



# Big Data, Sustainable Development, and Migration

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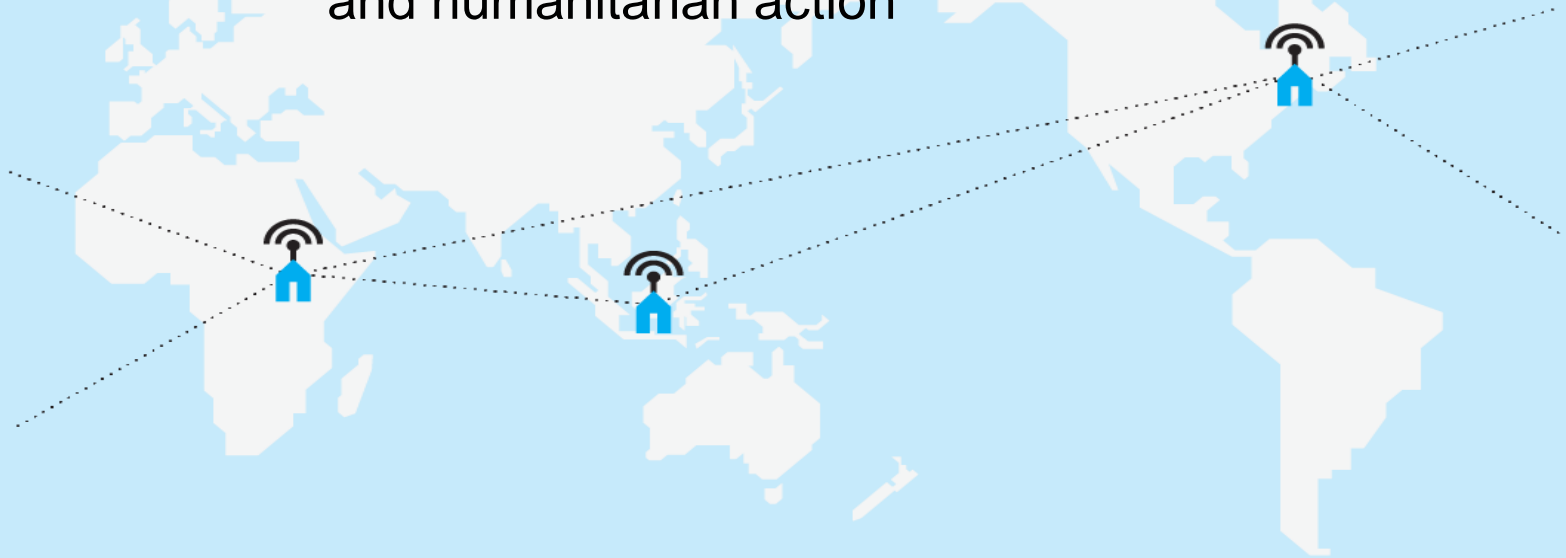
[www.unglobalpulse.org](http://www.unglobalpulse.org)

# UN Global Pulse:

A flagship innovation initiative of the Secretary-General

**Vision:** Big Data used responsibly for the public good

**Mission:** Accelerate discovery, development and adoption of data science innovation for sustainable development and humanitarian action



