



# JRC

## Drought Observatories

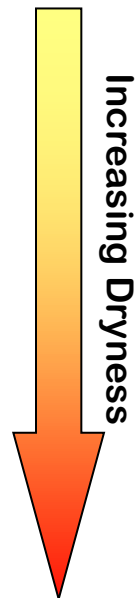
- timely information on slow onset disasters -

**Paulo Barbosa**

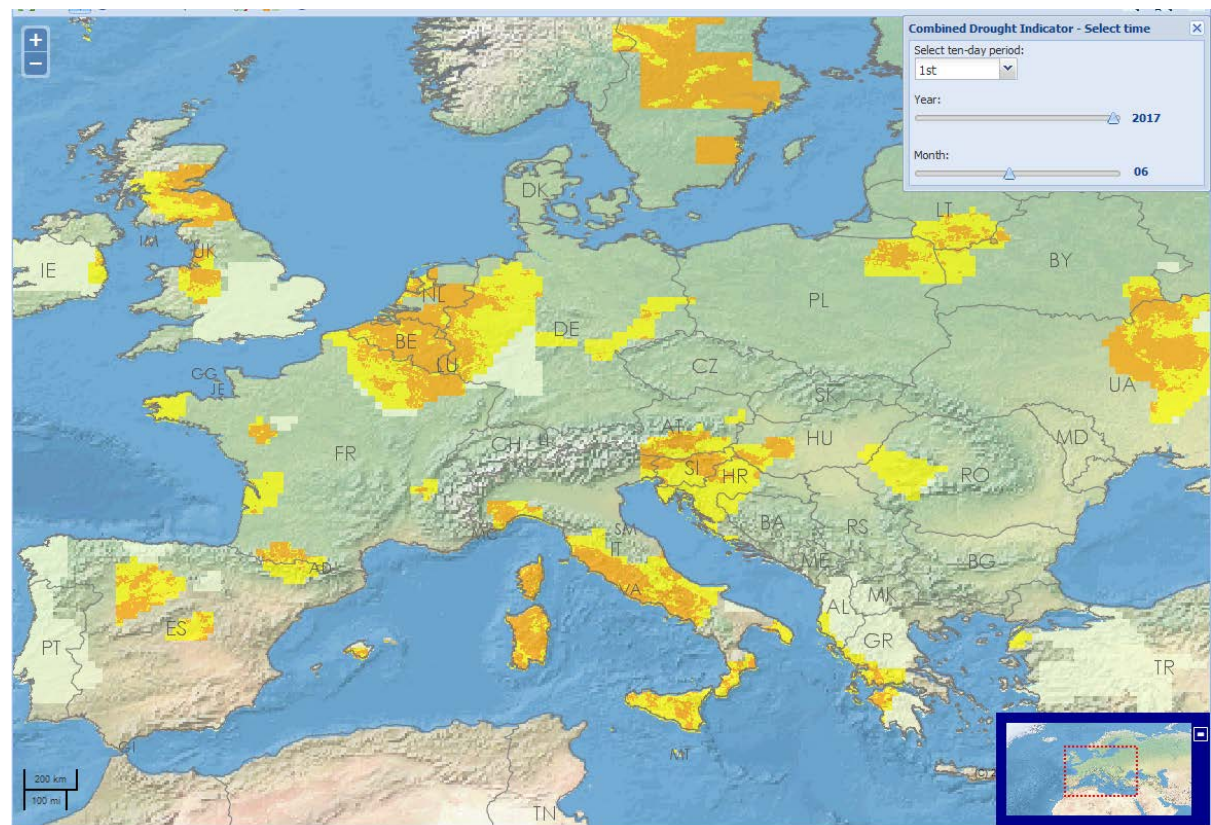
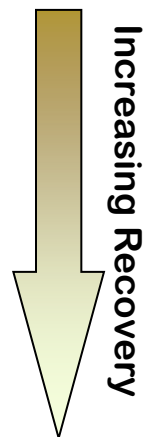
*European Commission  
Joint Research Centre (JRC)  
Disaster Risk Management Unit*

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Impact	Level
<b>Watch:</b> rainfall deficit	1
	2
	3
<b>Warning:</b> soil moisture deficit	4
	5
	6
<b>Alert:</b> vegetation stress following rainfall/soil moisture deficit	7
	8
	9
	10

