
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



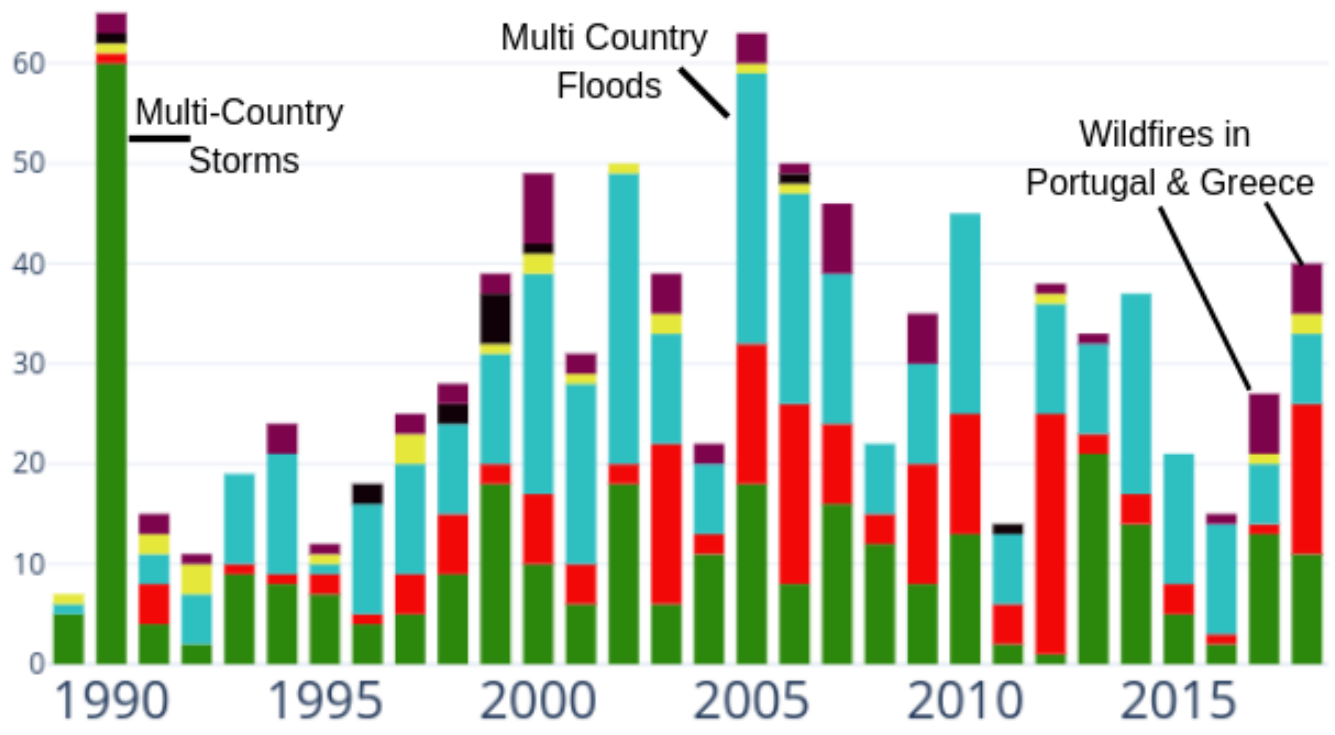
**Centre for Research on the
Epidemiology of Disasters
CREED**

