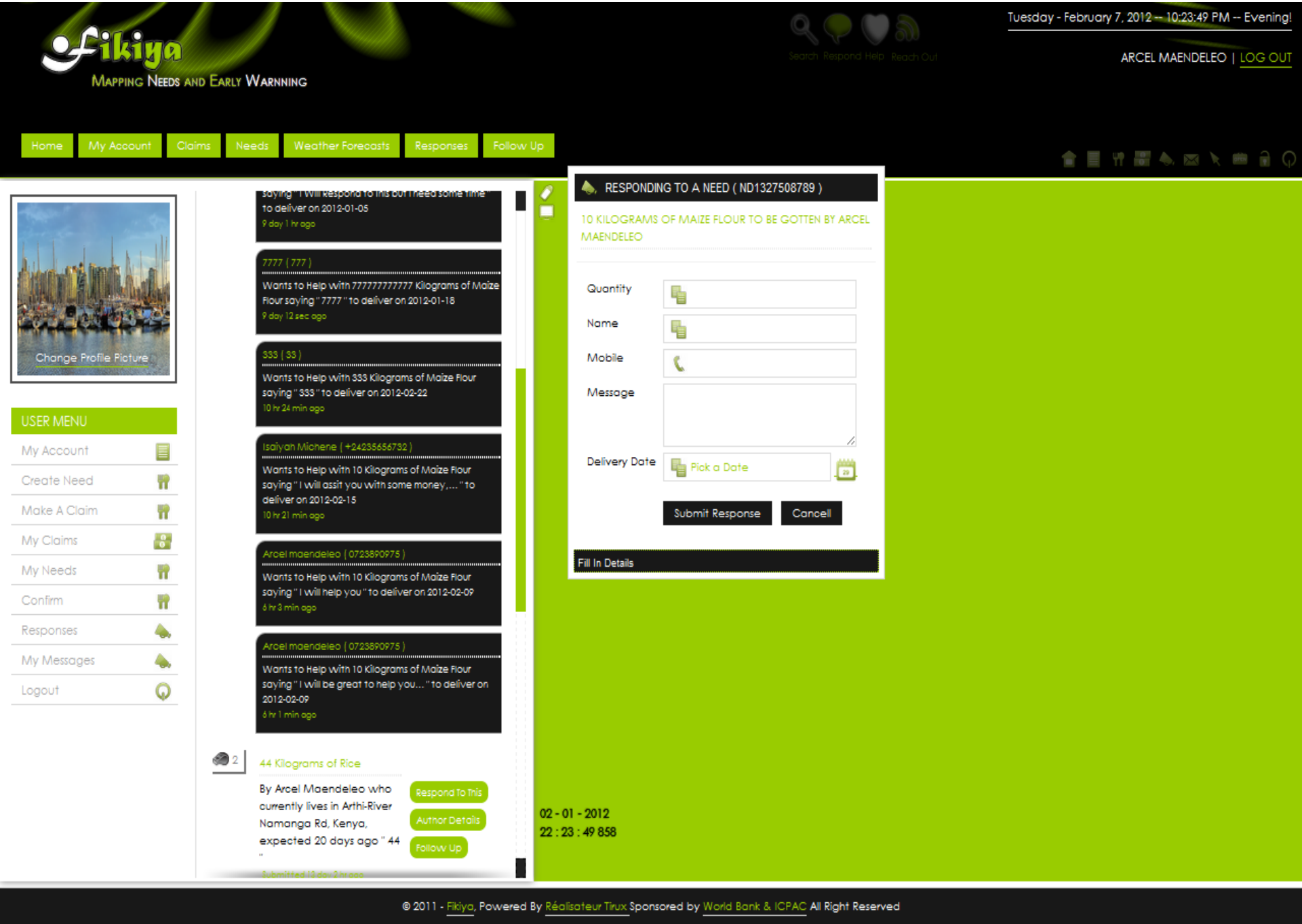
- Improve disaster response coordination
- Share meteorological information with end users especially farmers
- Help humanitarian organizations get resources and funding
- Give out to the public and to the political leaders information about the areas that need aid the most.
- Crowd sourcing and search and rescue

