

ARE CLIMATE RELATED DISASTERS ON THE RISE IN EUROPE?

DATA TRENDS AND PERSPECTIVES FOR THE FUTURE

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UCL
Université
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www.emdat.be

CRED – UC Louvain 2009



What is EM-DAT?

- Emergency Events Database, created in 1988
- Maintained at CRED, Université Catholique de Louvain
- Project funded by OFDA/USAID
- Compile information on occurrence and effects of over 17500 natural and technological disasters from 1900 until present
- Objective: Provide evidence-base to humanitarian and development actors at national and international levels



EM-DAT Criteria

10 or more people reported killed

and/or

100 or more people reported

affected

and/or

**Call for international assistance/
declaration of a state of emergency**



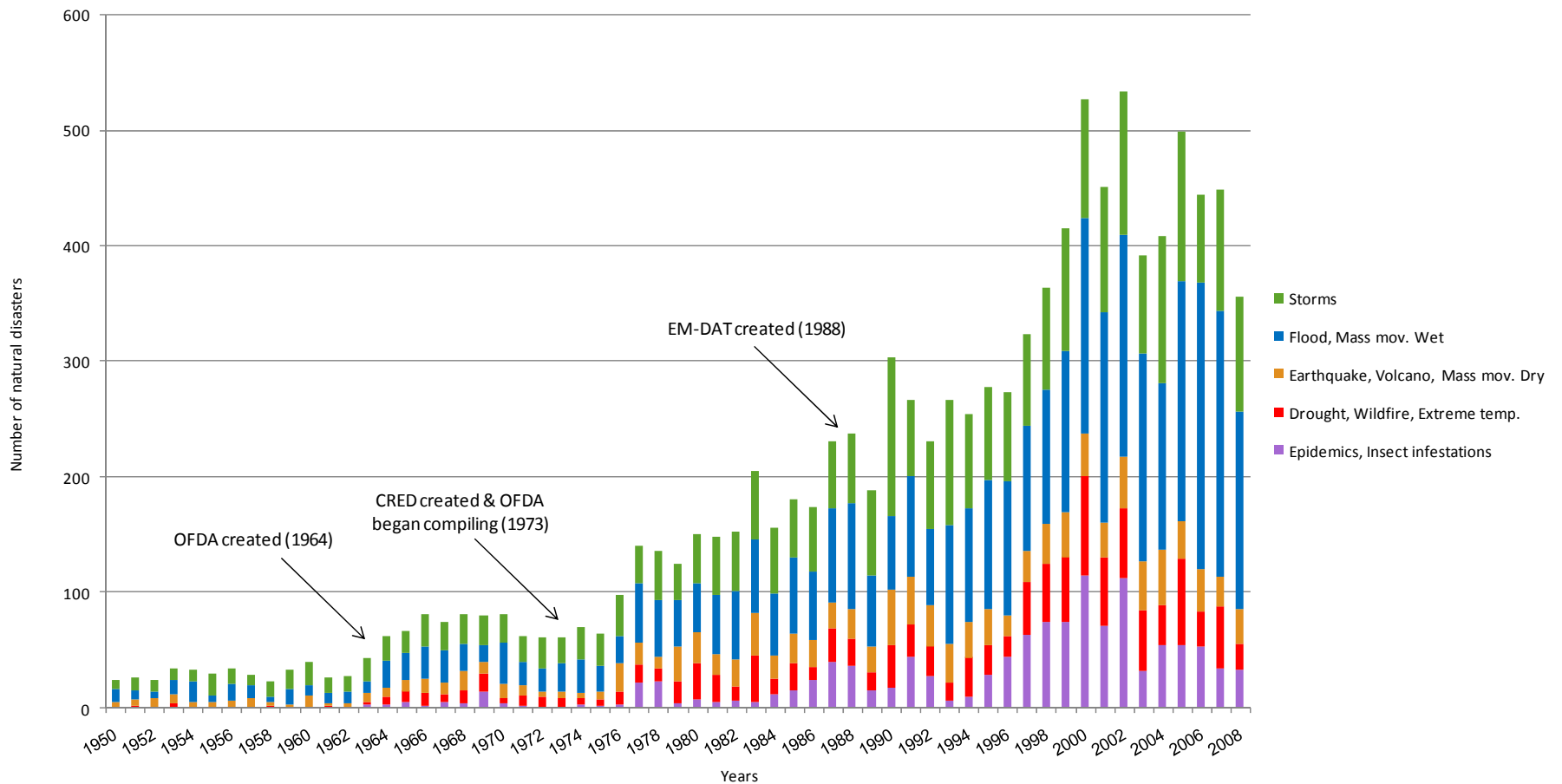
EM-DAT Sources

Database validated, updated daily and compiled from various sources according a priority list:

- **United Nations**
- **Governmental sources**
- **US Government**
- **IFRC and NGO's**
- **Reinsurance Companies**
- **Insurance magazines**
- **Research Centres**
- **Media**



Natural disasters in EM-DAT 1950-2008



Data recently cited by Al Gore in speech to American Association for the Advancement of Science, Chicago « This is creating weather-related disasters that are completely unprecedented »