 **UCLouvain**

CLIMATE RELATED DISASTERS IN THE EU

1989-2018

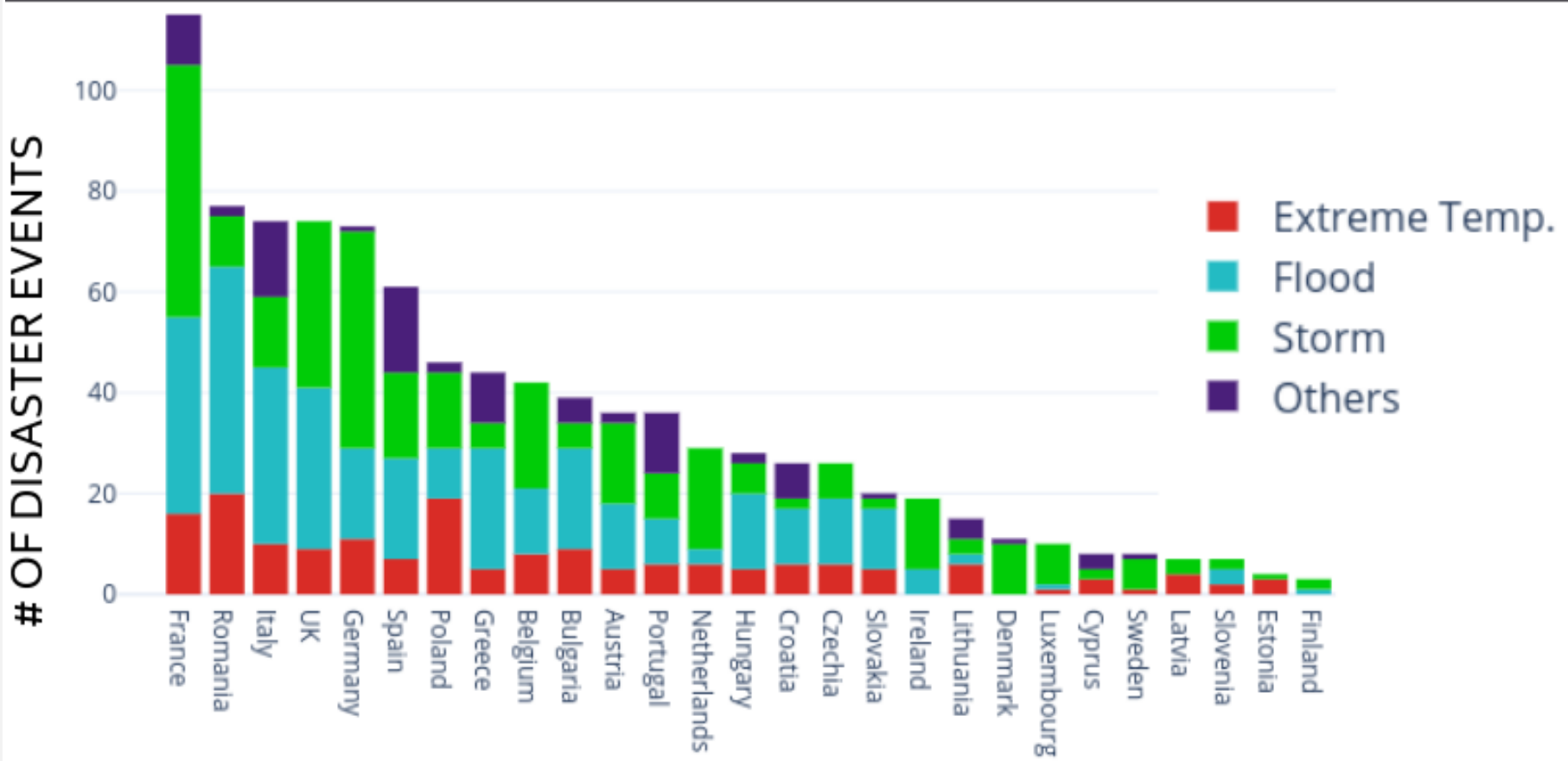
OF DISASTER EVENTS



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

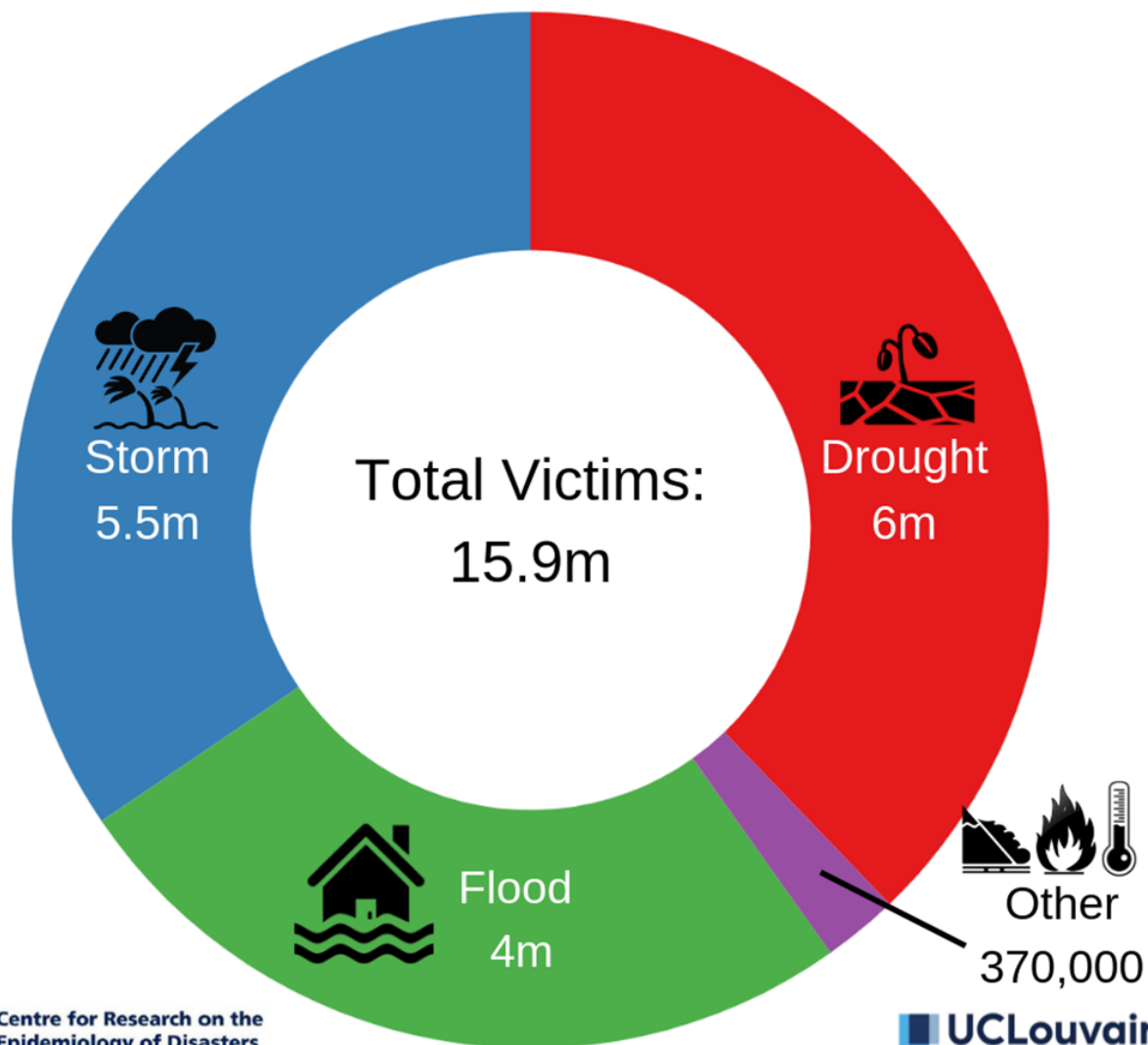
