

**EEA report on Climate change adaptation and
disaster risk reduction in Europe - Synergies for
the knowledge base and policies
(2017 EEA CCA/DRR report)**

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Global Frameworks on CCA and DRR:

- **Sendai Framework on DRR 2015-2030**

- Clearly linking between disaster risk reduction and Climate Change Adaptation

- **Sustainable Development Goals (SDG)**

- Strengthen resilience and adaptive capacity
- Integrate climate change measures into national policies, strategies and planning

- **COP 21**

- Agreement to limit the increase of GMT to 2⁰ C, possible 1.5 ⁰ C above pre-industrial levels
- Specific requirement on Parties to provide information on climate impacts (including extremes) and adaptation
- Support “loss and damage” via information on disaster risk reduction and management
- Implement the commitment of mobilising \$100 billion by 2020 for adaptation/mitigation in Developing Countries

EU policies on CCA and DRR

- **Floods Directive** (*Directive 2007/60/EC*)
- **Green Paper on insurance in the context of natural and man-made disasters** (EC, 2013)
- **EU Strategy on Adaptation to Climate Change** (EC, DG Clima, 2013)
- **Decision on a Union Civil Protection Mechanism** (EC, 2014)

EU knowledge base initiatives on CCA and DRR

- **Guidance for Recording and Sharing Disaster Damage and Loss Data** (*JRC, 2015*)
- **Disaster Risk Management Knowledge Centre – DRMKC** (*DG ECHO, DG HOME and JRC started in 2016*)
- **User Manual Climate extremes. Defining a pilot approach on estimating the direct and indirect impacts on economic activity** (*EC, DG Clima contract, 2014*)
- **Community of Users on Disaster Risk Management and Crisis Management** (*EC, 2014*)
- **European Forum for Disaster Risk Reduction – EFDRR** (*EC, DG ECHO, EUR-OPA, UNISDR Europe*)

Disaster risk reduction and climate change adaptation

Two sides of the same coin



- DRR does not *always* consider future changes in occurrence of extreme events,
- DRR includes also other, not climate-related, hazards,
- CCA addresses climate change and changes in extreme events, but focuses mainly on prevention and protection, while DRR focuses on full cycle.



Benefits of integration

CCA and DRR provide a range of complementary approaches for managing risks of climate and weather extremes

- Enhance knowledge base
- More effective and efficient policies
- Stronger collaboration between scientific and policy communities

Main objectives

- To facilitate a better **awareness** and **communication**
- To explore potential **synergies** between DRR and CCA – (knowledge base, policy developments and implementation)
- To describe **trends** and **projections** of selected extremes
- To describe **economical losses** from weather and climate related disasters.
- To address **case studies** of successful solution and good practices

Chapter 2: Overview of the policies and practices

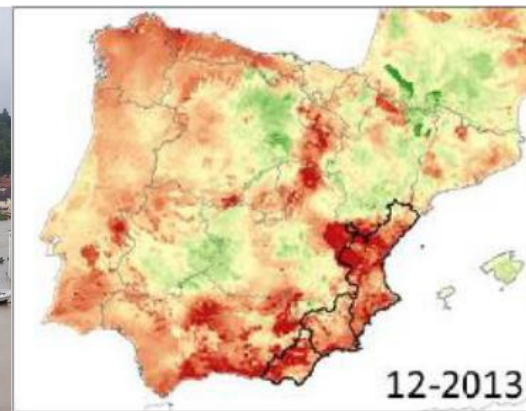
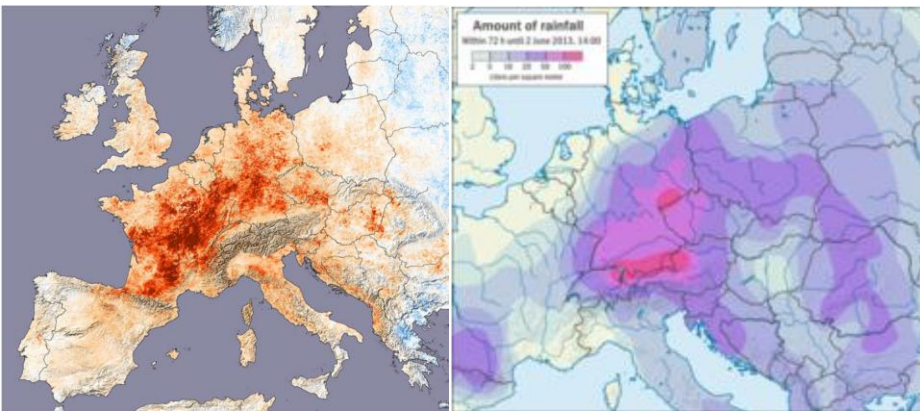
- Overview the European, national, and subnational scales
- Methods and tools to analyse risks and options for solutions
- CCA and DRR in practice

