



**A real-world
example of desired
technical
integration for
situation
monitoring**

Beijing, China
Oct.24 2017



What is PRISM?

Platform for Real-Time Information and Situation Monitoring (PRISM)

- A map-based platform that **monitors (near) real-time** weather/environmental conditions and their **impact on livelihoods and food security**;
- First pilot designed for the **2015 El Niño drought** in Indonesia
- Adopted by both **Indonesia and Sri Lanka** till 2017



Baseline Data

SUSENAS Poor and Dependent on Agriculture



Monitoring Data

Food Insecurity

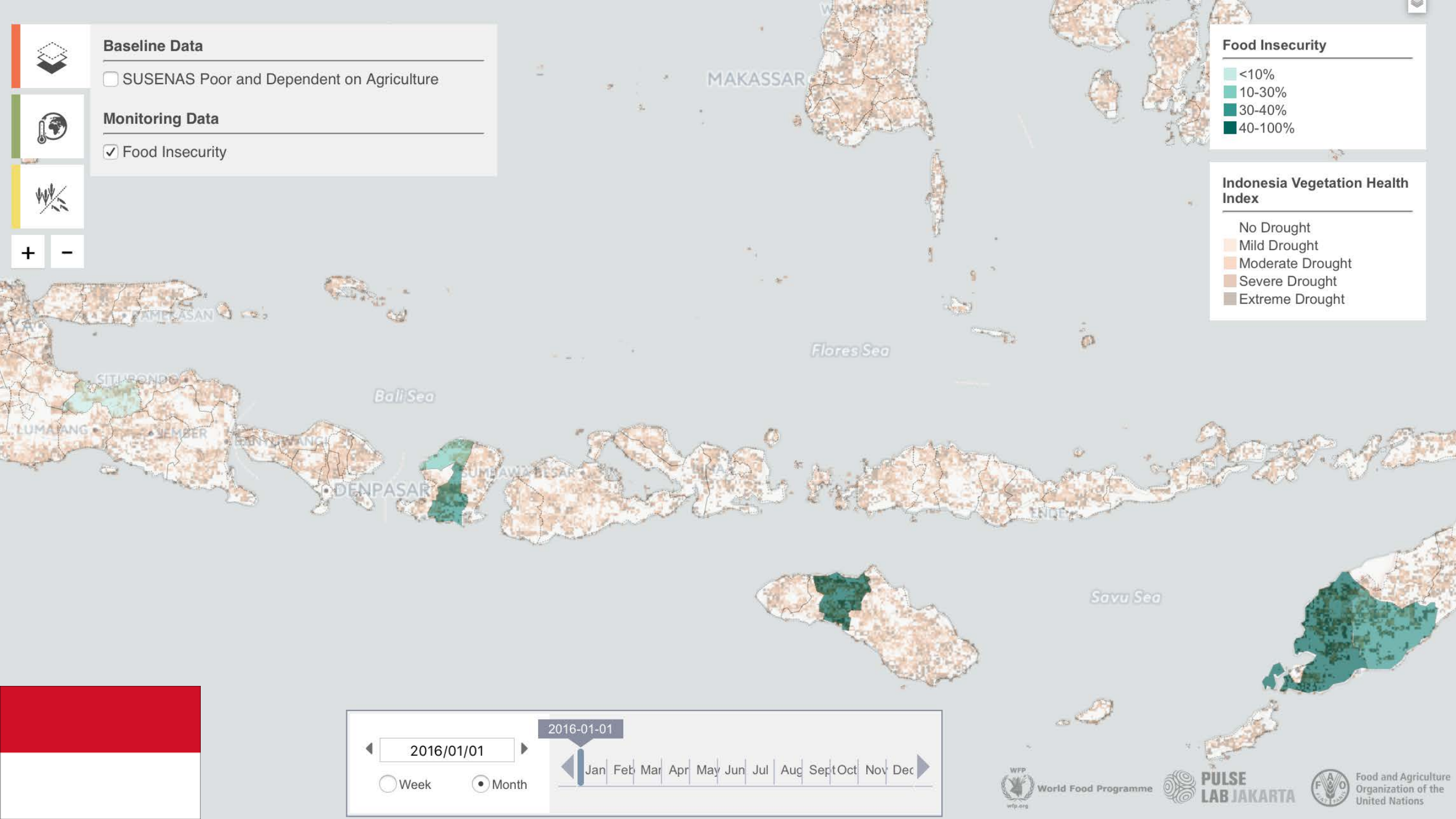


Food Insecurity

- <10%
- 10-30%
- 30-40%
- 40-100%

Indonesia Vegetation Health Index

- No Drought
- Mild Drought
- Moderate Drought
- Severe Drought
- Extreme Drought



2016/01/01

◀ 2016/01/01 ▶

Week Month

◀ Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec ▶



World Food Programme



Food and Agriculture Organization of the United Nations

What is PRISM?