CLIMATE RELATED DISASTERS IN THE EU

1989-2018



CLIMATE RELATED DISASTER VICTIMS BY TYPE IN THE EU

1989-2018



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

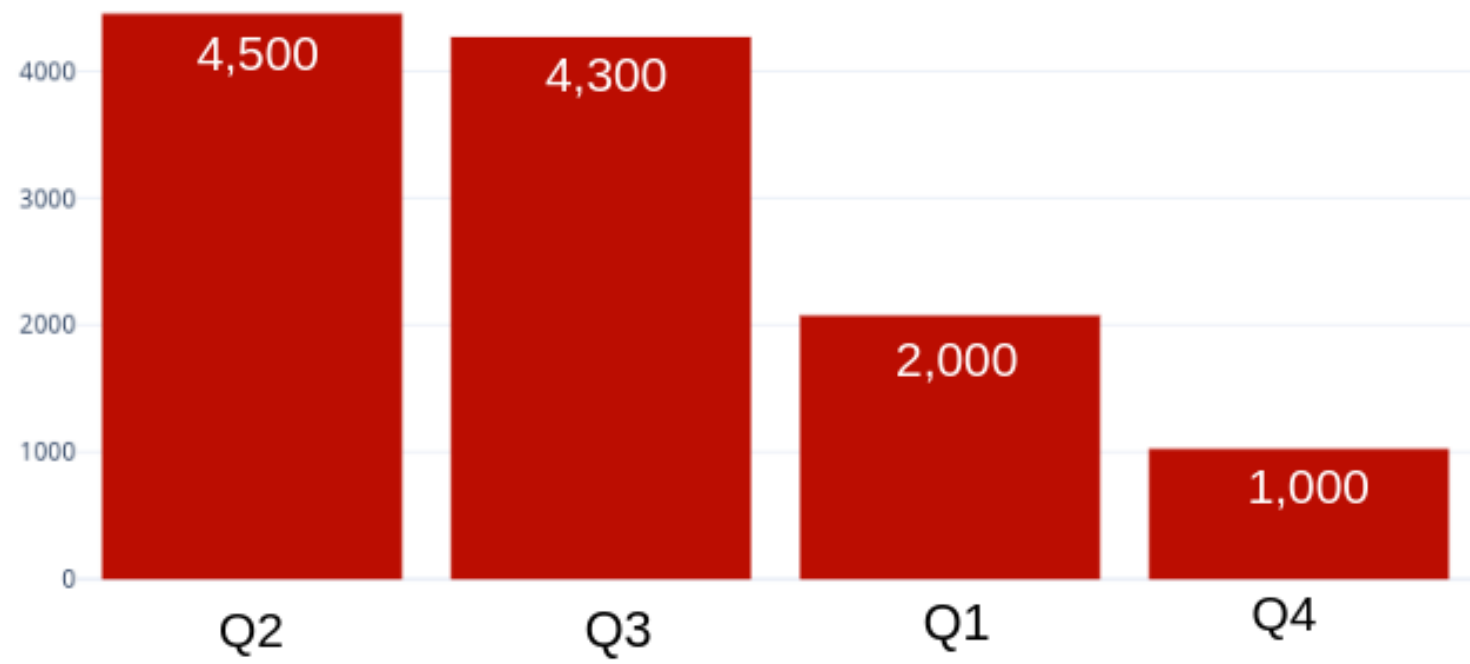