Outline

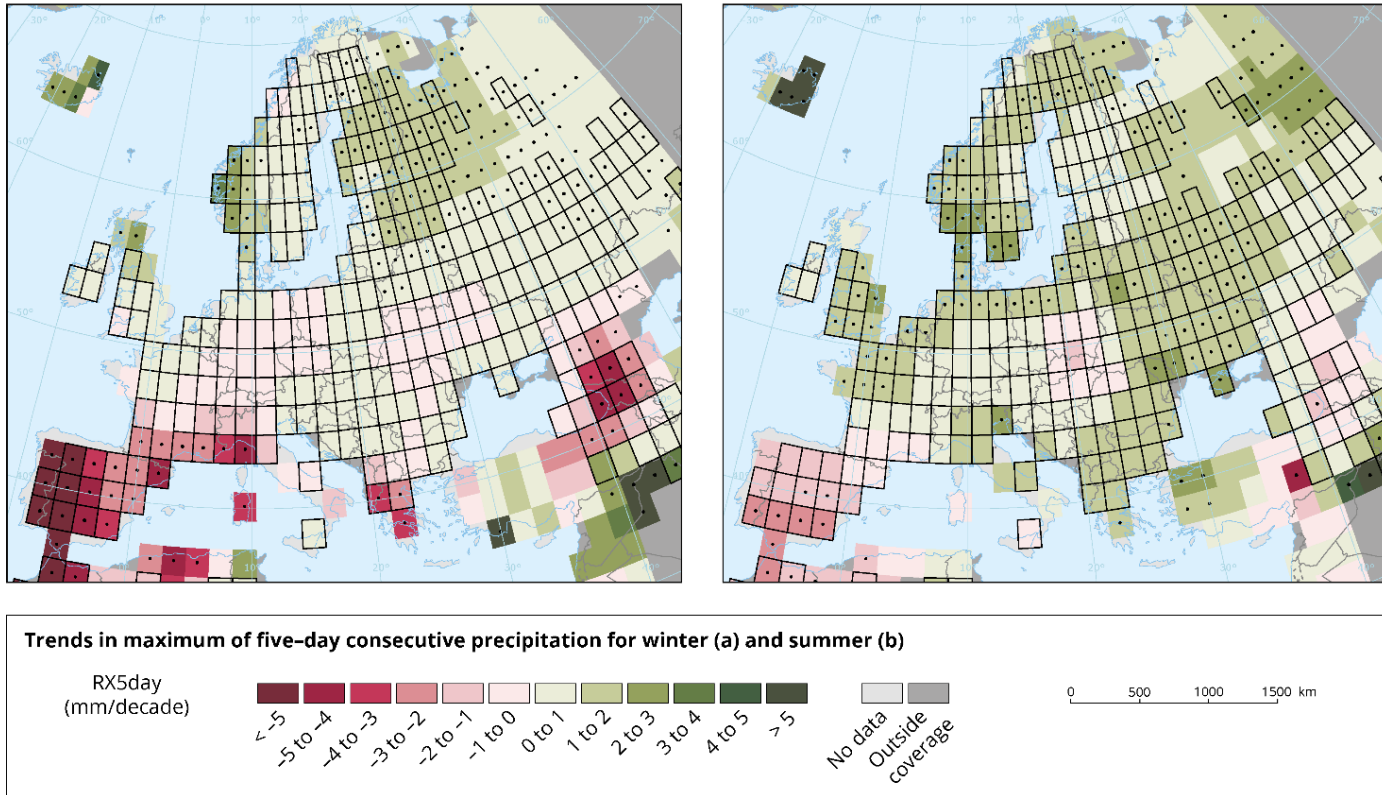
Chapter 3: Assessment of weather and climate related extreme events (hazards) in Europe

