30 March 2021

EXPERIENCES OF NATIONAL APPROACHES TO ADAPTATION

WEBINAR ON NATIONAL ADAPTATION STRATEGIES AND PLANS

EU4Climate

Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova, Ukraine

Climate change adaptation and disaster risk reduction in Europe - Enhancing coherence of the knowledge base, policies and practices

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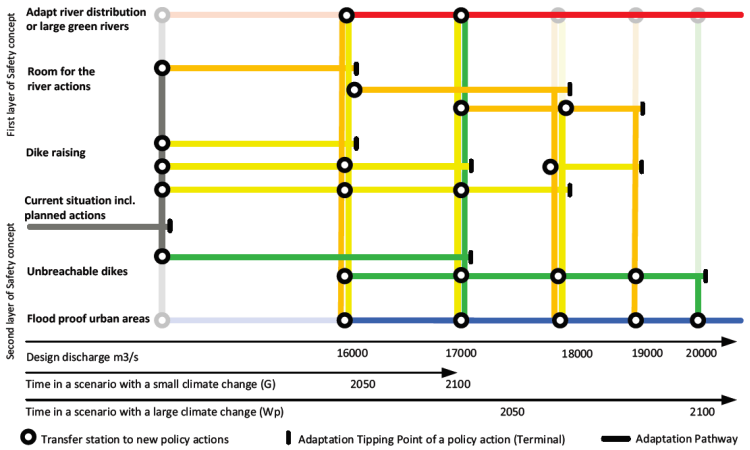
Key definitions of CCA and DRR

CLIMATE CHANGE ADAPTATION (CCA):

- Process of adjustment to actual or expected climate and its effects.
- In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities.
- In some natural systems, human intervention may facilitate adjustment to expected climate and its effects.
  Source: IPCC WGII AR5 (2014)

Figure 5.2 Adaptation pathway map for the River Waal



DISASTER RISK REDUCTION (DRR):

- Process of preventing new and reduce existing disaster risks (exposure, hazard or vulnerability), and managing residual risk, all of which contributes to strengthening resilience and therefore to the achievement of sustainable development.
  Source: IPCC WGII AR5 (2014); UNISDR 'Terminology' (2017).

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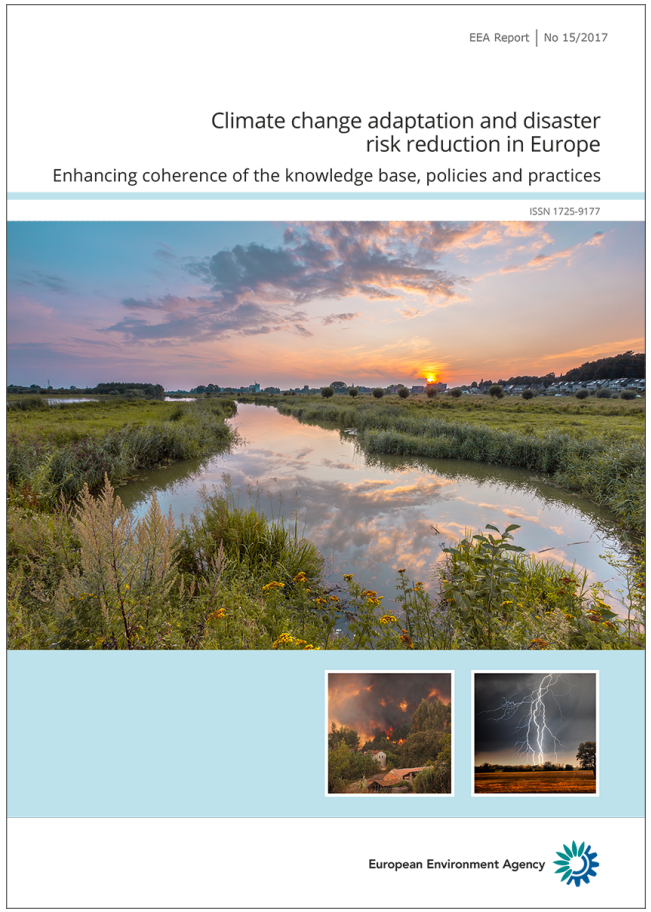
2017:
Climate change adaptation and disaster risk reduction in Europe - Enhancing coherence of the knowledge base, policies and practices



The report presents:

- Main global and European policies on CCA and DRR
- Knowledge base on weather-and climate-related hazards and their impacts
- 18 case studies in Europe
- Good practice examples of linking CCA and DRR
- Opportunities and benefits from linking CCA and DRR in Europe

This EEA report is available on-line:
https://www.eea.europa.eu/publications/climate-change-adaptation-and-disaster

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This report aims to look at <u>solutions</u> as well as the <u>extreme weather and climate events</u> that cause the problems we are increasingly having to face and react to.