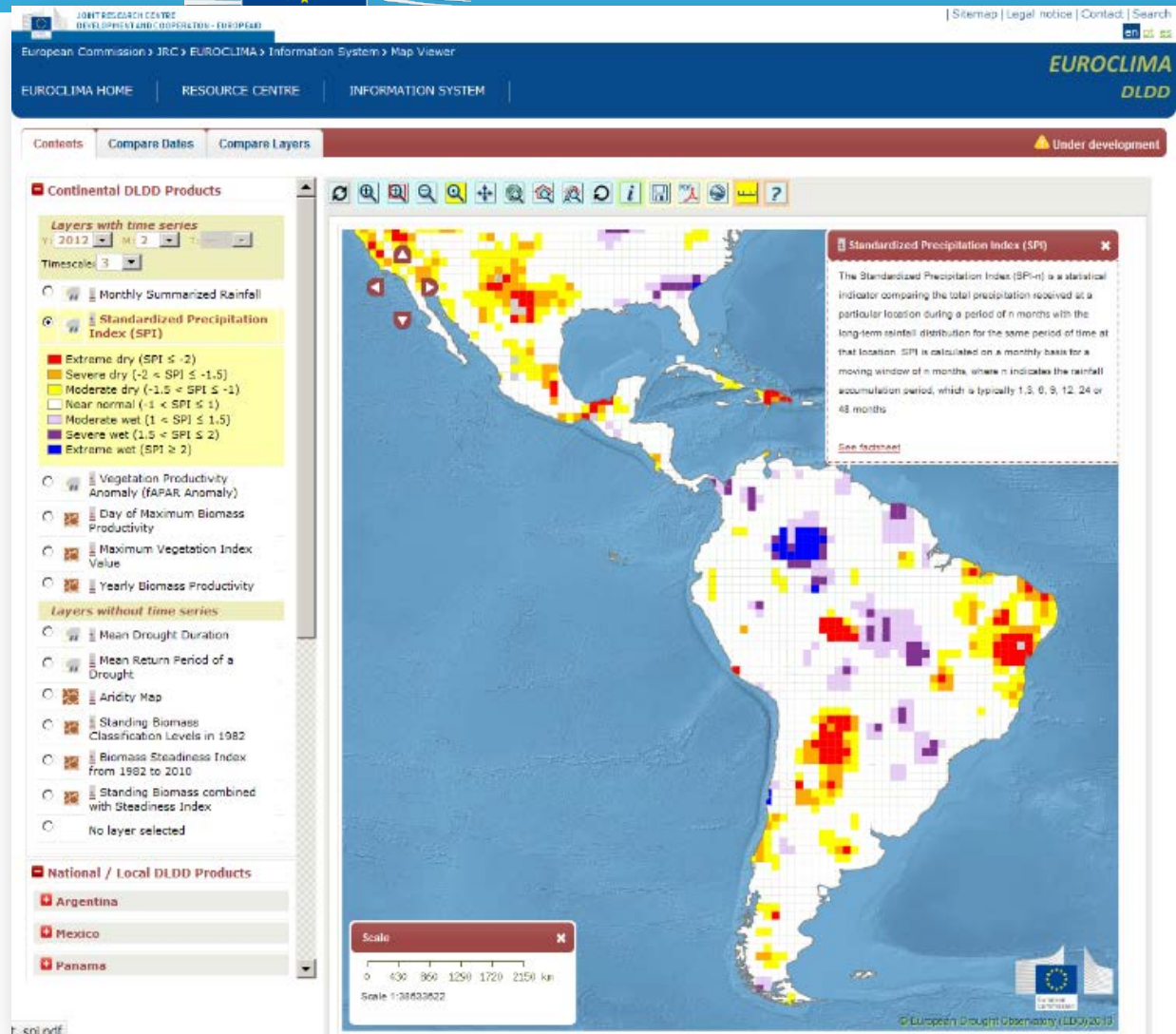


Impact	Level
<b>Partial Recovery of Vegetation:</b>  normal condition of rainfall still vegetation stress	11
	12
<b>Full Recovery of Vegetation:</b>  normal condition of rainfall normal condition of vegetation productivity	13
	14