Specifically:

- Focus on 10 extremes
- Assessments of trends and projections
- Description of selected events



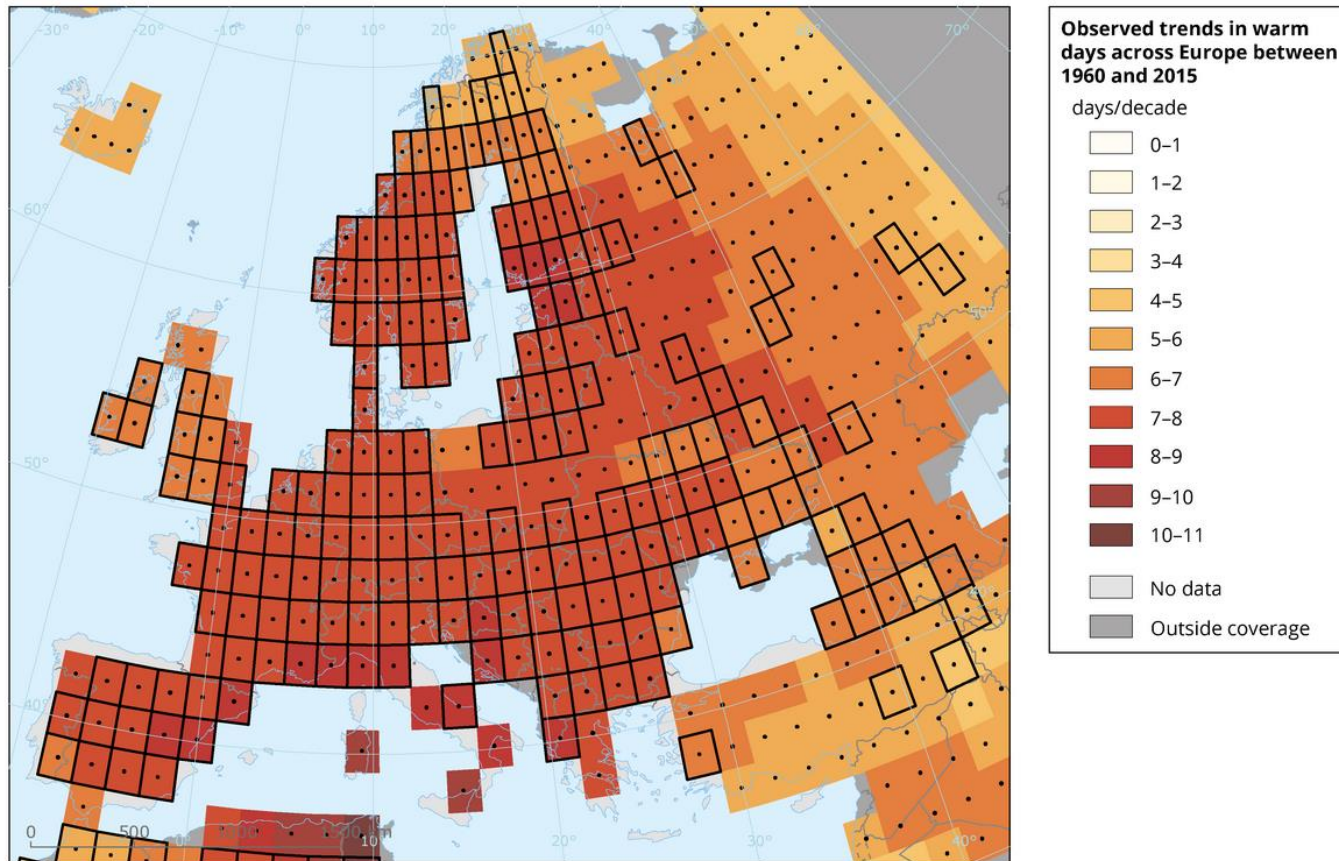
Trends in heavy precipitation events (1960-2015)