# Why is big data different?



survey data



big data

It allows continuous, real-time observation of dynamics of human behavior

# BIG (BEHAVIORAL) DATA

## “What People Say”

Online news

Social media

Retail advertising

Radio & TV

## “What People Do”

Online search

Mobile phone usage

Financial transactions

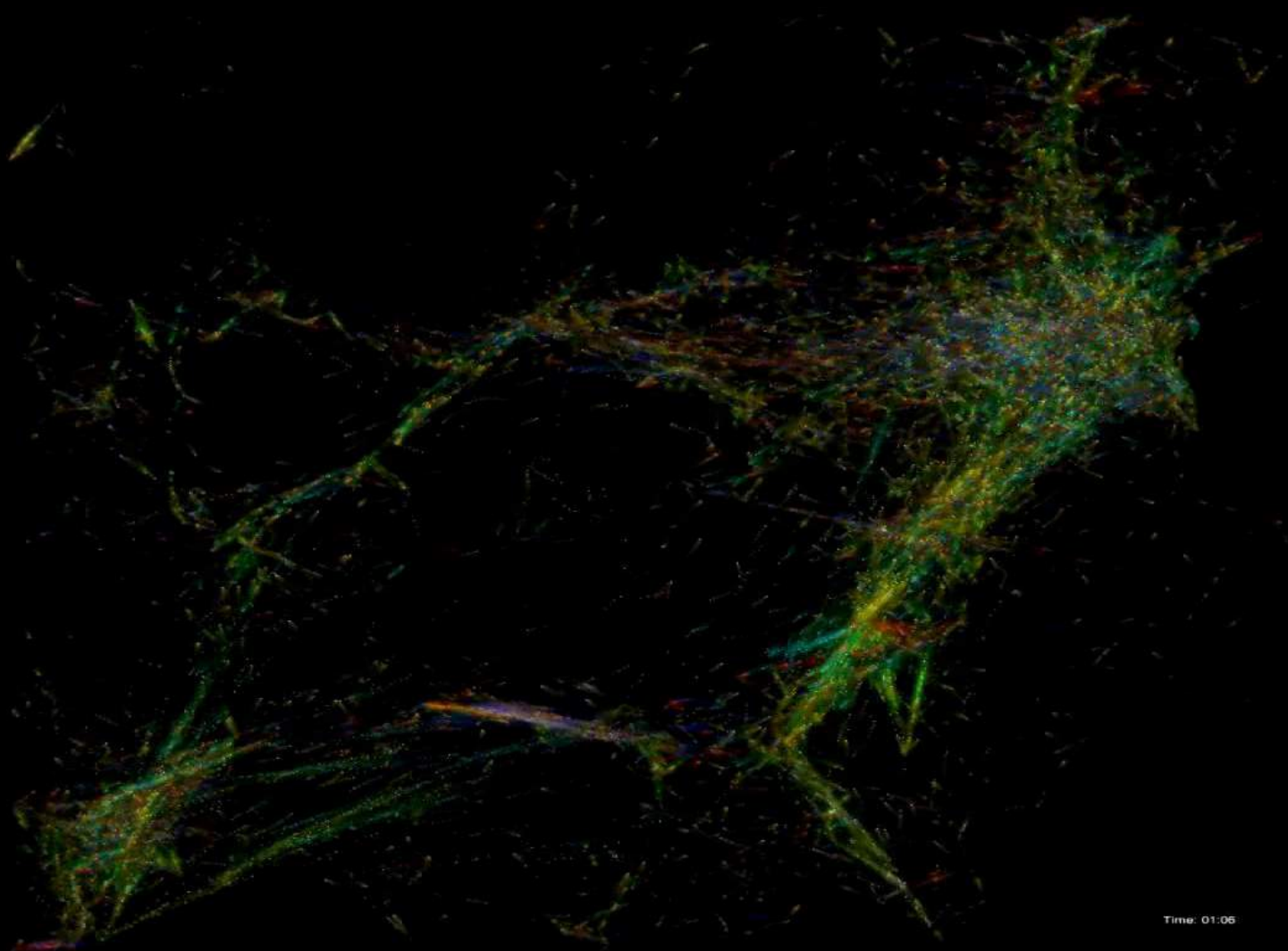
Money transfers