Natural disasters in 20 years 1989-2008

WORLD : 6248

EUROPE: 953

EU Countries: 658



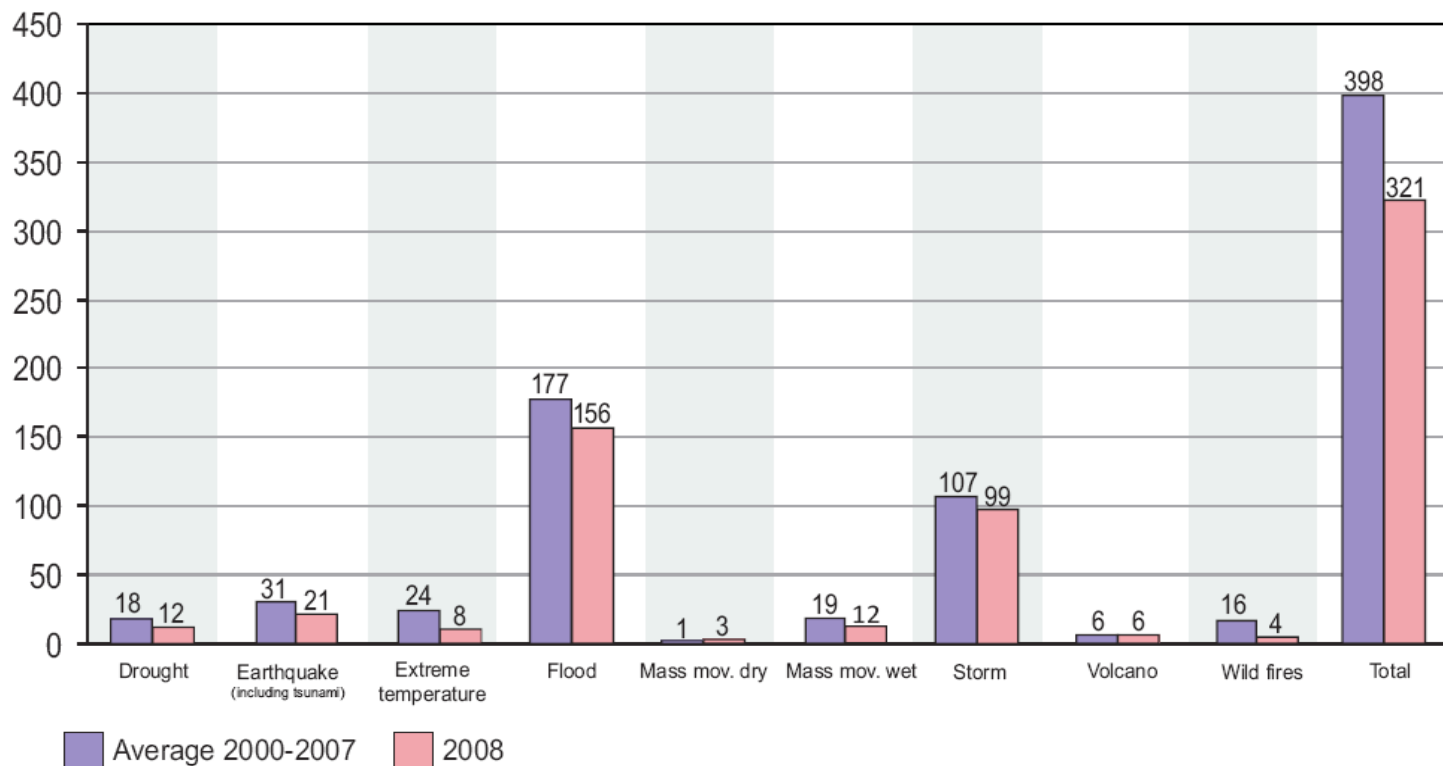
GLOBAL FIGURES - 2008

- Occurrence: 321 country level disasters*
- Total Deaths: 235,816
- Total Affected: 211,6 million
- Estimated Damages: 181 billion US\$

* Epidemics and Insect Infestation excluded