Nature-based solution (Betuwe, Olanda):
Renaturalization of a river to prevent flooding (near to Wageningen).

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Benefits in enhancing coherence between CCA and DRR

Climate change adaptation (CCA)

Focus on past trends and future projections and addressing uncertainty

Origin and culture in science

Environment ministries and agencies

Disaster Risk Reduction (DRR)

Focus on present, addressing existing risks and all hazards

Origin and culture in humanitarian assistance and civil protection

Civil protection ministries and agencies

Reducing vulnerability and increasing resilience of societies

Benefits

Enhanced knowledge base
More effective and efficient policies
Stronger collaboration
More efficient use of resources
Better prevention and preparedness

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CCA and DRR are central to sustainable development agenda globally and in Europe

Major recent UN-led agreements	Contributions to harmonising the DRR and CCA agendas
Sendai Framework for Disaster Risk Reduction (SFDRR)	• Formulates priorities for actions and targets for DRR, coordinated with climate adaptation efforts where relevant
	• Acknowledges climate change as a driver of disaster risk
	• Addresses disaster preparedness for effective response and to 'build back better'
Addis Ababa Action Agenda (AAAA)	• Specifies financial means for reaching the SDGs and reiterates targets for solidarity financial flows
2030 Agenda for Sustainable Development	• Provides an overarching framework connecting the DRR and CCA targets and commitments with poverty reduction, economic growth, social inclusion and environmental protection
	• Explicitly addresses the challenge to combat climate change (SDG13), and directly and indirectly addresses DRR and adaptation in several other SDGs
Paris Agreement on Climate Change	• Limits human-induced global temperature rise to 2 °C (1.5 °C) compared with pre-industrial levels.
	• Addresses climate adaptation as a part of climate change policies (Article 7), and confirms Loss and Damage initiative as cornerstone of global policy architecture (Article 8)
World Humanitarian Summit	• Commits the UN Member countries to core responsibilities of humanitarian aid and disaster risk preparedness
Urban Habitat	• Focuses on urban environment as the major hotspots of vulnerabilities
	• Formulates New Urban Agenda as a vehicle for better integration of various policies contributing to sustainable development

Note: Agreements concluded in 2015–2016 that promote, directly or indirectly, climate and disaster resilience, and coherence between the CCA and DRR actions.

Sources: EEA, ETC/CCA.

CCA and DRR are central to sustainable development agenda both globally and in Europe

- EU Climate Adaptation Strategy (2013, 2021)
- EU Civil Protection Mechanism
- EU Action Plan on Sendai Framework for Disaster Risk Reduction
- EU Floods Directive
- EU Green Infrastructure Strategy

10 natural hazards in Europe selected for this report:

Category of hazards	Specific natural hazard
Hydrological	River flood, Landslide, Avalanche
Meteorological	Heavy precipitation, Windstorm, Storm surge,Hail
Climatological	Heat wave, drought, forest fire

Classufucation of the 10 natural hazards selected for this report, taking into consideration that some natural hazards can be allocated to more than one category (e.g. Heat wave are both meteorological and climatological).

Number of extreme heatwaves will increase

Half of century:

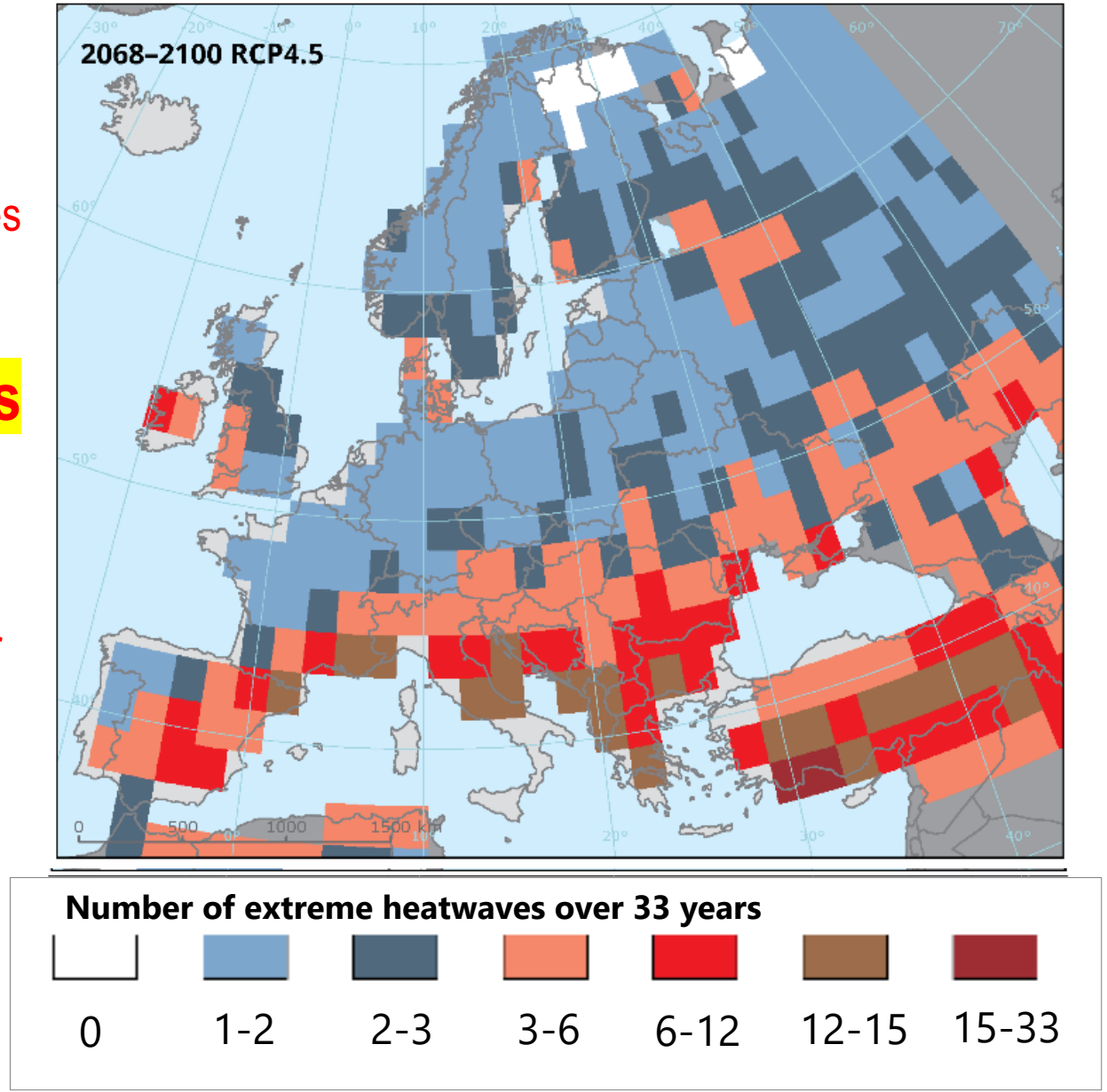
number of projected extreme heatwaves highest in southern Europe (3-6 extreme heatwaves over 33 years):

one every 5-10 years

End of century:

12-15 extreme heatwaves over 33 years in some parts of Southern Europe:

one every 2-3 years



Heat Wave Magnitude Index (HWMI): *based on the magnitude and length of heat waves in a year, where heat waves are periods of at least 3 consecutive days with maximum temperature above the threshold for the reference period 1981-2010.*