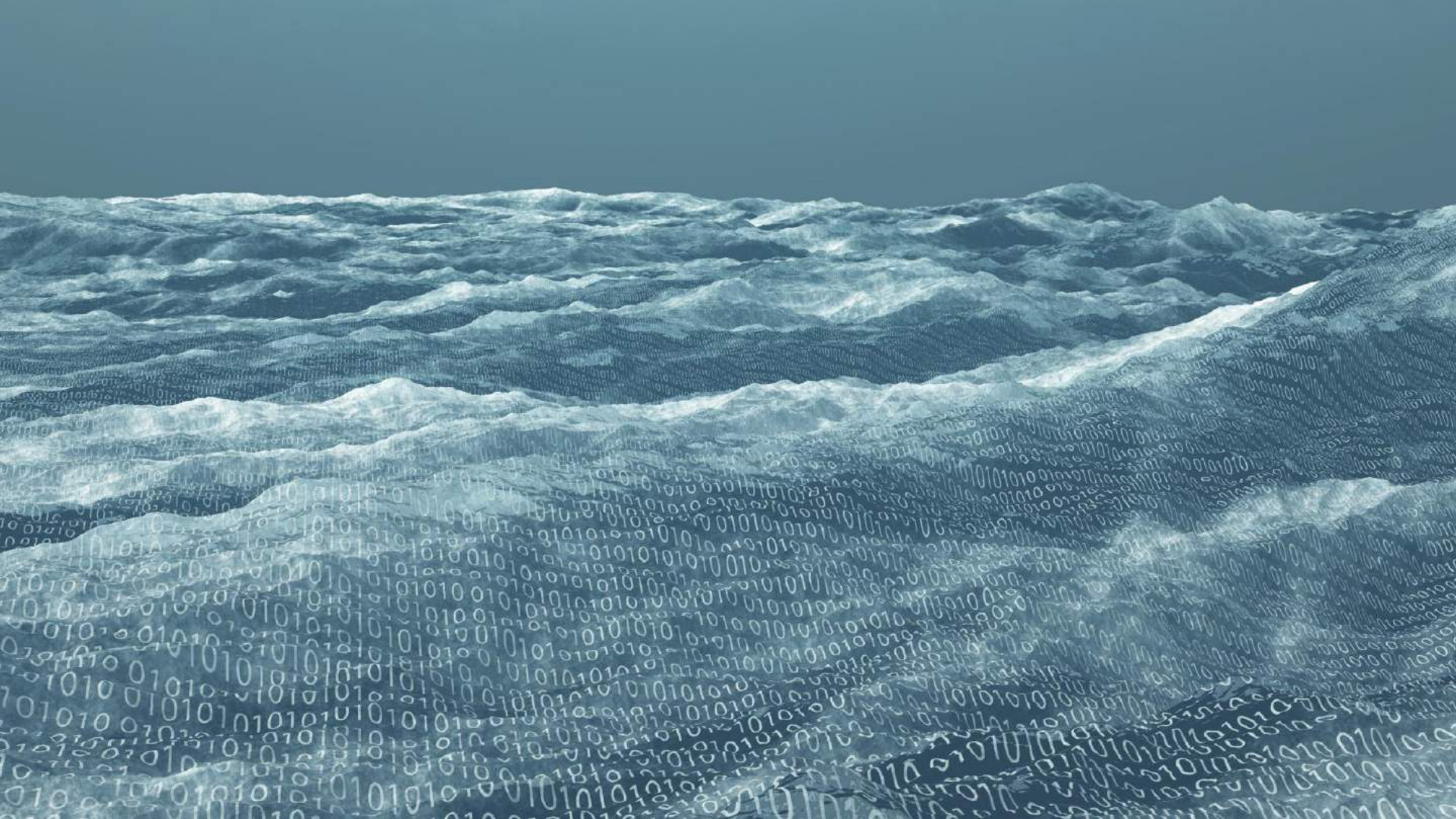
Postal traffic







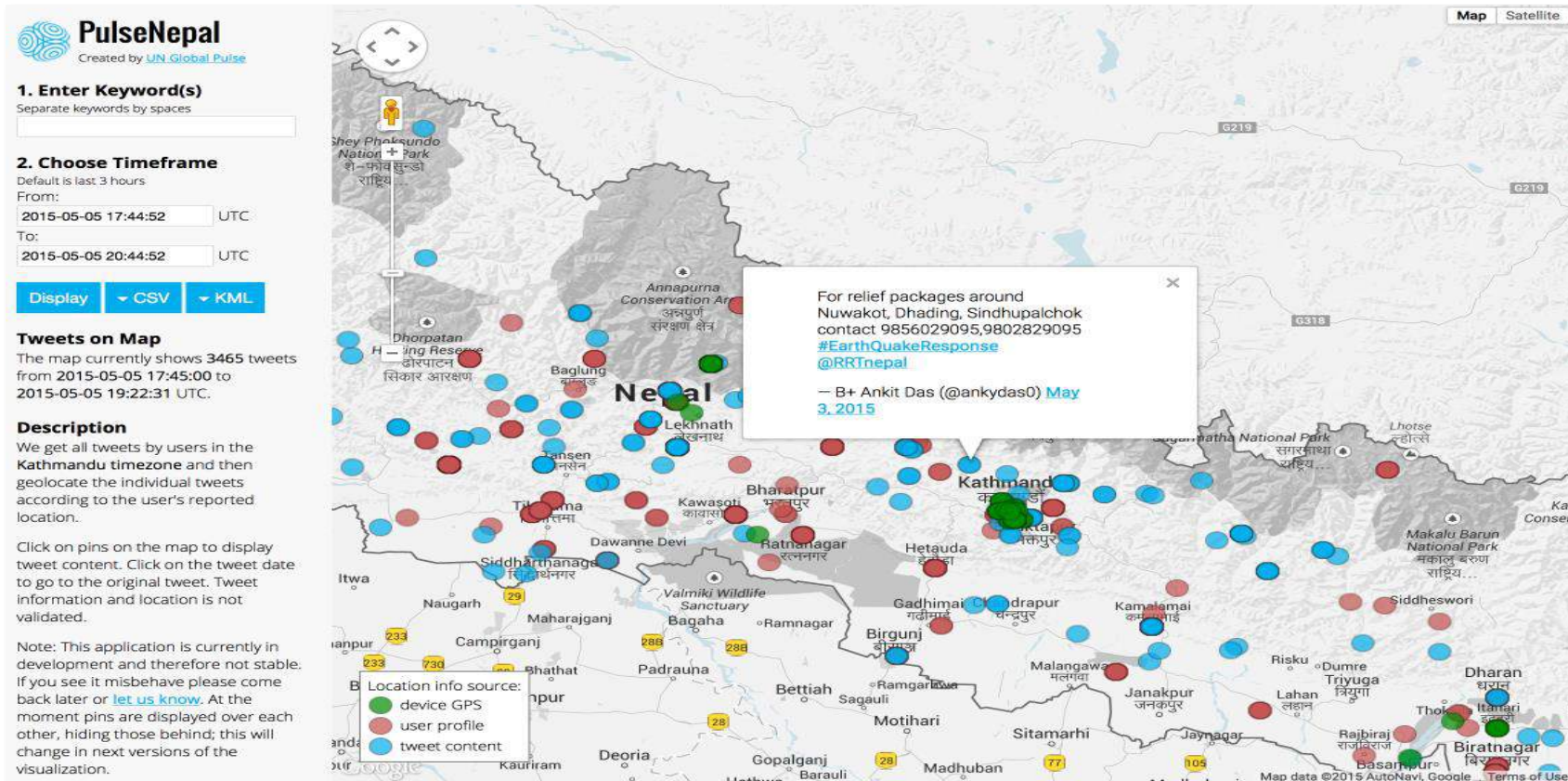




What people say



# Real-time Twitter Mapping for WFP Nepal



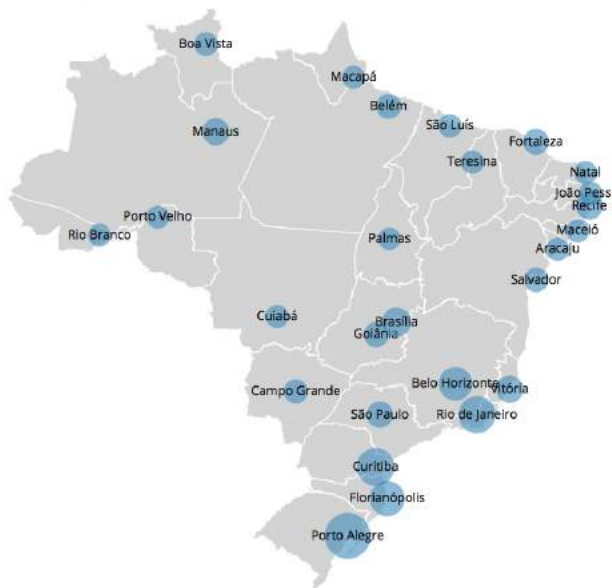


# HIV RISK AWARENESS AT THE WORLD CUP

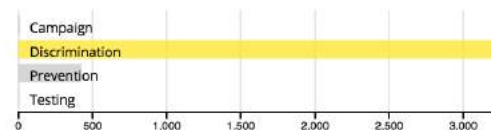
## Tweets About Discrimination and HIV/AIDS

The interactive dashboard makes it possible to explore the volumes of tweets about HIV risk behavior generated each day during the 2014 World Cup. With simple mouse hover and clicks on charts, the data can be simultaneously viewed by multiple dimensions; time, host city, and the four selected categories, 'Discrimination', 'Prevention', 'Testing', and 'Campaign'.

Brazil Map



Category [reset](#)



Daily Volume range: [06/01/2014 - 07/30/2014] [reset](#)