NATURAL DISASTER OCCURRENCE BY DISASTER TYPE (Av.2000-2007/2008)



Where do disaster occur and how many? 1989-2008

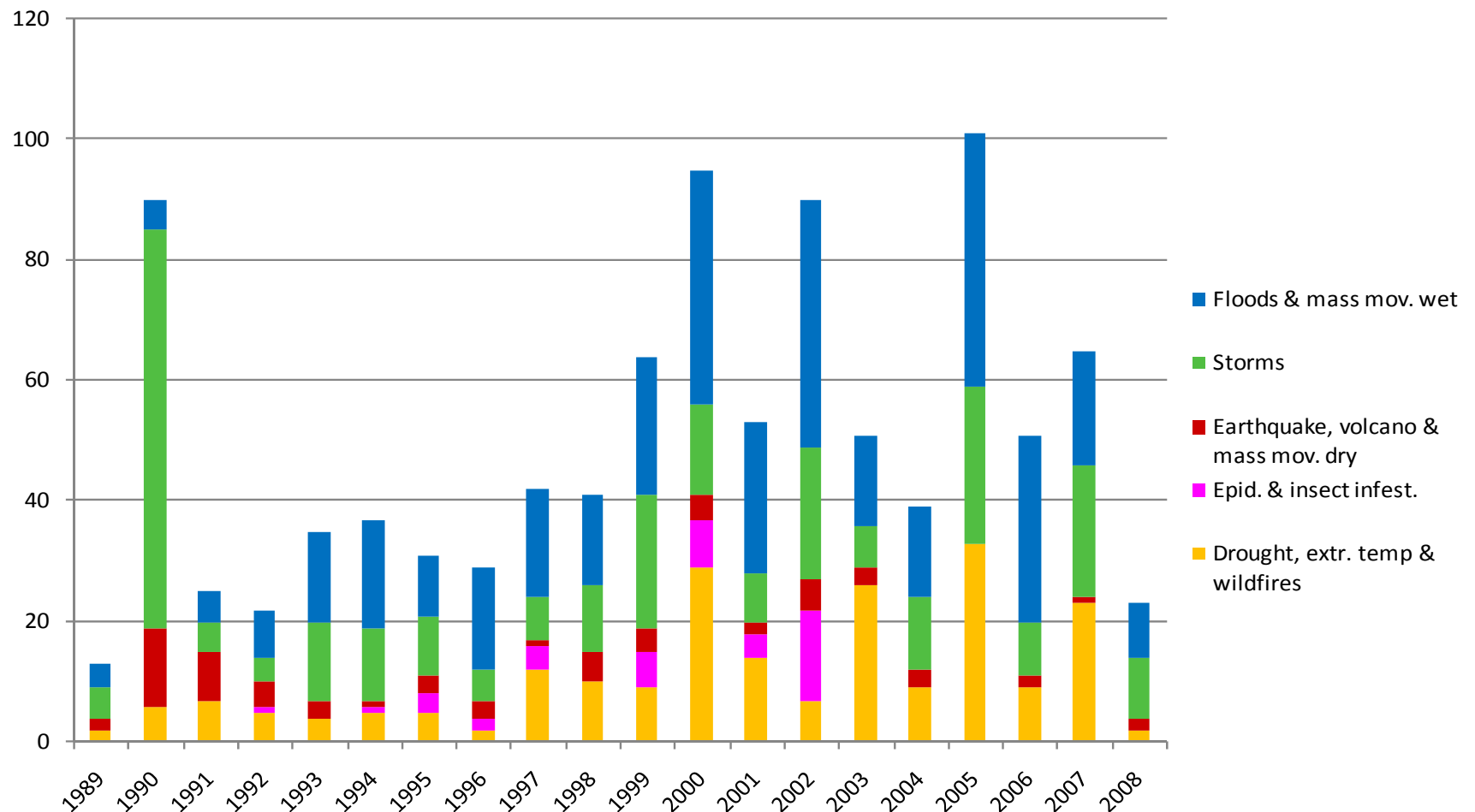
	Occurrence	Killed	Affected (million)	Econ damage (US\$ billion)
Africa	874	23,735	233	18
Americas	1,628	87,145	108	727
Asia	2,521	1,011,721	3,858	907
Europe	953	88,671	29	270
Oceania	272	3,560	18	23
Total	6,248	1,214,832	4,247	1,946