Source: JRC, Russo et al, 2014

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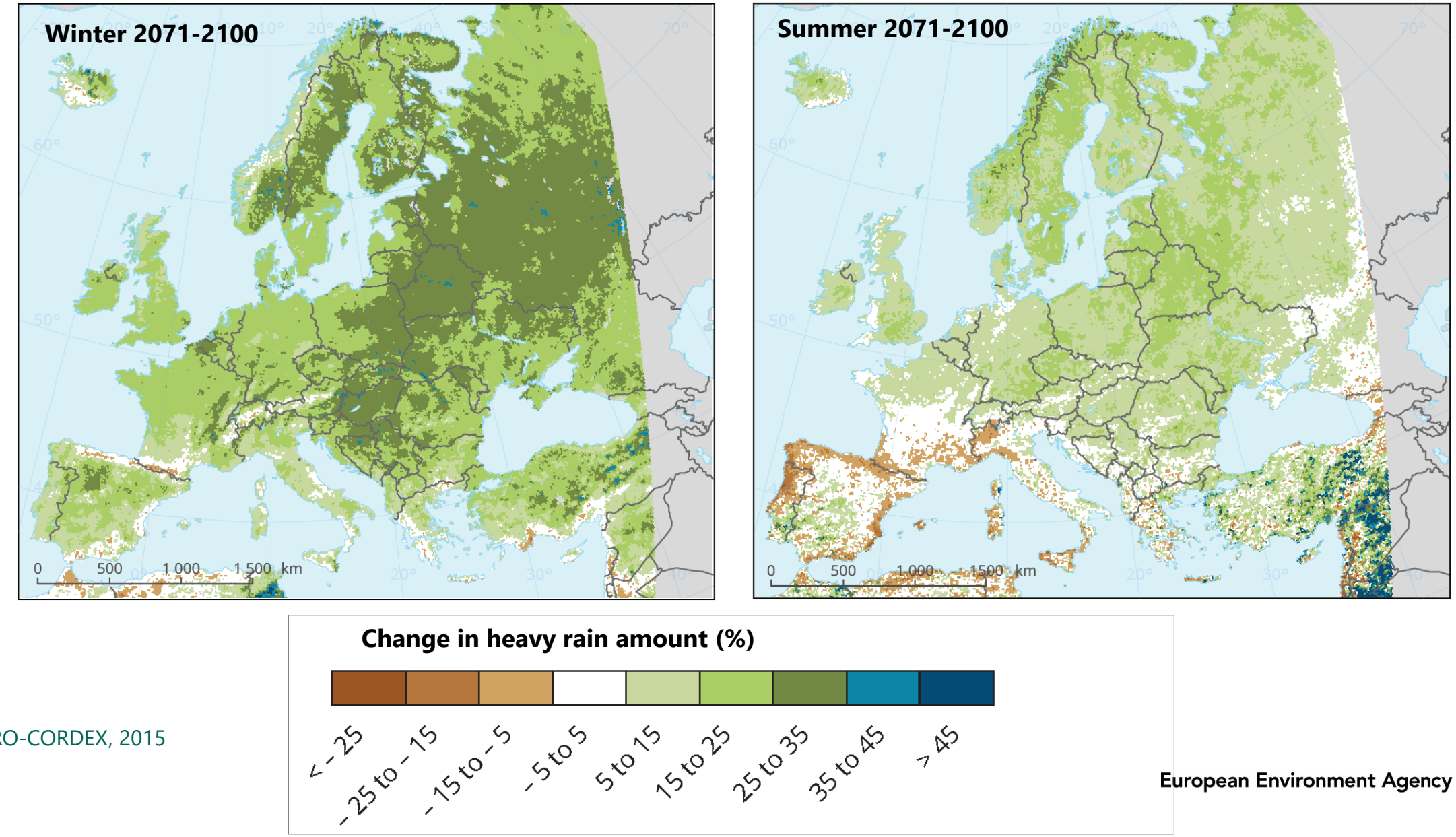
End of century: Heavy rain projections