Heavy precipitation events have:

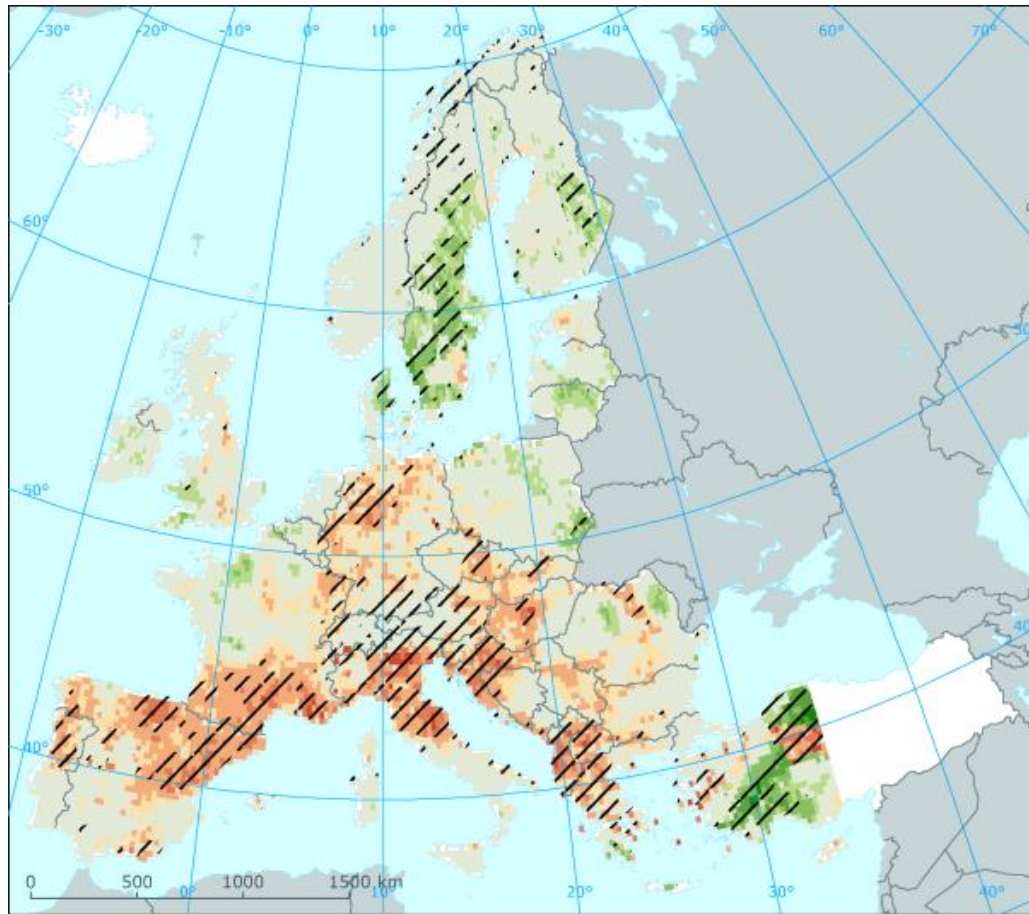
- *decreased in southwestern Europe*
- *increased in northern and northeastern Europe since 1960s*
– *especially in winter.*

Trends in heat waves (1960-2015)

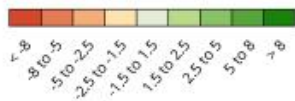


The number of warm days have almost doubled since 1960 across the European land area.

