

CMCC Webinar

Informing and supporting climate policy: the European Topic Centre on Climate Change impacts, vulnerability and Adaptation (ETC/CCA)

Speaker: Silvia Medri

CMCC, «Risk Assessment and Adaptation Strategies» Division

Moderator: Valentina Giannini

CMCC, «Economic analysis of Climate Impacts and Policy» Division

27 February 2018

The CMCC Foundation



Mission

To investigate and model our **climate system** and its interactions with **society** to provide reliable, rigorous, and timely **scientific results**, which will in turn stimulate sustainable growth, protect the **environment**, and **develop science driven** adaptation and **mitigation policies** in a **changing climate**.



The CMCC Foundation – research divisions

- Advanced Scientific **Computing**;
- Climate **Simulations** and **Predictions**;
- **Economic** analysis of Climate Impacts and **Policy**;
- Impacts on **Agriculture**, **Forests** and **Ecosystem Services**;
- **Ocean** modeling and Data Assimilation;
- **Ocean** Predictions and Applications;
- **Risk** Assessment and **Adaptation** Strategies;
- Regional Models and **Hydrogeological** Impacts.



Informing and supporting climate policy: the European Topic Centre on Climate Change impacts, vulnerability and Adaptation (ETC/CCA)

INDEX



European
Environment
Agency



European Topic Centre on Climate Change Impacts, Vulnerability and Adaptation

- **Overview - What it is | who we are | what we do**
- **Examples of key EEA-ETC/CCA activities**
 - Evaluation of the European Climate Adaptation Platform (Climate-ADAPT)
 - Enhancing the coherence of climate change adaptation & disaster risk reduction
 - Urban adaptation to climate change – overview, funding and social vulnerability



Overview

What it is | who we are | what we do

ETC/CCA at a glance

- *What* – Consortium of 14 European Institutions, lead by **cmccc**, contracted by the **European Environment Agency (EEA)**
- *Strategic objective* – Assist the EEA in **supporting and informing policy development and implementation** in the area of climate change impacts, vulnerability and adaptation (CCIVA) - Main supported policy process: **EU Climate Change Adaptation Strategy**
- *Product types* – **Data, information, indicators, assessments and information systems**



European Environment Agency (EEA)



- An independent **EU agency**
- 1990 EU Regulation; work started in 1994
- An **interface between science and policy**



- *Mission* – Support sustainable development and to help achieve significant and measurable improvement in Europe's environment through the **provision of timely, targeted, relevant and reliable information** to policy makers and the public
- *Mandate* – **Provide a sound decision basis for the EU and member countries' environmental policies**, by analyzing, assessing and providing environment-related: data and indicator sets, information, integrated and thematic assessments
- *Target Groups* – **Stakeholders: Institutions and governments** (European Commission, Parliament, Council, EEA member countries); **Policy influencers** (Civil society, NGOs, business, media, advisory groups, scientists, debaters); **general public**



EEA member and cooperating countries



- **33 member countries:**
28 EU Member States + Iceland, Liechtenstein, Norway, Switzerland and Turkey
- **6 cooperating countries**
(Western Balkans - Albania, Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia, Montenegro, Serbia as well as Kosovo)