**CDI, 1-10 June 2017**

# Drought Observatories for South & Central America



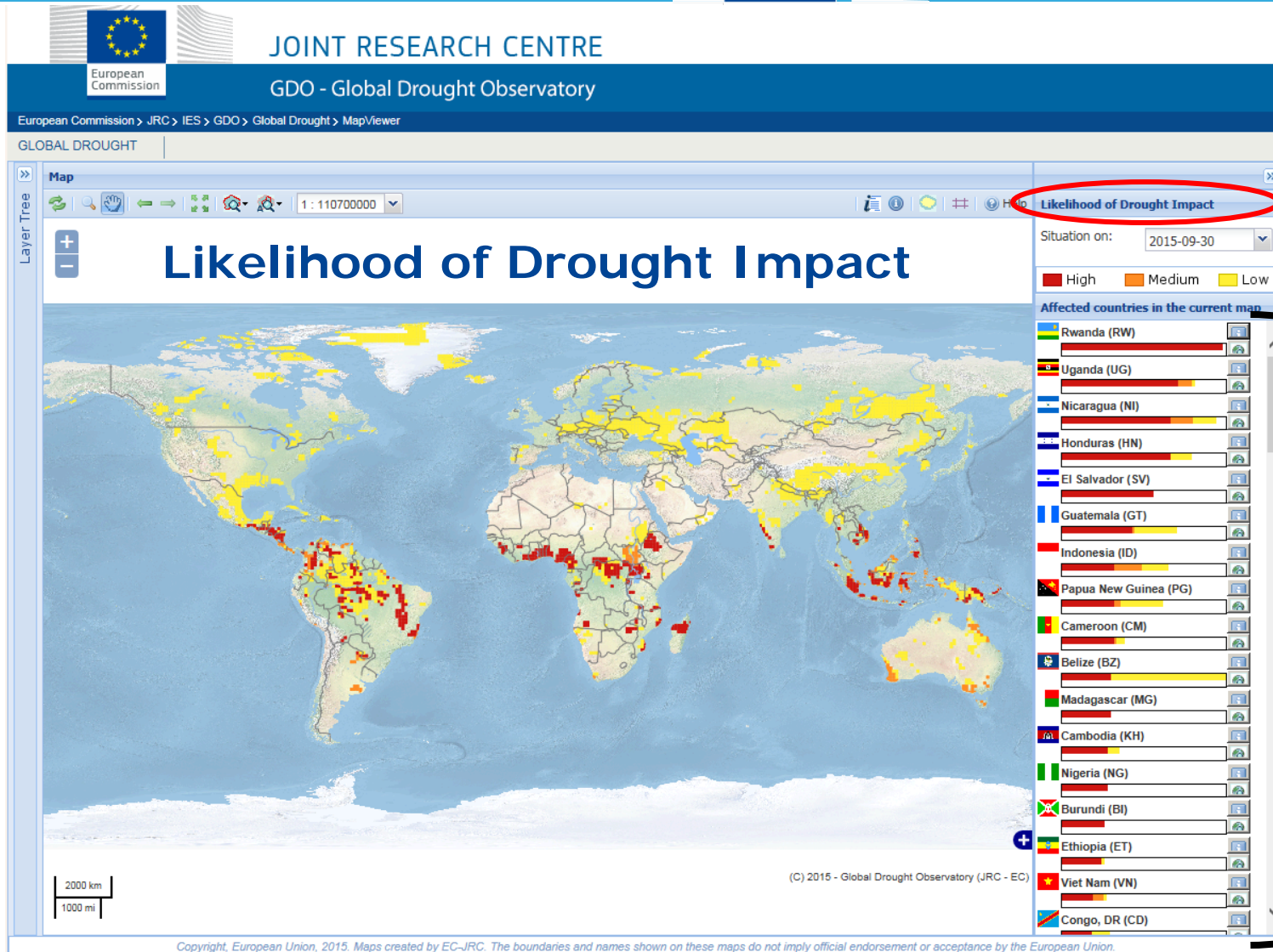
EUROCLIMA

System transferred to  
CIIFEN (open source  
software)