Trends in drought events (1951-2014)



Trends in summer soil moisture in Europe (litres/m²/10 years)

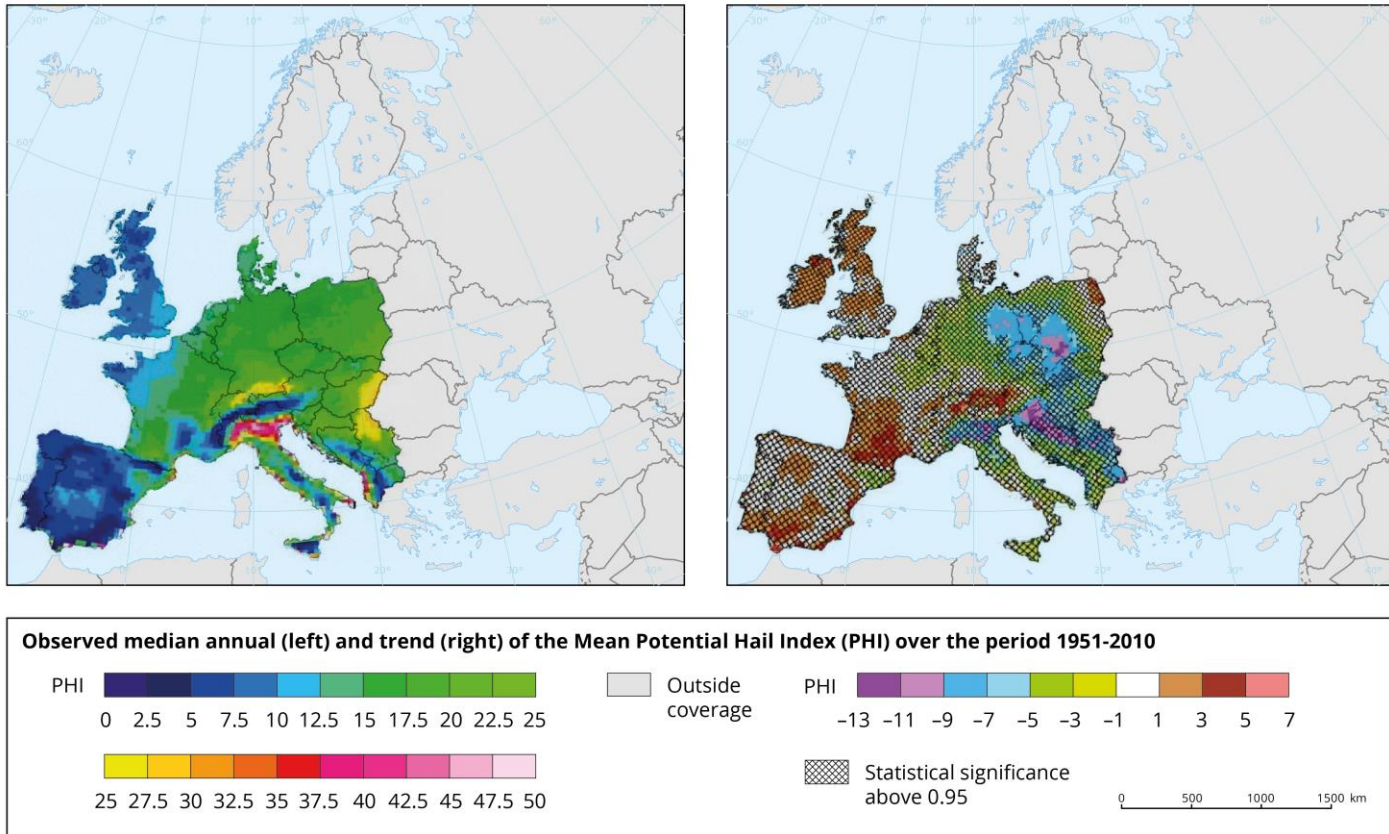


- Significance
- No data
- Outside coverage

In the last decade 15% territory and 17% population affected by droughts each year.