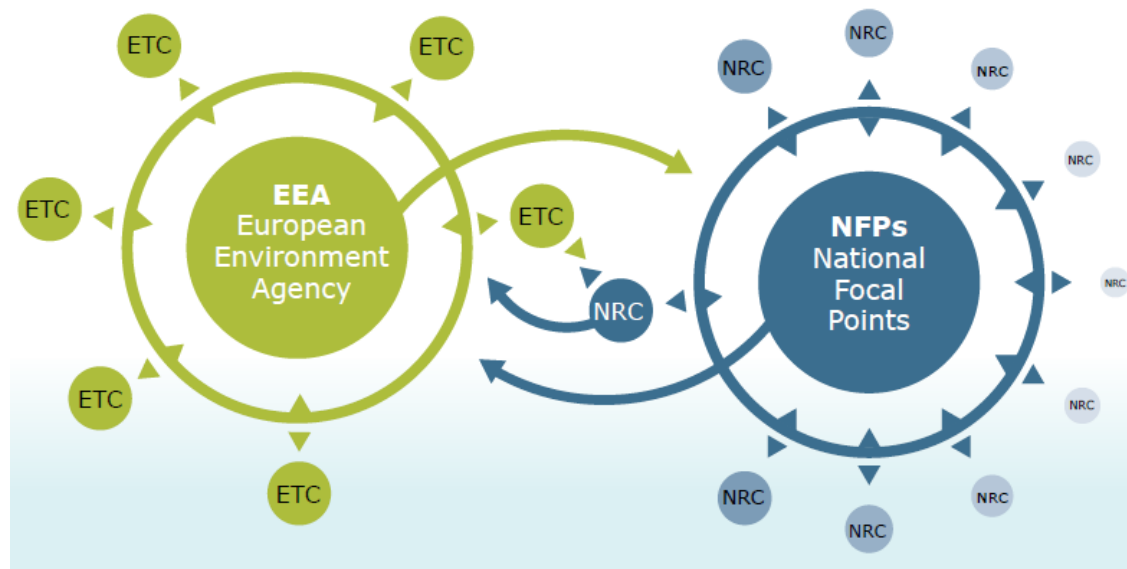
EEA coverage

Member countries

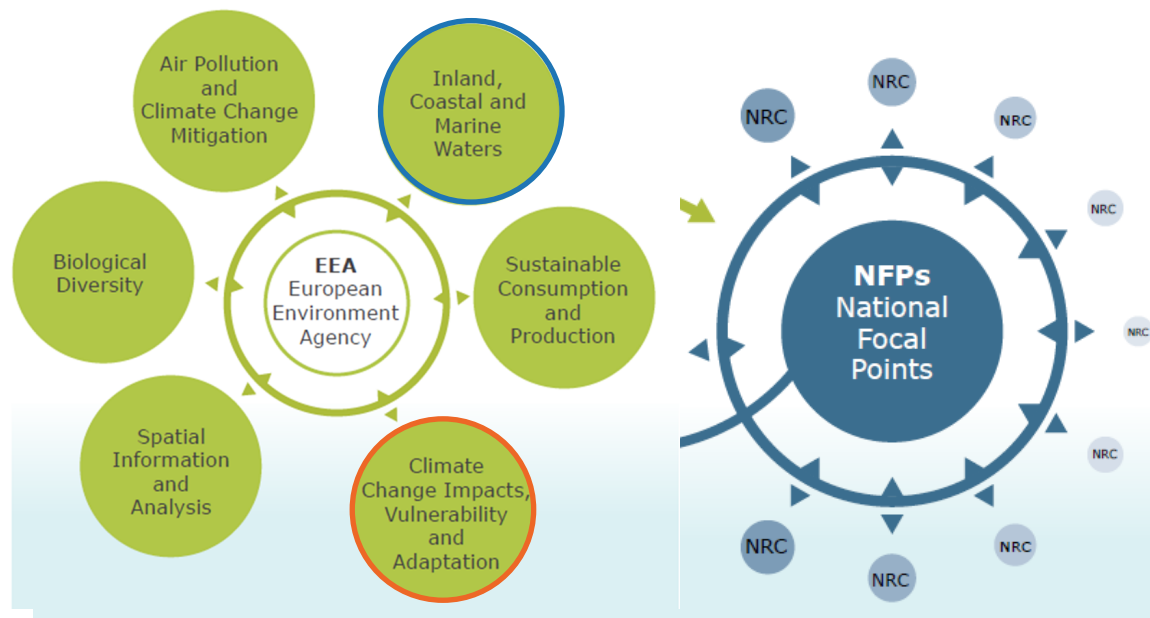
Cooperating countries

*Kosovo under UNSCR 1244/99

** This designation is without prejudice to positions on status, and is in line with UNSCR 1244/99 and the ICJ Opinion on the Kosovo Declaration of Independence.*