Source: EURO-CORDEX, 2015

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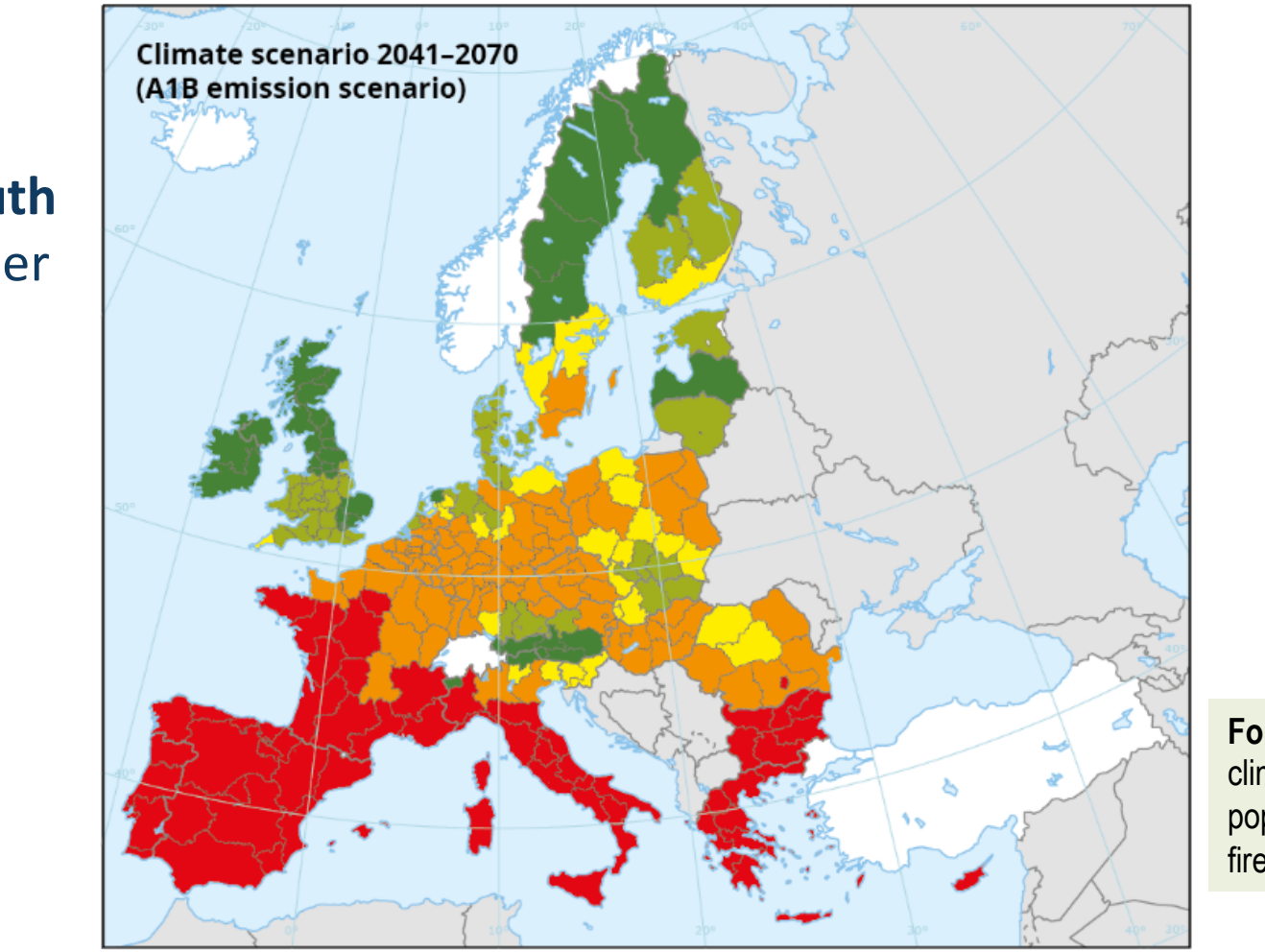
Risk of forest fires moving northward

Central Europe and **South Scandinavia** will be under **medium and high risk.**

South Europe remains under **very high risk.**



Forest fire risk

Very high | High | Medium | Low | Very low

Forest fire risk is a combination of climatic drivers (heat extremes), population density, fire exposure, and fire sensitivity.