	Occurrence	Killed	Affected (million)	Econ damage (US\$ billion)
Africa	14.0%	2.0%	5.5%	0.9%
Americas	26.1%	7.2%	2.5%	37.4%
Asia	40.3%	83.3%	90.9%	46.6%
Europe	15.3%	7.3%	0.7%	13.9%
Oceania	4.4%	0.3%	0.4%	1.2%
Total	100%	100%	100%	100%

- Human impact essentially concentrated in Asia: 83% killed; 91% affected
- Europe and Africa report a similar amount of disasters
- Asia: estimation of damage costs per capita= 225 US\$
- Europe: estimation of damage costs per capita= 325 US\$



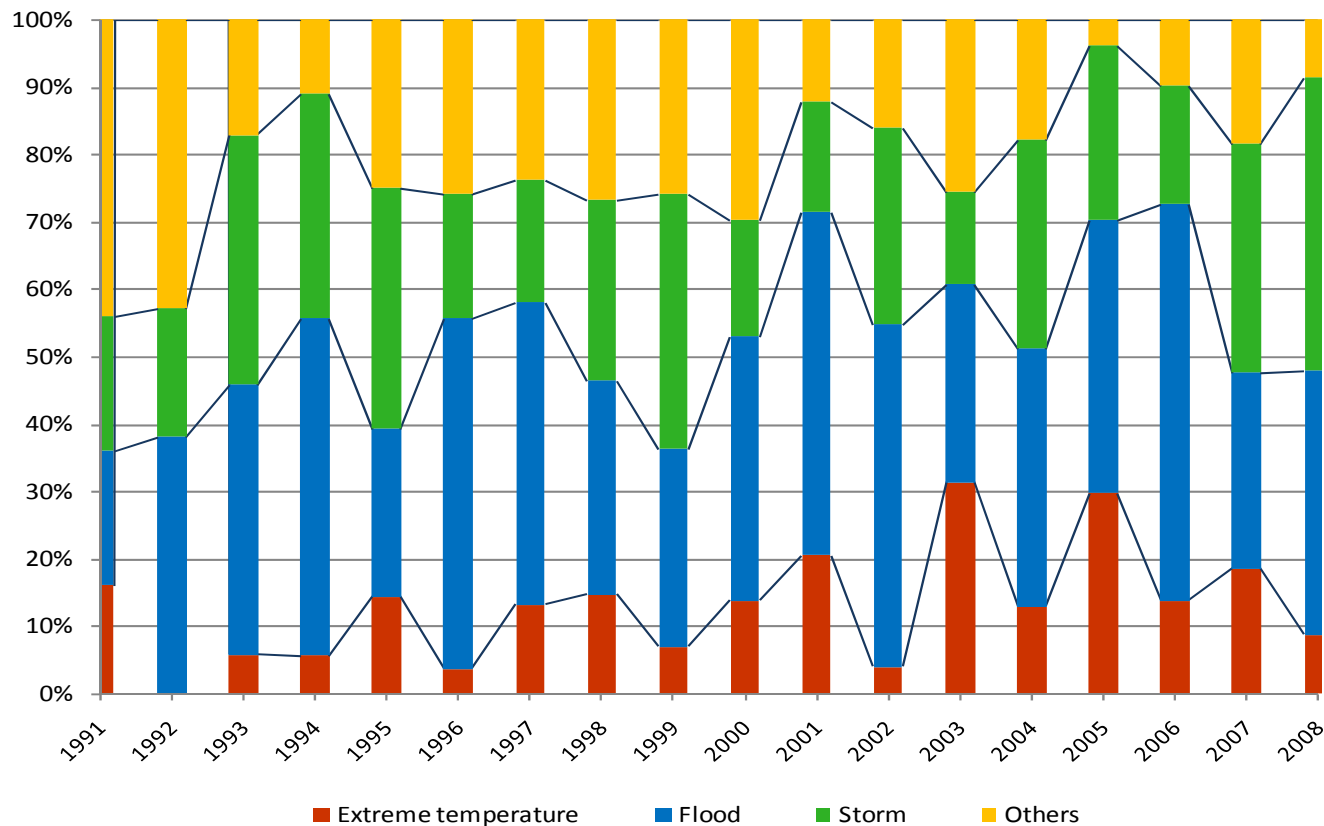
Disasters in Europe*: What kinds occur most frequently?