- Partnership network of the **EEA and its member and cooperating countries**: National Focal Points (**NFPs**) & National Reference Centres (**NRCs**) – about 1000 experts, 350 national institutions and other bodies
- **European Topic Centres (ETCs)** supporting the EEA on environmental topics as defined in its multi-annual work programme - 6
















- Partnership network of the **EEA and its member and cooperating countries**: National Focal Points (**NFPs**) & National Reference Centres (**NRCs**) – about 1000 experts, 350 national institutions and other bodies
- **European Topic Centres (ETCs)** supporting the EEA on environmental topics as defined in its multi-annual work programme - 6

ETC/CCA | what it is















- **Centre of thematic expertise contracted by the EEA** to carry out specific tasks in the area of **climate change impacts, vulnerability and adaptation (CCIVA)** identified in the EEA Multiannual Work Programme and the Annual Work Programmes
- Designated by the EEA Management Board following a Europe-wide competitive **selection process (call for proposals)**
- Consists of a **Lead organization / coordinator (2011-2013 & 2014-2018 cmcc)** & **Partner Organisations** from the research and information community, combining resources in the area of expertise, working under the overall guidance of the EEA
- **Part of and support to the EIONET:**
 - Work with EEA staff in the daily work
 - Cooperate with EEA countries on range of activities targeted to specific tasks – Eionet consultations (on EEA reports), Webinars, Expert meetings, online communication/ cooperation
 - Collaborate with other ETCs on cross-cutting themes

ETC/CCA | who we are

	CMCC - Euro-Mediterranean Center on Climate Change - Coordinator
	Alterra - Institute within the legal entity Stichting Dienst Landbouwkundig Onderzoek
 AARHUS UNIVERSITY DCE - DANISH CENTRE FOR ENVIRONMENT AND ENERGY	AU-DCE - Aarhus University-Danish Centre for Environment and Energy
	CUNI - Charles University Environment Center
	EAA - Umweltbundesamt GmbH
	FFCUL - Fundação da Faculdade de Ciências da Universidade de Lisboa
	FT - Fresh-Thoughts
	MO - Met Office Hadley Centre
	SYKE - Finnish Environment Institute
	Thetis - Thetis S.p.A.
	UFZ - Helmholtz Zentrum für Umweltforschung GmbH
	UKCIP - University of Oxford (UK Climate Impact Programme)
	UPM - Universidad Politecnica de Madrid
	ZAMG - Zentralanstalt für Meteorologie und Geodynamik



ETC/CCA | who we are

	CMCC - Euro-Mediterranean Center on Climate Change - Coordinator
	Alterra - Institute within the legal entity Stichting Dienst Landbouwkundig Onderzoek
	AU-DCE - Aarhus University-Danish Centre for Environment and Energy
	CUNI - Charles University Environment Center
	EAA - Umweltbundesamt GmbH
	FFCUL - Fundação da Faculdade de Ciências da Universidade de Lisboa
	FT - Fresh-Thoughts
	MO - Met Office Hadley Centre
	SYKE - Finnish Environment Institute
	Thetis - Thetis S.p.A.
	UFZ - Helmholtz Zentrum für Umweltforschung GmbH
	UKCIP - University of Oxford (UK Climate Impact Programme)
	UPM - Universidad Politecnica de Madrid
	ZAMG - Zentralanstalt für Meteorologie und Geodynamik

Involved CMCC Research Divisions

- **RAAS** - Risk Assessment and Adaptation Strategies (**coordinator**)
- **ECIP** - Economic analysis of Climate Impacts and Policy
- **IAFES** - Impacts on Agriculture, Forests and Ecosystem Services
- **CSP** - Climate Simulations and Predictions
- **REHMI** - Regional Models and Hydrogeological Impacts.