<http://edo.jrc.ec.europa.eu/scado/>



# Global Drought Observatory (GDO)



Select  
a date

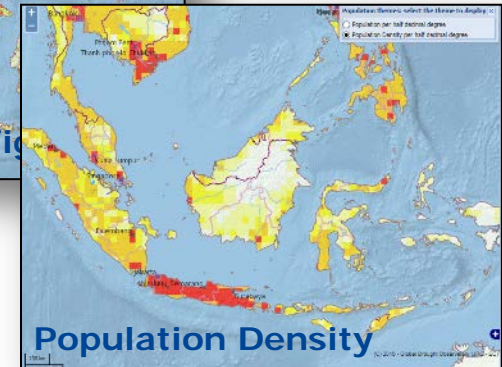
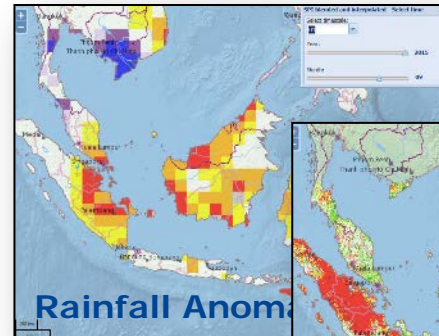
Hierarchical  
list of  
affected  
countries  
(visible on  
the map)