What are the impacts or potential impacts of weather/environmental conditions?

- *How severe is the impact?*
- *Where are the affected people?*
- *Where are the at-risk communities?*



- Geographic overview of environmental conditions and their impact
- Rapid access to information and analysis



- Faster decision-making response

How does PRISM work?



- Automates data acquisition and processing



- Combines multiple data streams into single interactive framework



- Visualizes information and analysis on a multi-layer, interactive map



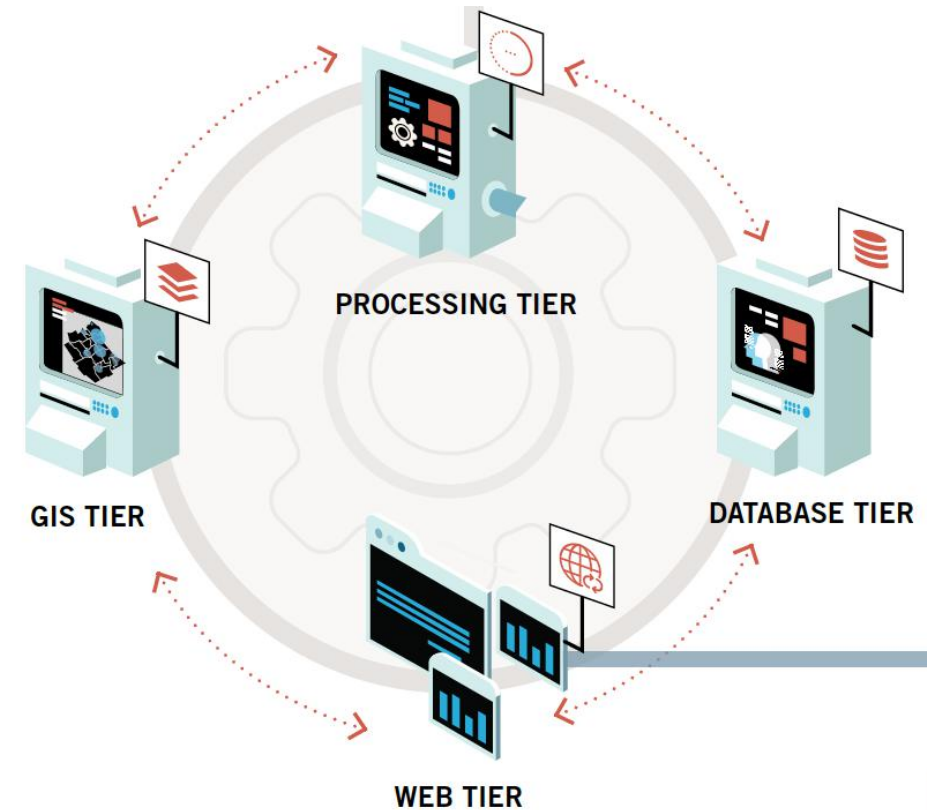
SURVEY DATA



CROWDSOURCE
DATA



SATELLITE DATA



How does PRISM work?

Economic Vulnerability + Drought Exposure → Impact & Geographic priorities



Economic Vulnerability

- Poverty data
- Income Source



Drought Exposure

Meteorological drought

- Standardized precipitation index
- Rainfall anomaly
- # days since last rain

Agricultural Drought

- Enhanced Vegetation Index
- Vegetation Condition Index
- Temperature Condition Index
- Vegetation Health Index



Impact & Priorities

- Crop land (hectares affected)
- Distribution of affected population

Further link to...