ETC/CCA | what we do – tasks

- The ETC/CCA tasks contribute to EEA work on:
 - improving the **harmonisation, quality and exchange of data and information** on CCIVA and disaster risk reduction (DRR) across Europe
 - developing **CCIV indicators**
 - maintaining and improving the European Climate Adaptation Platform (**Climate-ADAPT**)
 - **mapping, analysis, evaluations and assessments**
 - **capacity building** in EEA countries

EU Strategy on Adaptation to Climate Change (2013)



Priority 1: Promoting action by Member States

Action 1. Encourage MS to adopt Adaptation Strategies and action plans

Action 2. LIFE funding, including adaptation priority areas

Action 3. Promoting adaptation action by cities along the Covenant of Mayors initiative



Priority 2: Better informed decision-making

Action 4. Knowledge-gap strategy

Action 5. Climate-ADAPT



Priority 3: Key vulnerable sectors

Action 6. Climate proofing the Common Agricultural Policy, Cohesion Policy, and the Common Fisheries Policy

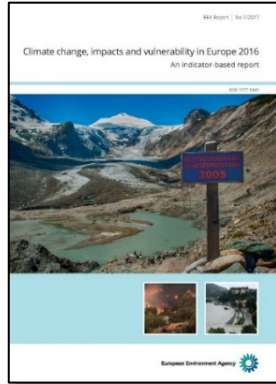
Action 7. Making infrastructure more resilient

Action 8. Promote products & services by insurance and finance markets



ETC/CCA | what we do – contribution to EEA products

Impacts and vulnerability



CCA & DRR



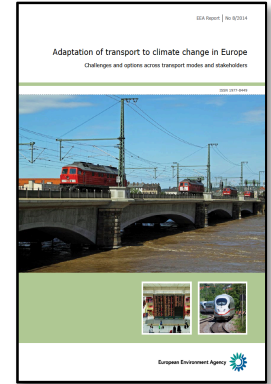
National adaptation



Urban adaptation

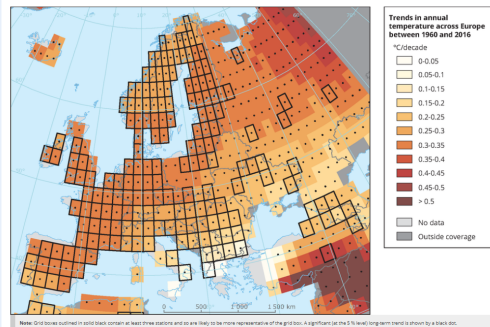


Sectoral adaptation



Thematic and assessments reports

Fig. 3: Trends in annual temperature across Europe between 1960 and 2016



Data source:
 • European Climate Assessment & Dataset: The daily European land temperature provided by Royal Netherlands Meteorological Institute (KNMI)
 • GLOBE gridded dataset provided by Royal Netherlands Meteorological Institute (KNMI)



Indicators



European Topic Centre on
Climate Change Impacts,
Vulnerability and Adaptation

Information system (Climate-ADAPT)



Example of key EEA-ETC/CCA activities

Evaluation of the European Climate Adaptation Platform (Climate-ADAPT)

Climate-ADAPT framework

Scope

- (Launched 2012), to improve **sharing of adaptation knowledge across Europe** in support to developing and implementing adaptation strategies, policies and actions

Intended users

- Experts and decision makers at EU, transnational, national, sub-national levels, research institutes

Management and maintenance

- EEA jointly with EC DG CLIMA



Climate-ADAPT framework

- **ETC/CCA:** supports the EEA in content update, improvement and further development, and dissemination



Climate-ADAPT framework

- **ETC/CCA:** supports the EEA in content update, improvement and further development, and dissemination

Involved CMCC Research Divisions

- **RAAS** - Risk Assessment and Adaptation Strategies (*Task Manager 2011-2017*)
- **ECIP** - Economic analysis of Climate Impacts and Policy (*Task Manager 2018*)
- **IAFES** - Impacts on Agriculture, Forests and Ecosystem Services