Source: JRC, Lung et al, 2013

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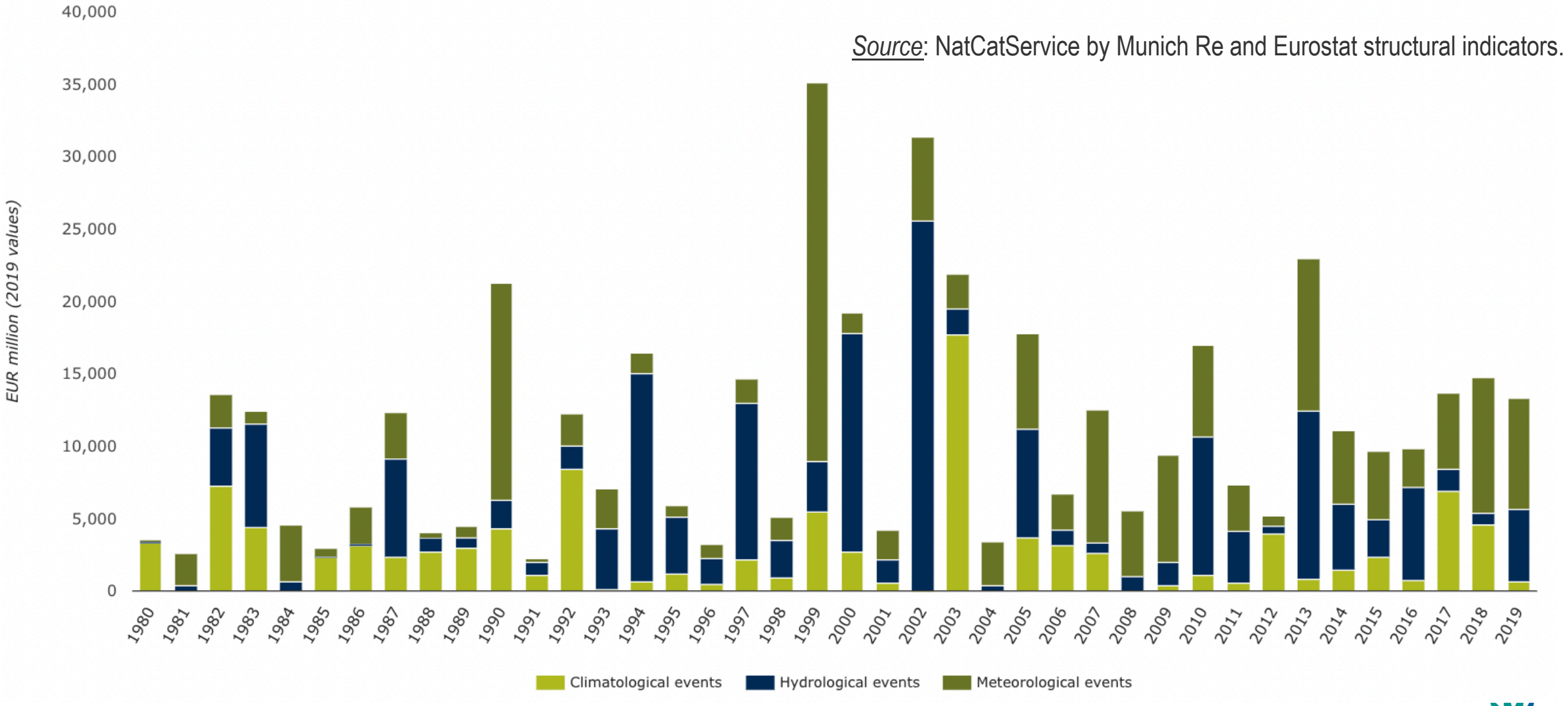
1980-2019: Economic damage by weather and climate-related extreme events in Europe



https://www.eea.europa.eu/data-and-maps/indicators/direct-losses-from-weather-disasters-4/assessment

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1980 – 2019: Economic losses in Europe

- Climate-related extremes (heatwaves, droughts and forest fires) more common
- Climate-related extremes could result in greater losses in the future
- Total loss: **EUR 446 billion** in Europe
- **EUR 11.1 billion per year**
- Weather and climate-related extremes: **81 %** of total economic losses caused by natural hazards
- Highest economic losses in Germany, Italy and France
- Around **27 % of total losses insured!**

Dealing with disasters: six good practices

1. **Delta Programme** (the Netherlands)**:**
   - *programmatic approach*
   - *adequate funding, long-term strategy*
   - *effective CCA and DRR integration*
   - *new adaptive planning approach to reduce risk of overspending or underinvestment'*

2. ***Consorcio de Compensación de Seguros (CCS)*** *Spain*, ***French Catastrophes Naturelles (CatNat)*** *France*, ***Flood Reinsurance Scheme (Flood Re)*** *UK:*
   - *to combine not only risk transfer and mitigation in public–private cooperation*
   - *to create incentives for risk prevention*
   - *to help improve understanding of climate risks among citizen.*

3. **Switzerland:**
   - *Good combination of national agenda setting and local implementation*
   - *integration, effective implementation of CCA and DRR strategies*

4. **National Risk Assessments (e.g. UK)**:
   - *including more risks than only those related to weather and climate hazards*
   - *effective base for CCA and DRR*
   - *a broader risk picture and give indications for tolerance thresholds*

5. **City networks:**
   - *to increase urban resilience*
   - *to motivate cities*
   - *to support capacity building for both CCA and DRR*

6. **Financing nature-based solutions for CCA and DRR in European countries**
   (e.g. European Investment Bank).