- Market price data
- Disaster history
-



BASELINE

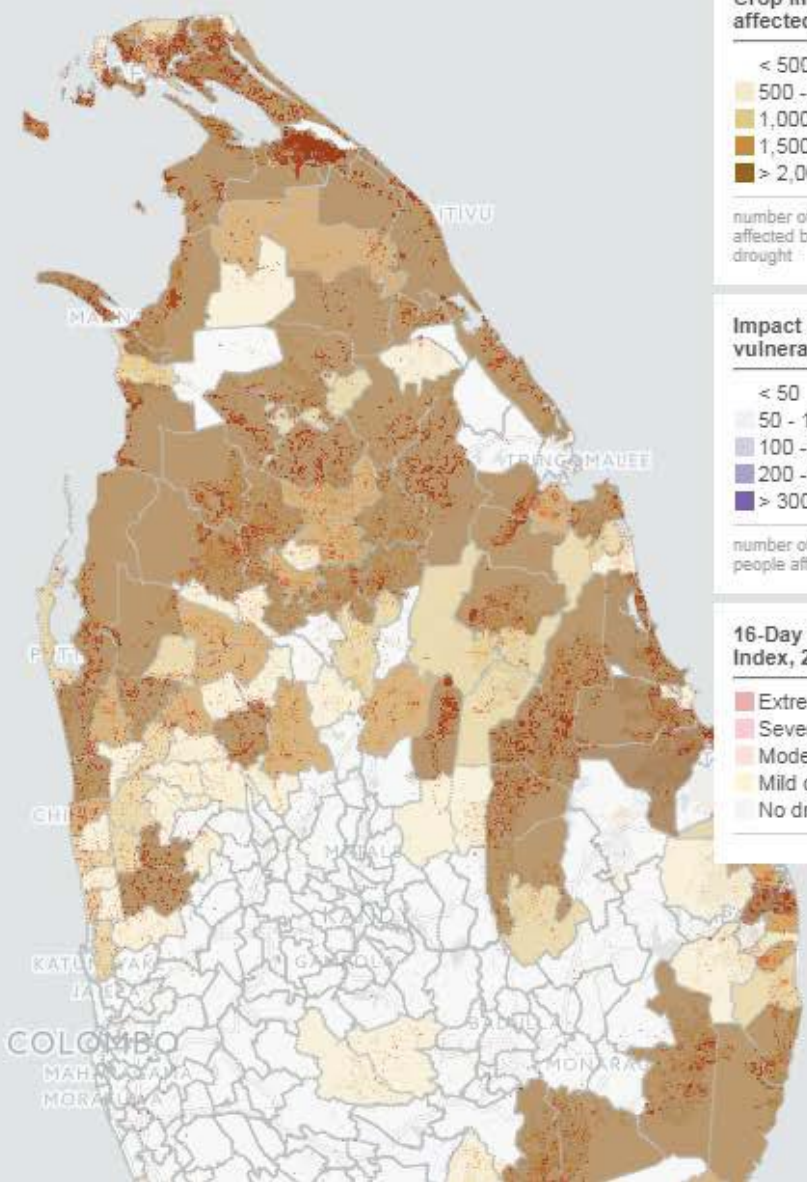
CLIMATE

IMPACT

2017/06/27

Day Week Month

🔍 🔍



Crop impact (hectares affected)

- < 500
- 500 - 1,000
- 1,000 - 1,500
- 1,500 - 2,000
- > 2,000

number of hectares of croplands affected by severe or extreme drought

Impact on economically vulnerable persons

- < 50
- 50 - 100
- 100 - 200
- 200 - 300
- > 300

number of economically vulnerable people affected

16-Day Vegetation Health Index, 250m

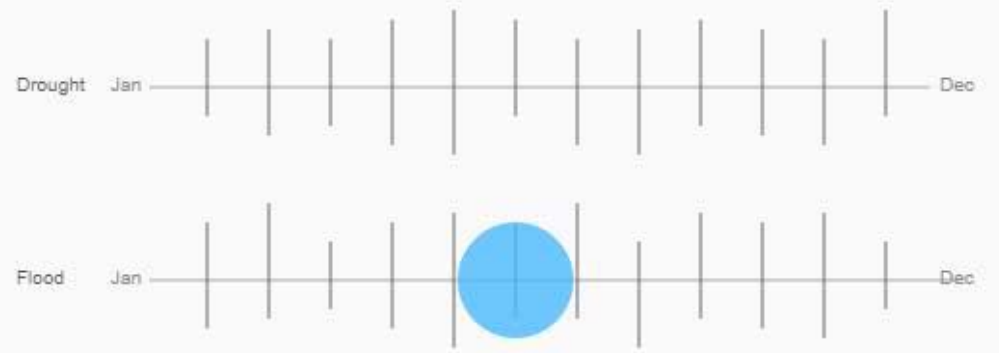
- Extreme drought
- Severe drought
- Moderate drought
- Mild drought
- No drought