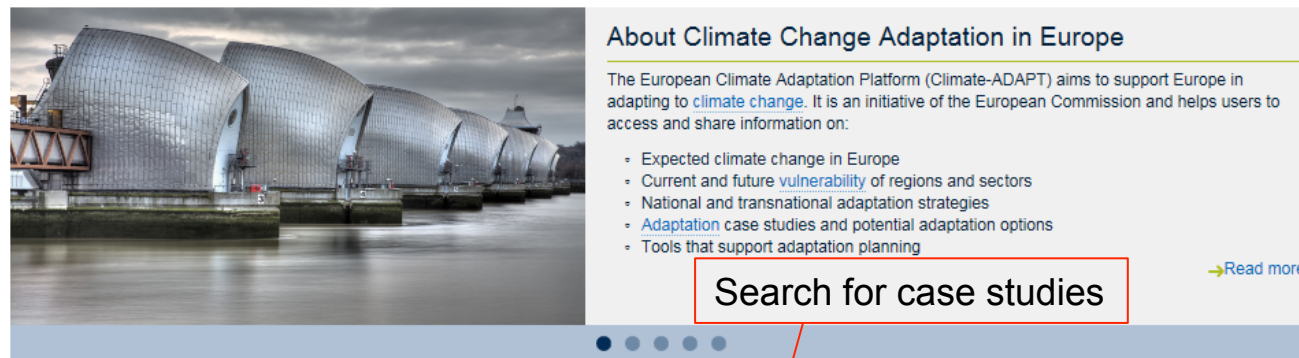


Main features of Climate-ADAPT

A searchable database of QC information

Cities

Tools



Search for case studies

Adaptation support tool



Country profiles

News

Events

Newsletter

Latest updates

<http://climateadapt.eea.europa.eu>

Main features of Climate-ADAPT

News, Events & Newsletter

News

- » 15 Feb 2018, European Food Safety Authority survey on climate change and risks for food safety
- » 29 Jan 2018, Global warming poses substantial flood risk increase for Central and Western Europe
- » 17 Jan 2018, Report on forest fire danger extremes in Europe under climate change

» More news

Events

- » 23 Jan 2018, EU Adaptation Strategy evaluation: public consultation meeting
- » 01 Mar 2018, Public consultation launched on EU Adaptation Strategy
- » 11 Dec 2017, Webinar on "Implementing a pathway approach for climate change adaptation at the local level"

» More Events

Newsletter

Check the European Climate Adaptation Newsletter and register to receive it in your e-mail



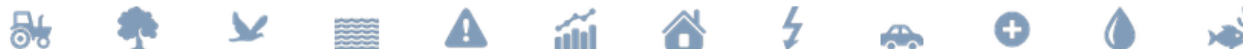
Latest updates

Check the latest updates in the content of the Platform.

- » Copernicus Climate Change Service
- » Updated Country page of Bulgaria
- » Urban Adaptation Support Tool

Sectoral information

EU Sector Policies



EU policy and funding

EU Funding and Adaptation



Life Climate Action



ESI funds



H2020

EU Climate Policy



EC Climate Action



EEA Climate Change topic

<http://climateadapt.eea.europa.eu>

EU Climate Change Adaptation Strategy (2013) and evaluation by the European Commission (2017-2018)

Action 5. Climate-ADAPT

*The Commission and the EEA will **improve access to information and develop interaction between Climate-ADAPT and other relevant knowledge platforms**, including national and local portals.*

Special attention will be given to cost-benefit assessments of policy and to innovative funding.

EU Strategy on Adaptation to Climate Change (2013)



Priority 1: Promoting action by Member States

Action 1. Encourage MS to adopt Adaptation Strategies and action plans

Action 2. LIFE funding, including adaptation priority areas

Action 3. Promoting adaptation action by cities along the Covenant of Mayors initiative



Priority 2: Better informed decision-making

Action 4. Knowledge-gap strategy

Action 5. Climate-ADAPT



Priority 3: Key vulnerable sectors

Action 6. Climate proofing the Common Agricultural Policy, Cohesion Policy, and the Common Fisheries Policy

Action 7. Making infrastructure more resilient

Action 8. Promote products & services by insurance and finance markets



Public consultation on EU Adaptation Strategy by EC until 1 March 2018

EC Communication due in autumn 2018

Climate-ADAPT evaluation (2017-2018)