Droughts have increased in parts of Europe, in particular in south-western and central Europe

Trends in hail events in Europe (1951-2010)

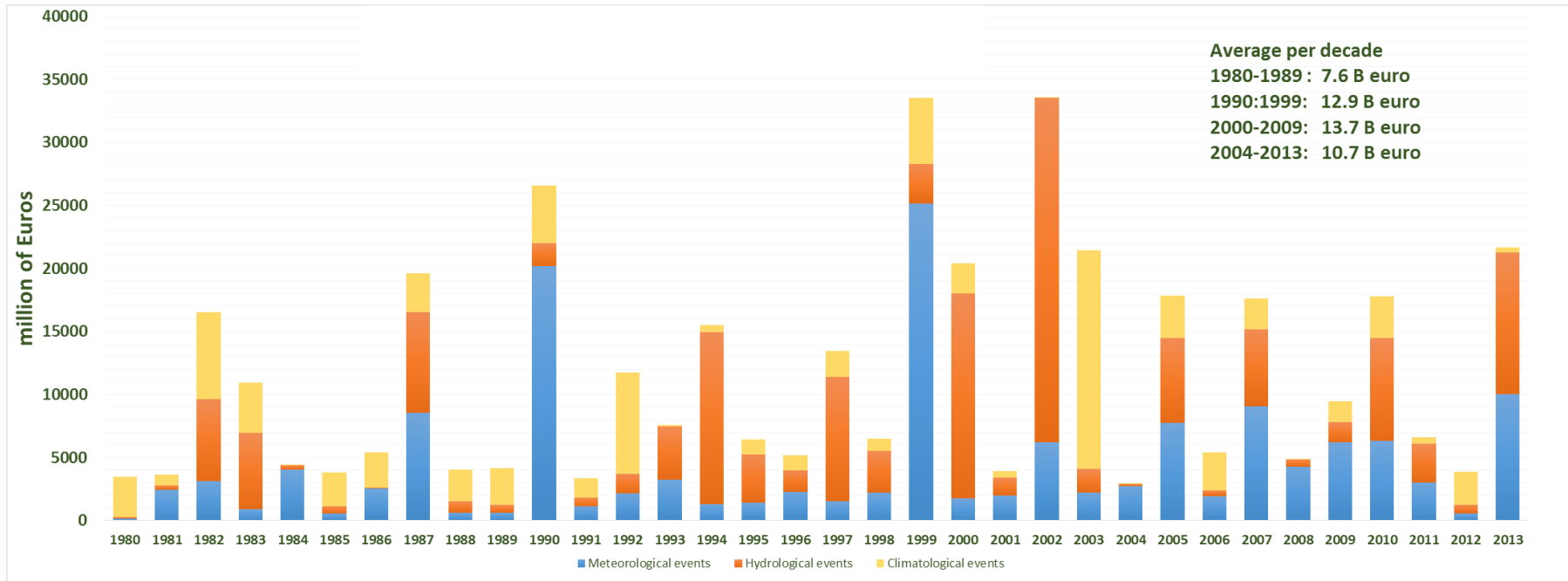


Increasing hail trends in southern France and Austria,
decreasing (but not significant) trends in parts of eastern Europe.

