Climate Extremes: How Ready is Europe?
Implementing European Climate and Security Policies

Data Source: www.emdat.be

Prof. Debarati Guha
School of Public Health, Brussels
CLIMATE RELATED DISASTERS IN THE EU
1989-2018

# OF DISASTER EVENTS

- Multi-Country Storms
- Multi Country Floods
- Wildfires in Portugal & Greece

- Storm
- Extreme Temp.
- Flood
- Drought
- Landslide
- Wildfire

Centre for Research on the Epidemiology of Disasters (CRED)
UCLouvain
CLIMATE RELATED DISASTER VICTIMS BY TYPE IN THE EU
1989-2018

Total Victims: 15.9m

- Storm: 5.5m
- Drought: 6m
- Flood: 4m
- Other: 370,000
Economic Quartiles by Mid-Range GDP Per Capita (2003)

**Q1**
- Croatia
- Estonia
- Poland
- Lithuania
- Latvia
- Romania
- Bulgaria

**Q2**
- Greece
- Portugal
- Slovenia
- Malta
- Czechia
- Slovakia
- Hungary

**Q3**
- Belgium
- Germany
- France
- Italy
- Spain
- Cyprus

**Q4**
- Luxembourg
- Ireland
- Denmark
- Sweden
- Netherlands
- United Kingdom
- Finland
- Austria
DISASTER VICTIMS BY EU ECONOMIC QUARTILES (PER 100,000 PERSONS)

1989-2018

EU Average Victims 3,200/100,000 persons

Q2: 4,500
Q3: 4,300
Q1: 2,000
Q4: 1,000
DISASTER DAMAGES BY ECONOMIC QUARTILES IN THE EU
1989-2018

- Total Losses (USD Billion)
- Avg Yearly Losses to GDP (USD Billion)
Human Impacts of Climate Change in Europe

- Highest levels of warming for extreme hot days are expected to occur in central and southern Europe, the Mediterranean (IPCC, 2018)

- Reductions in projected food availability are large (at 2°C increase) in the Mediterranean and central Europe (IPCC, 2018)

- Expansion of geographic range and seasonality of Lyme and other tick-borne diseases, as well as West Nile Virus transmissions, in Europe (IPCC, 2018)
Impact of Climate Change on Food Security

Relative Price Increases of Food by 2050

1. Low Emission/Moderate Trade
2. Low Emissions/Free Trade
3. High Emissions/Very Restricted Trade
4. High Emissions/Restricted Trade
Climate hazards pushed 39 million people into major food crisis in 23 countries (WFP, 2017). These crisis contribute to the break down of livelihoods, social exclusion, and makes joining armed groups attractive.
Countries with regions of 50%+ loss in productivity:

- Morocco
- Algeria
- Tunisia
- Libya
- Mauritania
- Mali
- Niger
- Burkina Faso
- Nigeria
- Chad
- Sudan
- South Sudan
- Eritrea
- Ethiopia
- Somalia
How Prepared is Europe for Climate Extremes?

Europe needs clearer strategies for climate extremes
- Particularly heat waves and droughts

Poor reporting leads to poor policy
- 63% of all disasters in EM-DAT do not report economic losses
- No conventional protocol defining disaster events across EU (ex: 2018 drought)

The EU can play a proactive role in stabilizing climate risk
- Particularly countries in the European Neighbourhood and Sahel
Thank you

www.cred.be  www.emdat.be

contact@cred.be  news@emdat.be

@CREDUCL