- **Achievement of the 3 Climate-ADAPT core objectives**
 - Operationalisation by 14 questions
- **Internal assessment elements**
 - Content
 - Functionalities
- **External feedback mechanisms**
 - Web statistics
 - Survey
 - Use cases
 - Ad-hoc feedback at conferences/meetings

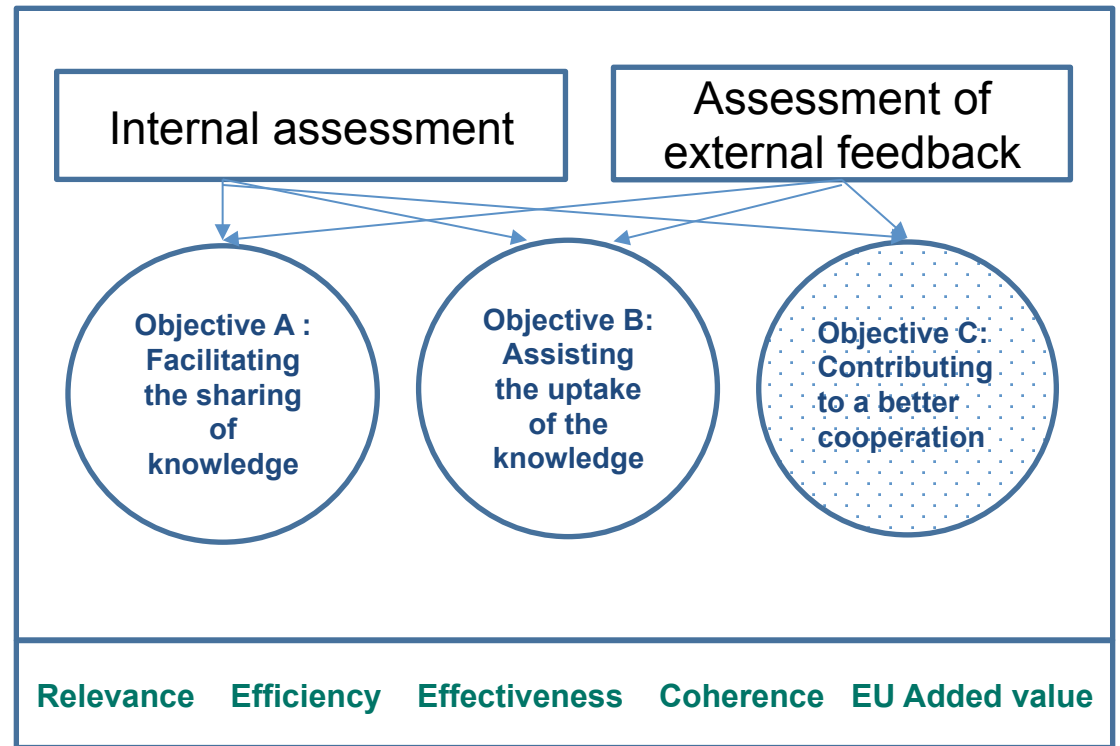


Figure: Informing the EU Strategy Evaluation by evaluating the fulfilment of the three specific Climate-ADAPT objectives; objective C partly covered

Source: EEA, 2017

Objective A: Sharing the knowledge - Which platform sections were used & what are the additional user needs?

Which parts of the platform were used?

- Outreach (**News/events/Newsletter**)
- **5 key features: Database, EU policy, Country pages, Adaptation Support Tool, case studies**
- Tools on urban adaptation

EEA conclusions

- Promote 5 key features as core content
- Promote specific tools on the homepage

Which information is additionally needed?