# What is behind the Likelihood of Drought Impact?



## (A) Drought Hazard

- Rainfall Anomalies
- Vegetation Vigor
- Soil Moisture Anomalies

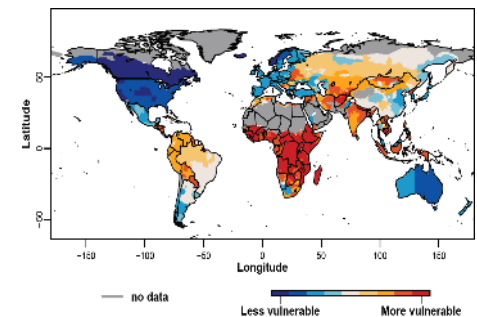


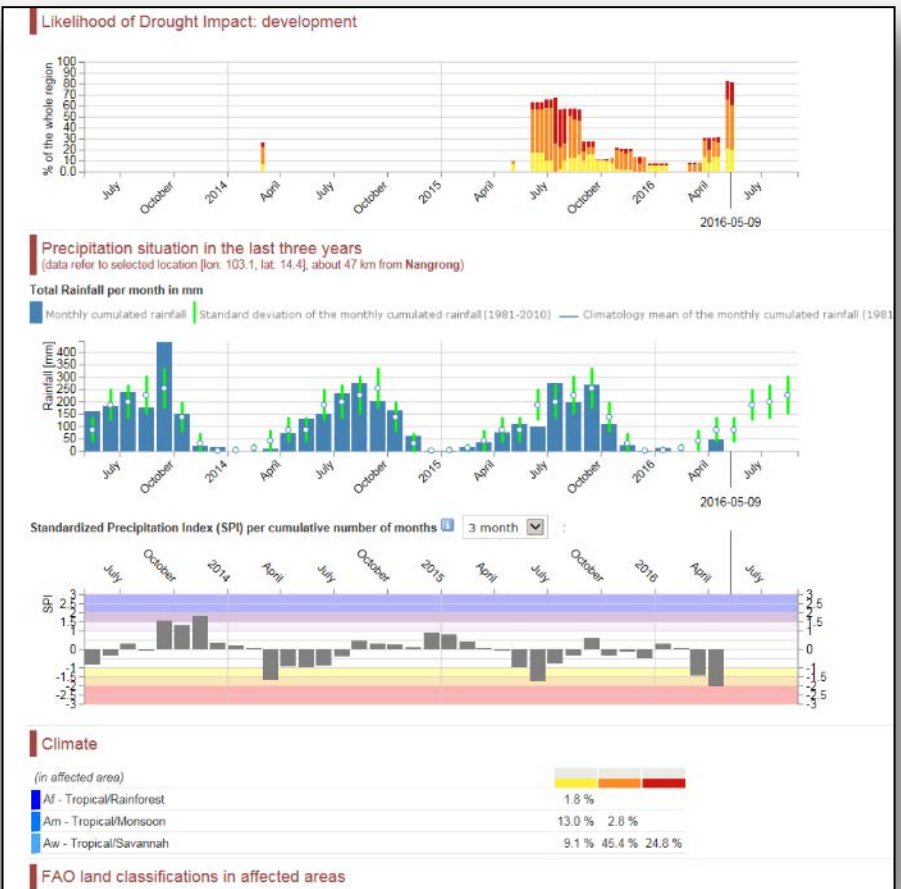
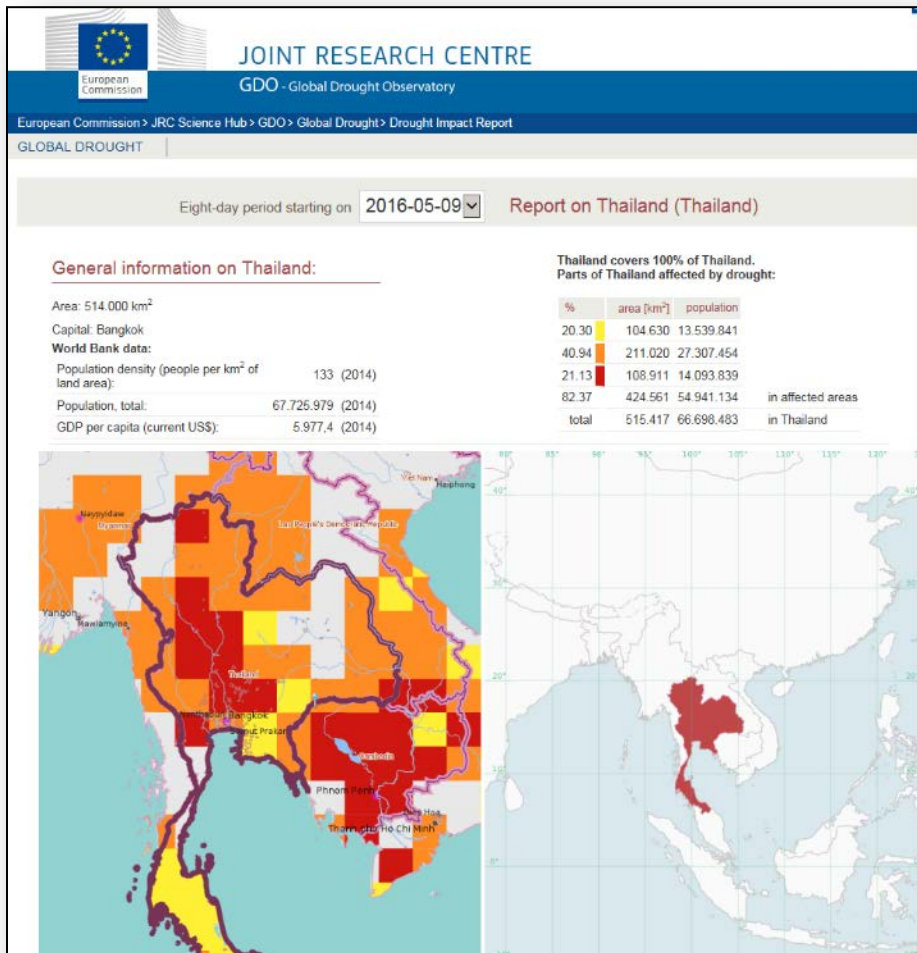
## (B) Exposure

- Population density & Distribution
- Reservoirs
- Agricultural area

## (C) Societal Vulnerability

- Social Indicators (Age, Poverty, Infant Mortality, etc.)
- Economic Indicators (GDP, Energy Consumption, etc.)
- Infrastructural Indicators (Irrigation, Accessibility, etc.)





+ selectable pie charts on land cover types and other surface characteristics in the affected areas



## European Drought Observatory

- EDO is implemented as a multi-scale distributed system.
- Core indicators are complemented by regionally relevant indicators.
- More combined indicators for different sectors will be developed.

## Global Drought Observatory

- Soil moisture and temperature indicators to be added.
- Vulnerability and Likelihood of Impact assessments for different sectors (e.g. food security, public water supply, energy production, inland water transportation)



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European Commission

Joint Research Centre

***<http://ec.europa.eu/jrc>***