TABLE **DISASTER HISTORY** COMMODITY PRICE REPORT

Colombo, Colombo, Western



2016



Detail Information (01 Jan 2016, Flood - 30950 people affected)

Death	: 1	Evacuated	: 0	Praying Facility	: 0
Disappeared	: 0	Heavily Damaged House	: 0	Educational Facility	: 0
Injured	: 0	Moderately Damaged House	: 0	Health Facility	: 0
Suffered	: 30950	Lightly Damaged House	: 0	Crop Damages (ha)	: 0

PRISM: An integration

Multiple data sources integrated into one system

1 Satellite

- GPM IMERG (Precipitation)
- CHIRPS (Precipitation)
- MODIS MOD11C3 (Land surface temperature)
- MODIS MOD13A3 (Vegetation)
- MODIS Croplands

2 Survey

- Mobile data collection

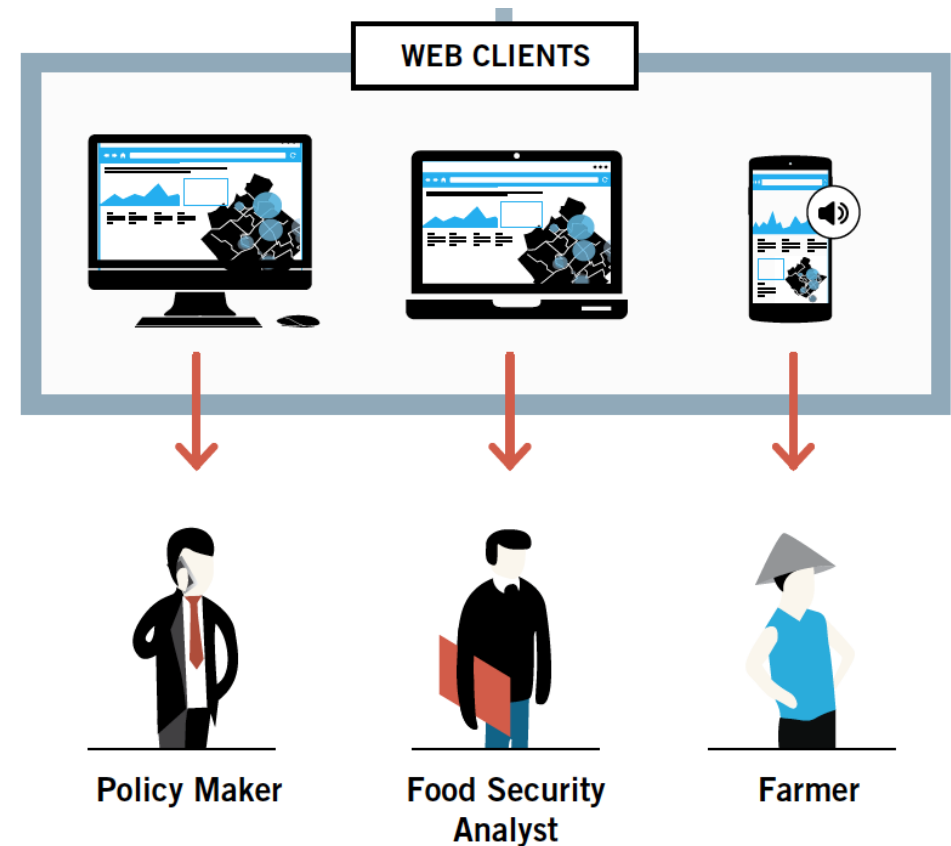
3 Social Statistics

- Poverty
- Agriculture dependent
- Disaster history

4 Crowdsource

- Premise market price data

An integrated mindset to produce evidence-based knowledge



Q & A



**World Food
Programme**

World Food
Programme