- Broad content; synthesis information
- Information to address adaptation in a systemic way (economic, social and env .aspects)

EEA conclusions

- Provide synthesis information
- Consider additional needs

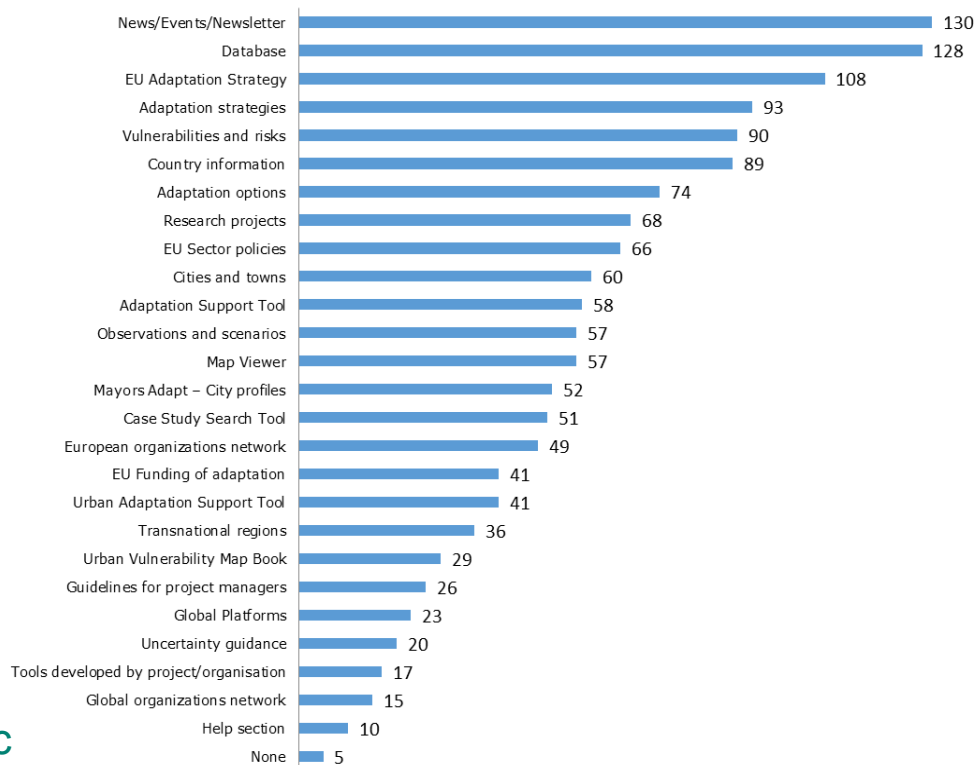


Figure: Sections of Climate-ADAPT used (Survey, Q8, N= 246)

Source: Climate-ADAPT User/provider survey, EEA, 2017

Objective B: Assisting information uptake - Was there uptake and did it support decision making?

Was there uptake and did it support decision making?

- Main reference for state of the art knowledge
- Knowledge used in many policy processes, more than expected
- Often used as starting point for tailor-made assessments

Q23 of the survey

EEA conclusions

- Adjust the mandate into “first stop shop”
- Make the information more useable for developing tailor-made products
- Further improve the user friendliness and promote the platform

Nr	Location	Governance level	Develop evidence	Support adaptation strategies and plans	Support participatory processes	Develop guidance	Develop funding proposals
1	DG RTD*	EU	x				
2	Carpathians	Transnational	x				
3	Bulgaria	National	x	x	x		
4	Italy	National		x			
5	Poland	National	x	x	x	x	
6	Spain	National				x	
7	Turkey	National	x	x			x
8	Greece	National		x			x
9	Lombardy	Subnational	x	x			
10	Sardinia	Subnational	x		x		
11	Barcelona	Subnational		x		x	
12	Bologna	Local		x			
13	Cascais	Local		x		x	
14	Sorradile	Local		x			
15	Lombardy Foundation	Intermediary	x				
16	UK	Sector		x			
17	UK	Research organisation	x				x

Examples of processes supported by Climate-ADAPT

Source: Climate-ADAPT Use cases, EEA, 2017

Objective C – Presenting information complementarily

Was the information presented complementarily to the other (e.g. national, transnational) platforms?