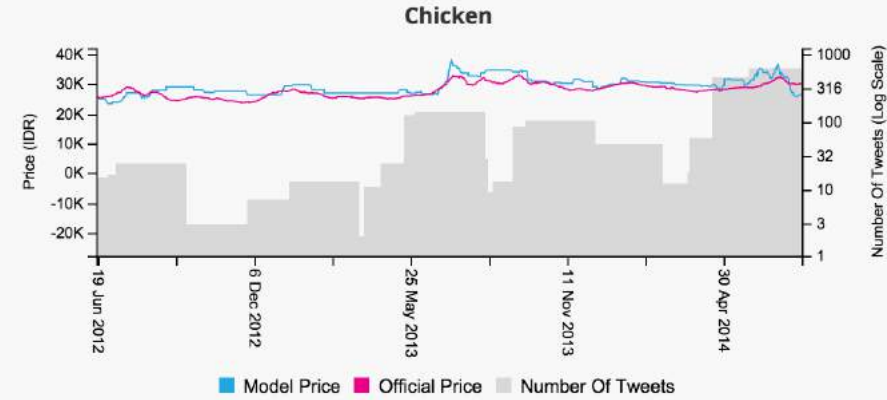
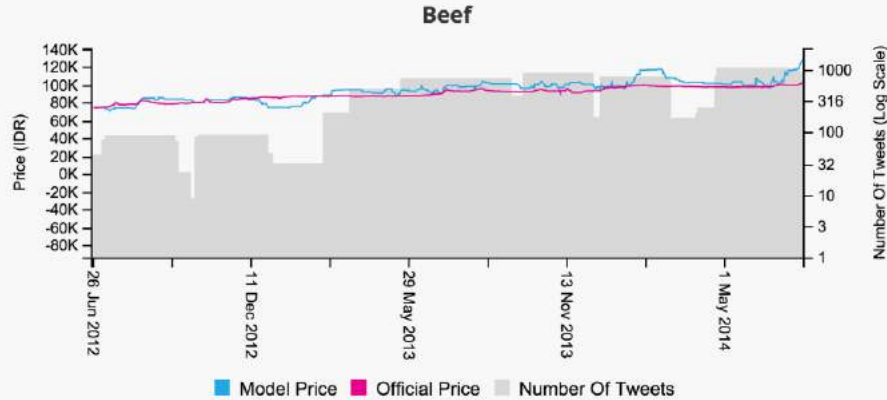


[select a time range to zoom in](#)