Q4

Luxembourg
Ireland
Denmark
Sweden
Netherlands
United Kingdom
Finland
Austria

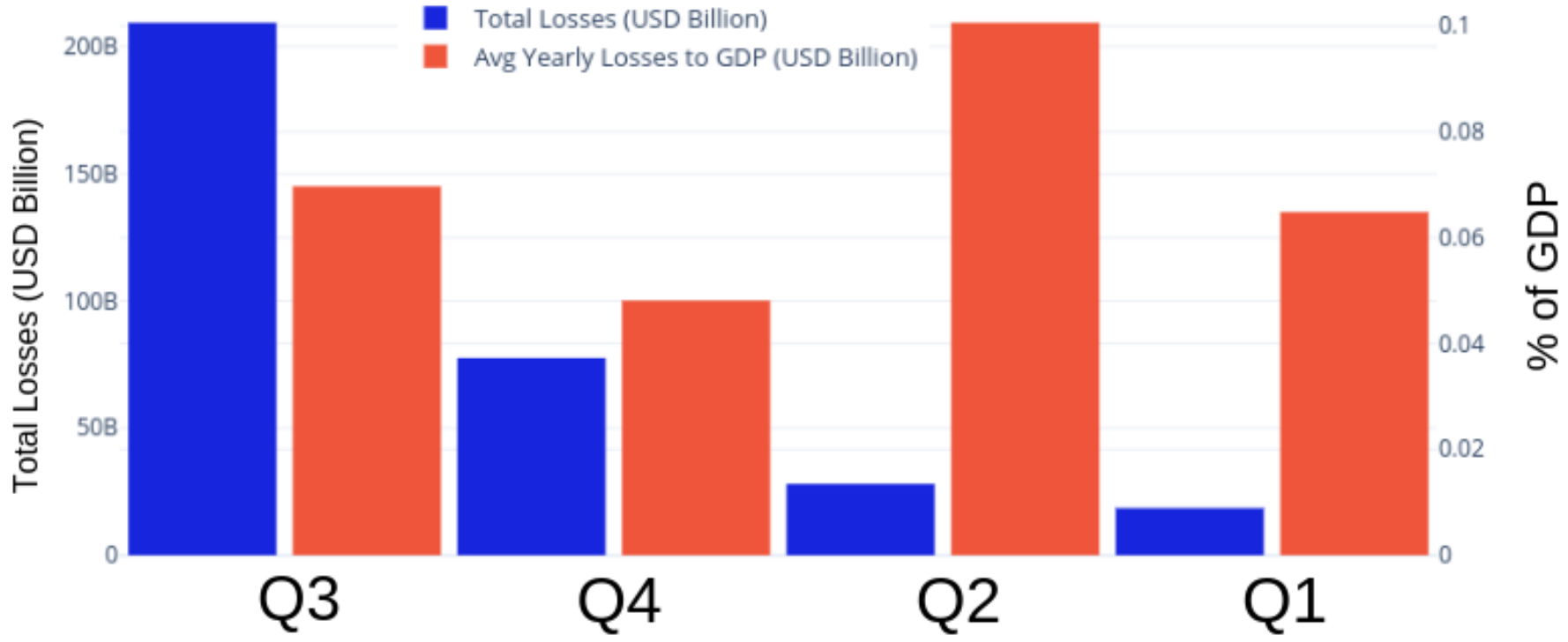
DISASTER VICTIMS BY EU ECONOMIC QUARTILES (PER 100,000 PERSONS)