Chapter 4: Impacts and risks of hazards on different sectors in Europe

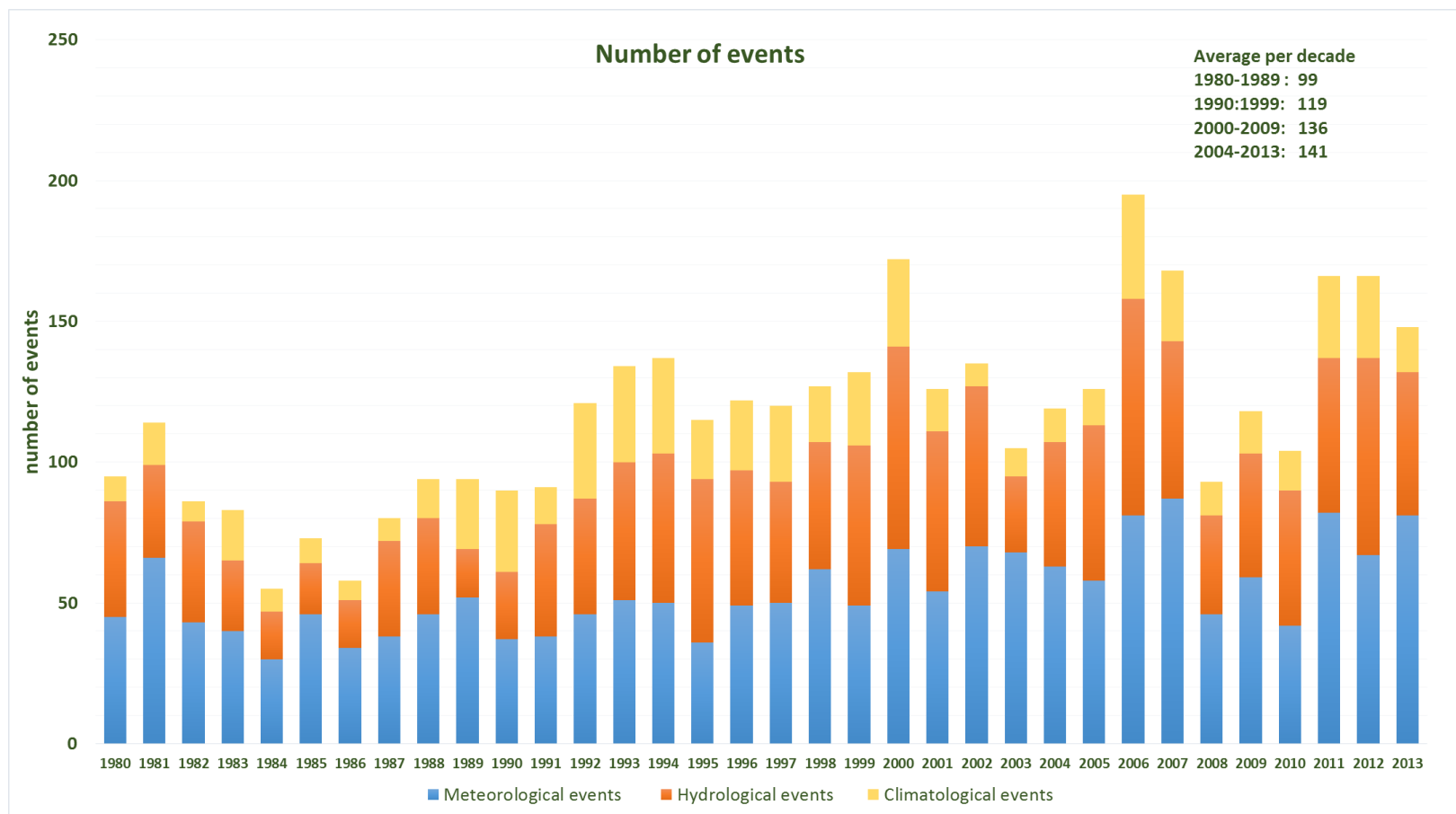
- Overview of the availability of damages/loss data at different spatial scales (global → European → national → subnational),
- Impacts and risks of natural hazards on human health, ecosystems, and socio-economic sectors.

Economic losses from climate- related extremes



- In total 1980-2013 almost 400 billion Euro (in 2013 Euro values).
- the average damage has varied between 7.6 billion Euro per year in the 1980s and 13.7 billion Euro in the 2000s.

Number of climate-related extremes



- The number has increased but this increase is driven primarily by better reporting and by socio-economic factors.

Chapter 5: Filling the gaps - successful cases and solutions

- Opportunities to better integrate CCA and DRR
- Examples (case studies) of successful solution and good practices

Working plan

- Update of the indicator “Economic losses from climate related extremes” based on the most recent data from Munich Re
- Survey on CCA/DRR activities by countries (March/April 2016)
- 2-day Expert Workshop on 2017 EEA CCA/DRR policies and practises (11-13 April)
- Write the chapters of the Report during 2016
 - July 2016: First draft
 - November 2016: Second (Final) draft
 - Eionet consultations (January - February 2017)
 - Layouting, figures production (January – June 2017)
 - Publishing: June 2017

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