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Improving the relationship between CCA and DRR

EU, national and regional platforms

Multi-Hazard mapping and risk assessments

Climate services

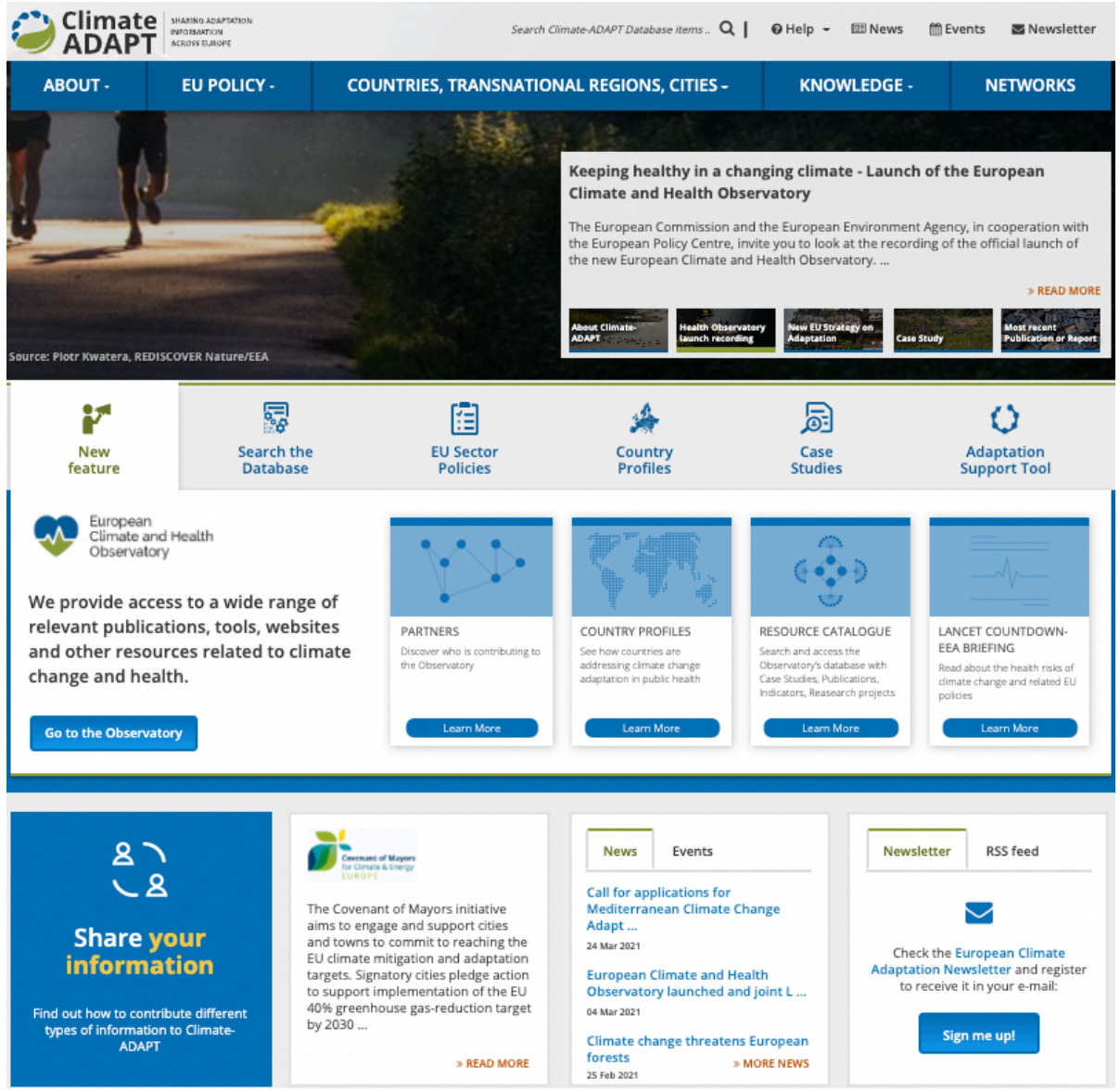
Long-term national approaches

Nature-based solutions

Risk prevention financing

Monitoring and evaluation of policy

Climate-ADAPT: the EU platform on CCA



https://climate-adapt.eea.europa.eu/

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"Without **urgent adaptation action**, we risk undermining food, energy and water security for decades to come.

The costs of adapting are less than the cost of doing business as usual.

And the benefits many times larger."

— Ban Ki-moon,

8th Secretary General of the UN

Half of April:
New EEA Report:

Nature-based solutions in Europe: Policy, knowledge and practice for climate change adaptation and disaster risk reduction

FB event on **27 April**

Thanks!

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