*See countries included in the Press Pack



Floods, storms and extreme temperatures: % share in Europe

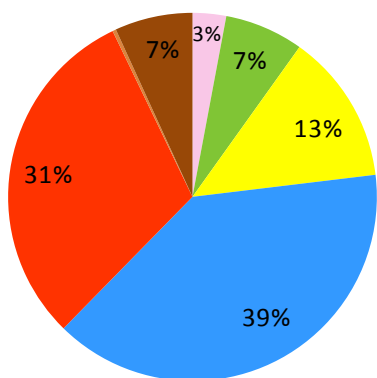


- 5 times more floods in last 4 years compared to first 4 years
- 10-fold increase in number of extreme temperature events (last 4-years vs first 4-years)
- Floods are taking a large share

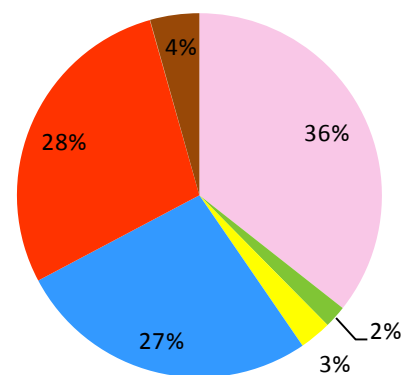


Natural disasters in Europe: shares of the pie 1989-2008

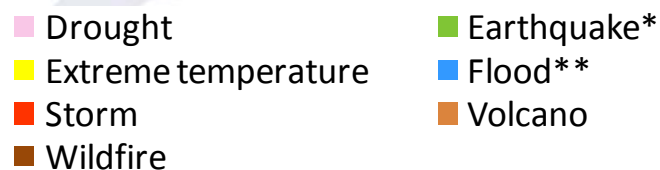
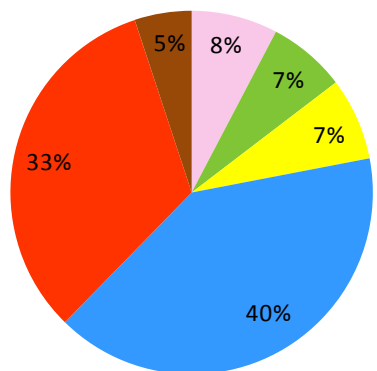
Disaster occurrence