# REAL-TIME TWITTER FOOD INDEX

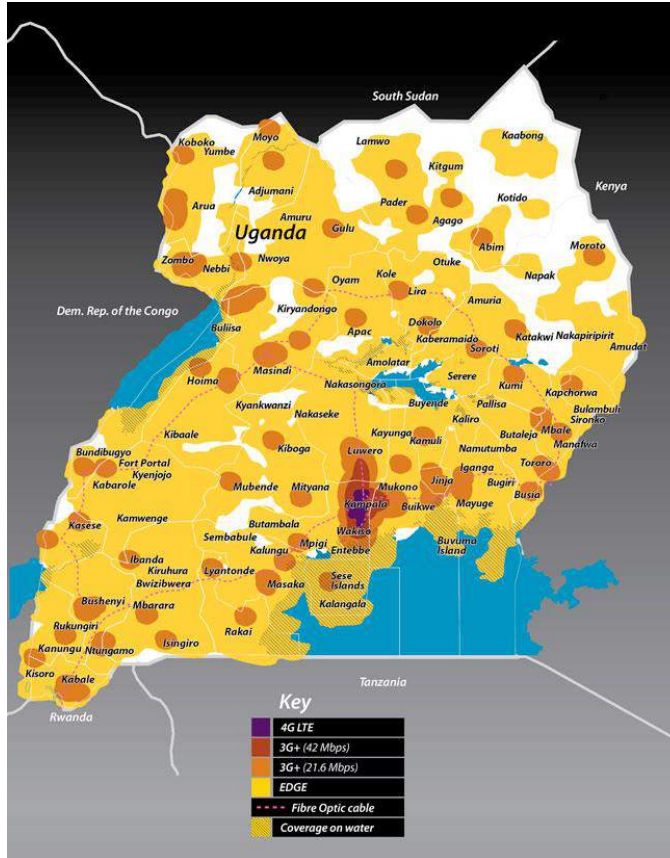


COMMODITY	PEARSON CORRELATION COEFFICIENT
Beef	0.87
Chicken	0.81
Onion	0.85



# Real-Time Rural Talk Radio Analytics

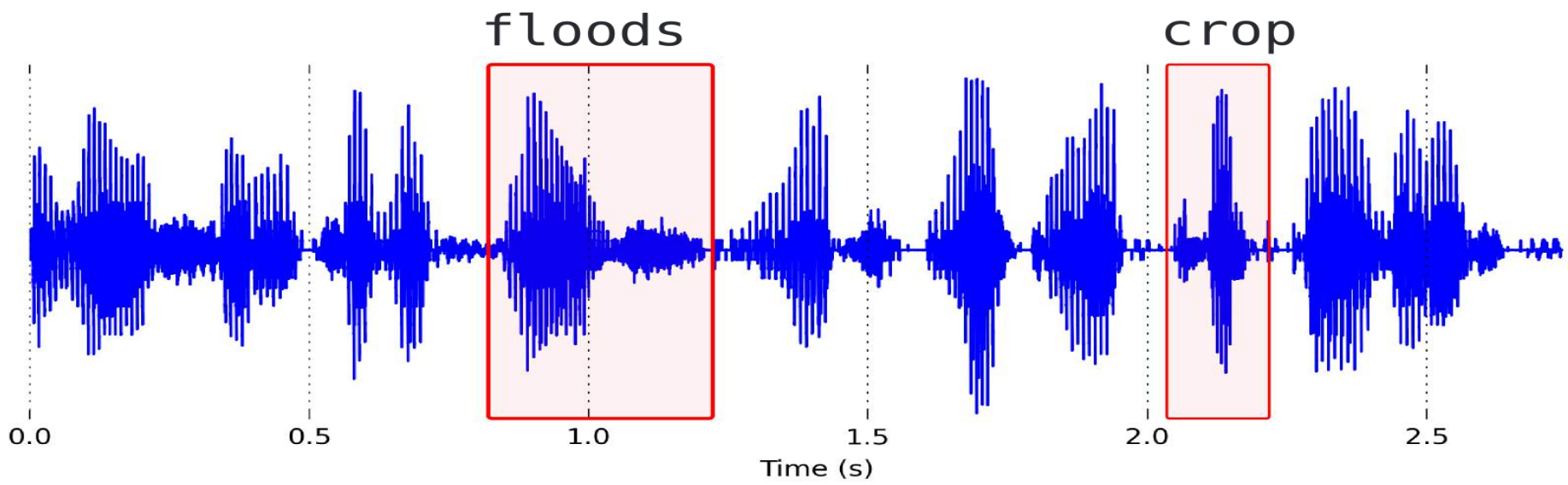
All 200 FM transmitters are in areas with mobile phone/EDGE reception, and most have 3G+ coverage.



Recording Ugandan talk radio on 50 stations 24x7 in English, Luganda and Acholi.



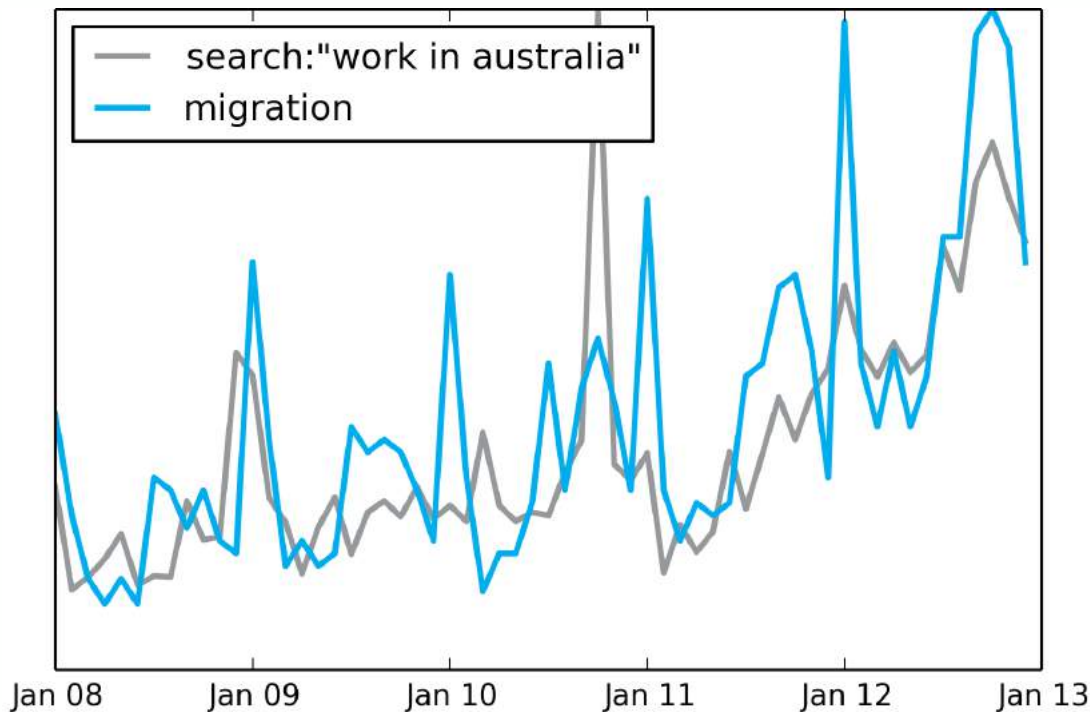
"hailstorm triggered floods which washed away crop gardens"