1989-2018

EU Average Victims 3,200/100,000 persons



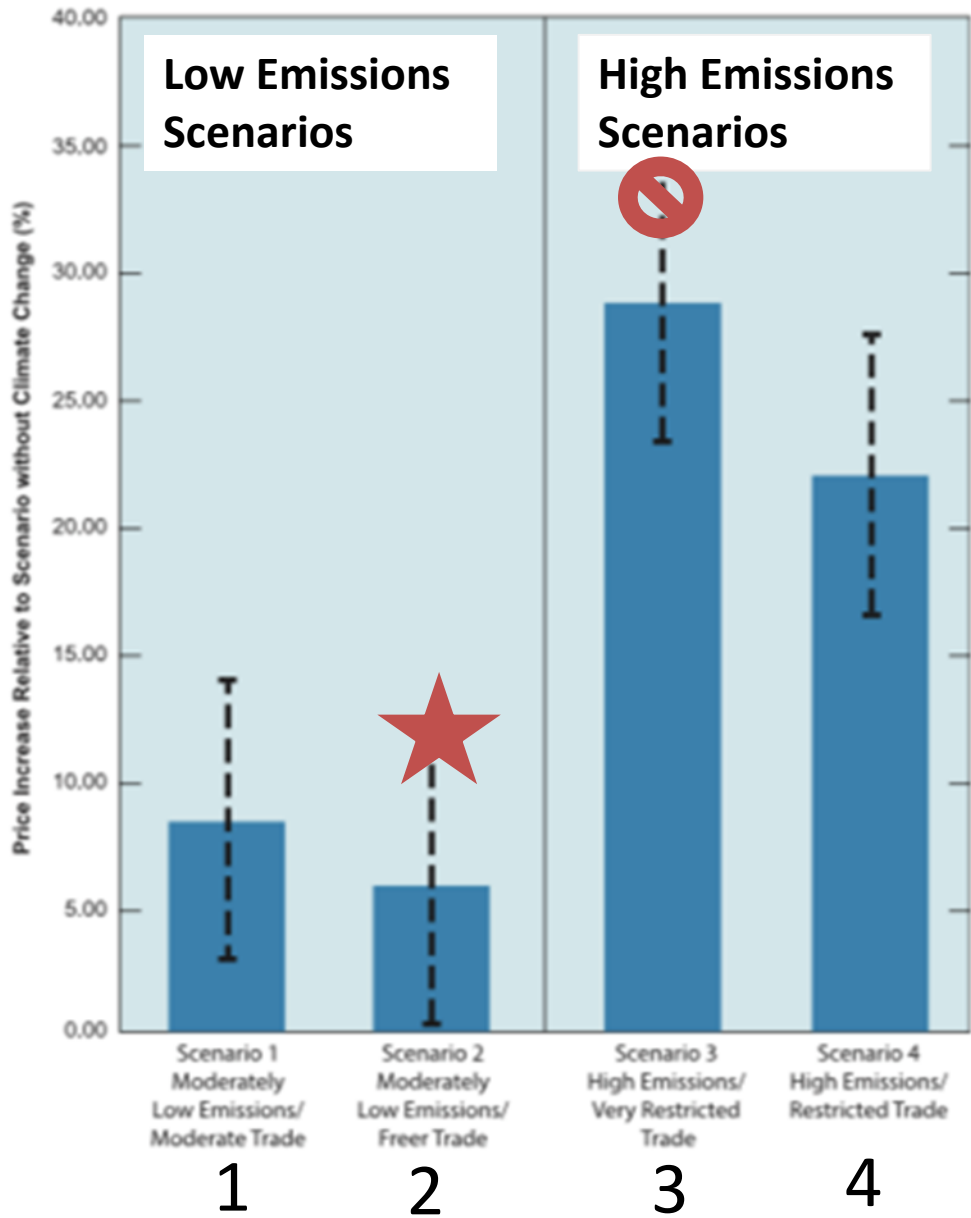
DISASTER DAMAGES BY ECONOMIC QUARTILES IN THE EU 1989-2018



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

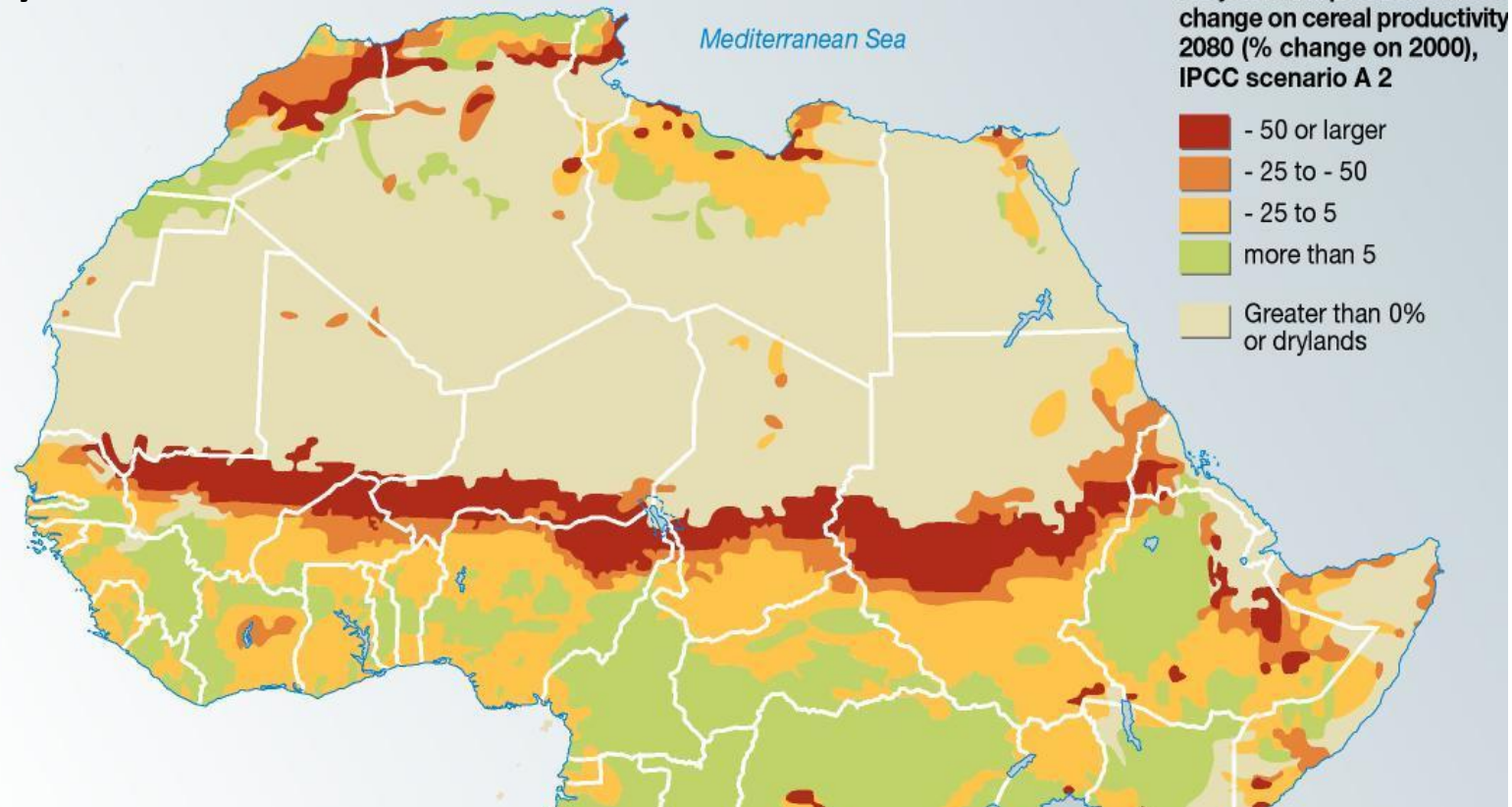
Impact of Climate Change on Food Security

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.**

Cereal productivity in Sub-Saharan Africa under a scenario of the IPCC that shows CO₂ atmospheric concentrations a level at 520-640 ppm by 2050

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

- Particularly countries in the European Neighbourhood and Sahel

Thank you

www.cred.be

contact@cred.be

www.emdat.be

news@emdat.be



@CREDUCL