<<DESIGN LEVEL 0 DIAGRAM)>>




User / Beneficiary / Donor
Register / Login
Place Allocation
View Weather Data
Manage Account
View Pending Donnations
View Pending Needs
Follow Up on A Donation You Claimed
Follow Up on A Donation Claimed to You
Give a Feedback to the Public
View Forecasts
View Warnings
Create a Need
Respond to A Need
Make An Open Donnation
Schedule Delivery
Reminder
Approsave Received

SYSTEM DEMO / www.res-q-team.com/fikiya



<<WAY FORWARD>>

- System is still undergoing tests
- Plan is to launch as an open source software for use by all free of charge
- Improve on its configurations continually
- To be tested in collaboration with Kenya Red Cross and other humanitarian partners

<<ICPAC, KENYA MET ROCKEFELLER PROJECT>>

- Through support from Rockefeller Foundation, ICPAC is currently implementing a pilot project entitled:
  - **Improved Agricultural Production and Food Security to Enhance Adaptation to Climate Variability and Change Through Timely Dissemination of Climate Products and Services**

- Four pilot communities with diverse agricultural experiences and levels of vulnerabilities were selected for participation in the pilot activities

<<Issues that need to be addressed>>

- Agriculture is the main economic activity that is highly dependent on weather and climate
- Weather and/or climatic variability directly or indirectly influence at least 75% of any agricultural output
- In the GHA region, agriculture and the allied sectors are primarily the most vulnerable to climate change and variability

<<Issues that need to be addressed>>

- Weather forecasts information is not widely utilised by the intended end-users (farmers) due to :

a) Improper packing of (weather) information;
b) Unreliable means of dissemination;
c) Delayed dissemination

- Currently, weather forecast information is not well packaged to guide location-specific decision making by the end-users;

- The current major means of disseminating forecast information (i.e. **Print Media and Internet**) do not adequately convey the messages to the end users while other users get the message when it is too late to apply it in decision making

<<Target Communities>>

- **A) Nganyi Community**
  - Traditionally known to be **rain makers**; dominantly peasant farmers; currently facing climate change related hazards
- **B) Ondu Community**
  - Peri-urban peasant farmers (live near Kisumu town); severely being threatened by urbanization
- **C) Reru Community**
  - Semi-arid region; very religious peasant farmers who listen to and believe the priest more than any one else
- **D) Maasai Community**
  - Dominantly pastoralists; have been forced to diversify production through small scale irrigation, selling of crafts, apiculture, extra, due to increased frequency of droughts which at one point led to death of over 75% of their cattle

<<What ICPAC is doing differently>>

- The Agrometeorologist at ICPAC repackages the forecasts into tailor-made weather information products and develops related advisories for crop farmers and pastoralists

- The information is regularly disseminated through various channels such as:
  - Workshops mainly at the beginning of seasons to give seasonal climate outlooks
  - Field days
  - SMS based messages
  - Church gatherings
  - Other forms of media (print, radio, TV, internet and Telephone); ETC

- Based on the forecasts, farmers make guided decisions about the kind of farming technologies to employ for increased food production and food security

The Design of the SMS Message Broadcasting System Installed at ICPAC

ONDU Community

SMS Server with user profiles and contextual data

ICPAC

MAASAI Community

Broadcasts

RERU Community

User Registration through SMS

SAFARICOM

NGANYI Community

Synchronized Database

<<Progress achieved so far>>

- An SMS Message Broadcasting System has been installed at ICPAC for efficient delivery of advisories and other relevant messages
- Rigorous capacity building for extension staff, farmer group coordinators and farmers
- Delivery of starter inputs: approx. 300 Kg of improved seeds (beans, maize, sorghum and green gram; 1000 cassava cuttings & 1000 sweet potato vines); fertilizers (TSP & CAN) for establishment of demonstrations
- 6 Rain Gauges have been installed in various locations to enhance data collection

<<Progress achieved so far>>

<<Way forward>>

- Improve on the use of the software's through continuous improvement
- Engage more communities and document lessons learnt
- Let the market determine the rest

END