No. affected people



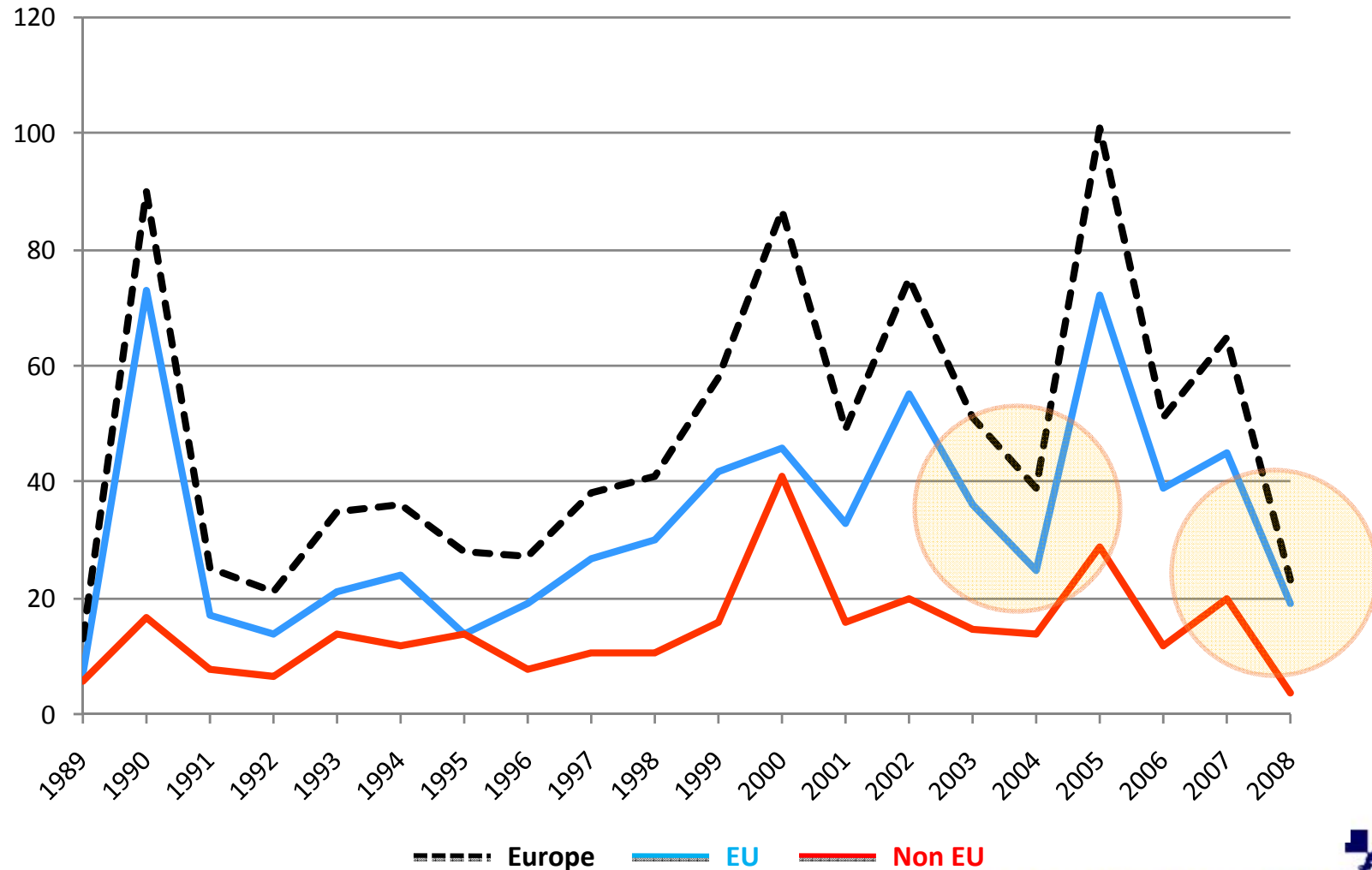
Economic damages



- Floods and storms are the major sources of natural perils
- Drought affected the largest number of people



How do disasters in EU compare to non EU countries?