What people do



# USING ONLINE SEARCH DATA AS A PROXY INDICATOR OF INTERNATIONAL MIGRATION



# HUMAN BEHAVIOURS IN FLOODS USING MOBILE PHONE DATA



World Food  
Programme



## POPULATION DISPLACEMENT

TYPICAL NIGHT IN TABASCO

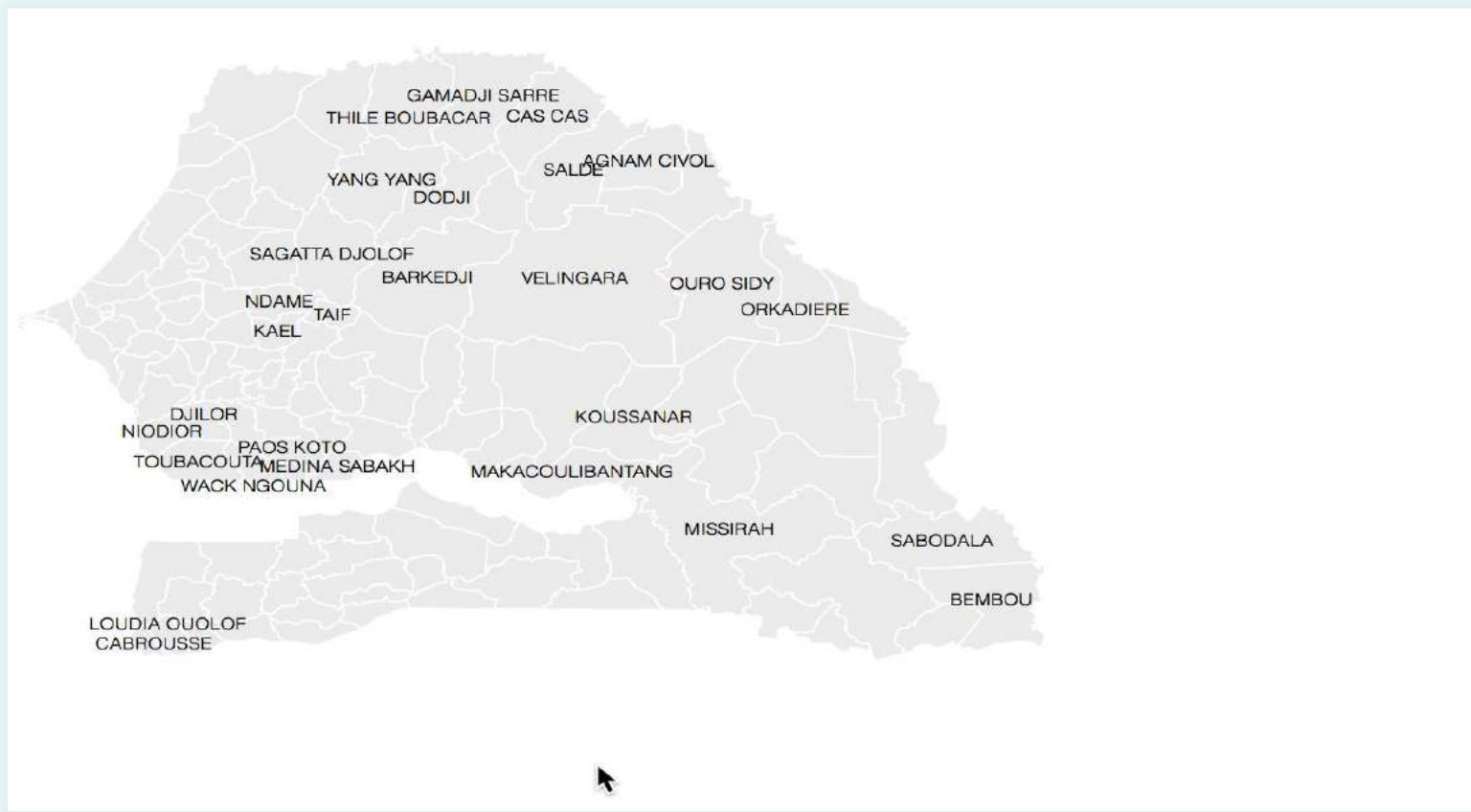


NIGHT OF FLOODS:



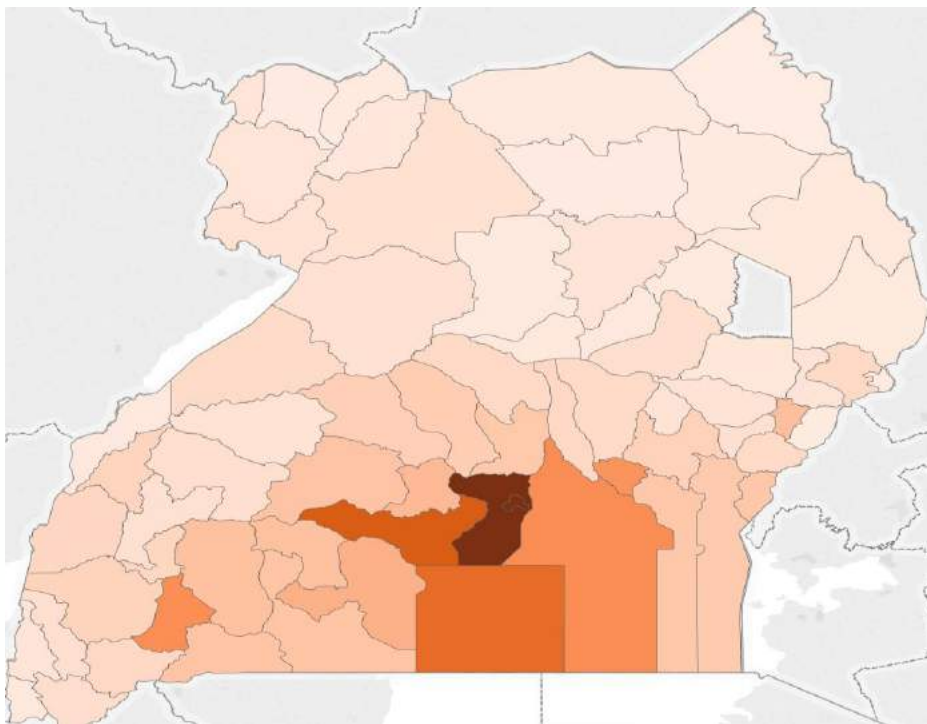
**PARTNERS:** Global Pulse, WFP, Technical University of Madrid, Telefonica Research

# Livelihoods and mobility in Senegal

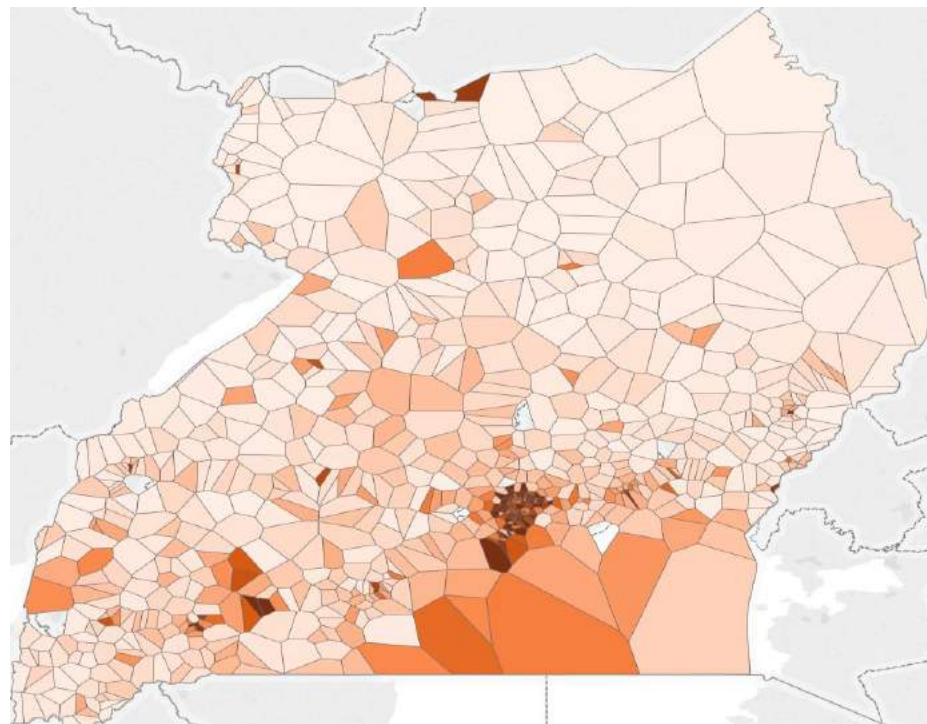




# Real-time Proxy Measures of Poverty in Uganda from Mobile Phone Credit Purchases



Official Household Consumption



Airtime Consumption

# Opportunities for Understanding The Drivers and Dynamics of Migration?

## “What People Say”

Pro- and anti-migrant sentiment

Migrants’ perceptions of opportunities, challenges

Reports of relevant events

Reports of conditions (food prices, health issues, etc.)

## “What People Do”

Human Mobility

Spending patterns

Remittances

Postal traffic

THANK YOU!