Which disasters affect people the most? 1989-2008

	Total victims	Disaster share	
Europe	29508730	droughts 36%	storms 28%
EU	13941881	droughts 43%	storms 37%
non EU	15566849	floods 36%	droughts 29%



Ranking Europe for disasters and their impact

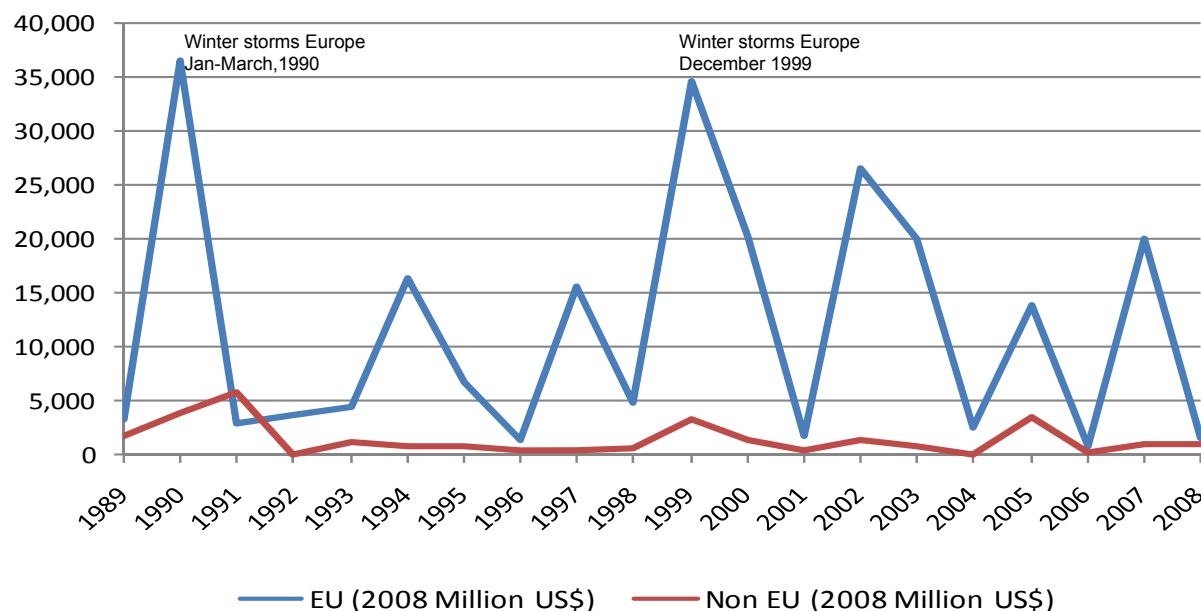
Top 10 countries in 1989-2008

Incidence	Victims	Econ damage (1000 US\$)
Russia	Spain	Italy
France	Russia	Germany
Romania	Albania	United Kingdom
Italy	France	France
United Kingdom	Moldova Rep	Spain
Germany	Ukraine	Greece
Spain	Macedonia FRY	Switzerland
Greece	United Kingdom	Soviet Union
Bulgaria	Lithuania	Denmark
Austria	Germany	Austria
Highest 120 (Russia)	6,044,944 (Spain)	34,155 US\$ Million (Italy)
Lowest 28 (Austria)	578,699 (Germany)	4,922 US\$ Million (Austria)

- High concentration in few countries (France, Spain, Germany)
- Russia most hit (wide geographical area)
- Italy the worst hit in terms of economic damages



Where are the economic costs from disasters in Europe: comparing EU vs non EU



- EU countries account for the majority of the reported damages
- Difference in vulnerability patterns
 - EU particularly vulnerable in terms of economic damages
 - Non EU more vulnerable in terms of human impacts
- Total costs 1989-2008

Europe:	269,967 US\$ million
EU:	240,386 US\$ million
non EU:	29,581 US\$ million



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