- Users find relevant information on EU policy and knowledge
- Overall good coverage of web links guiding users “to the right spot”
- Solution for countries without a national adaptation platform

EEA Conclusions

- Overall successful
- Improvement of links to other platforms (Sectoral platforms in EU policy sectors, Climate Services, LIFE and Interreg projects)
- Link to new information at Covenant of Mayors
- Web links across all Web pages to be extended and made more user friendly

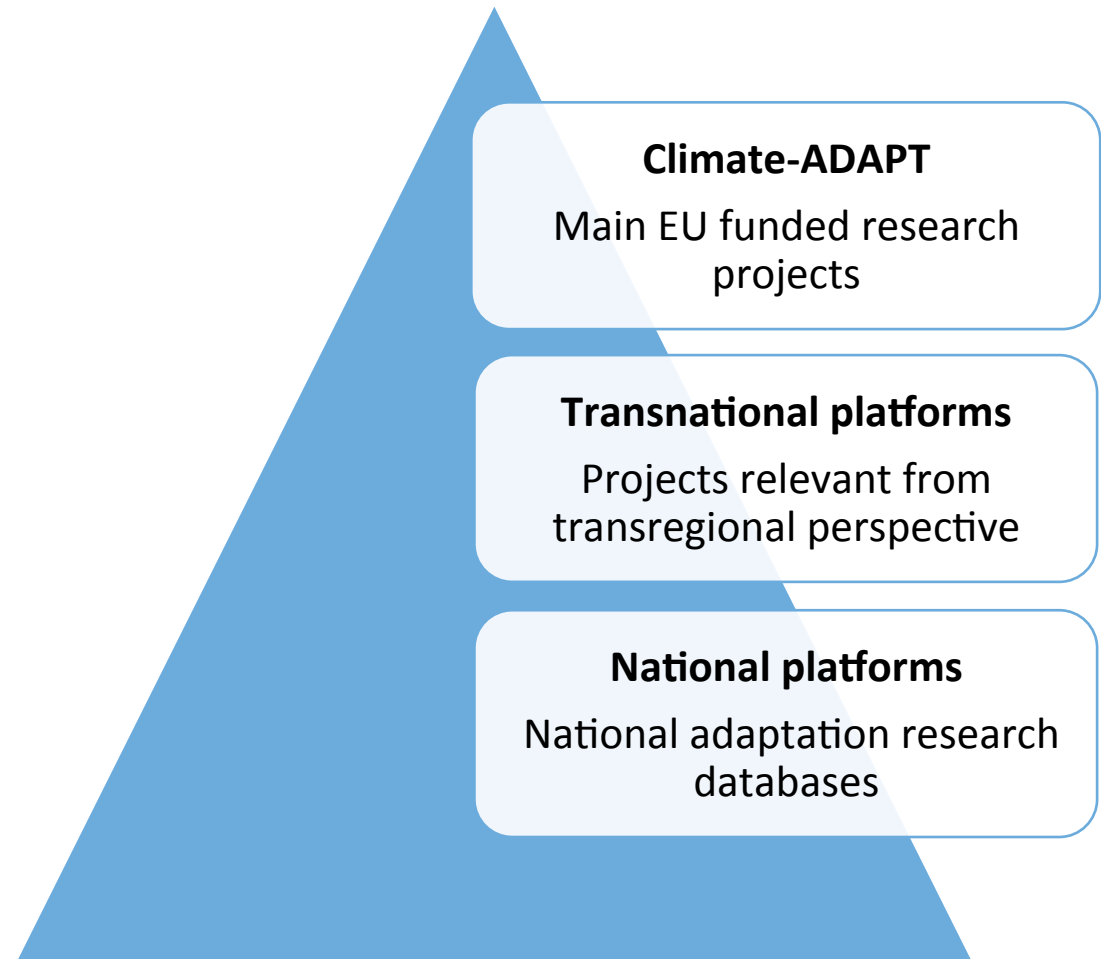


Figure: Example of complementary presentation of research and knowledge project

Source: EEA, 2017

Informing the Evaluation of the EU Adaptation Strategy

Combined conclusions from internal and external assessment

Relevance

- Sharing the knowledge across Europe, assisting the uptake of information, and supporting cooperation among sectors and across governance levels, for better informed decision making, is still needed.

Effectiveness

- Growth of knowledge (from EU funded research and other projects, countries, cities, other practitioners) was captured.
- Knowledge presented in the policy context is useful and reaches a wide audience.
- Informed policy processes across Europe at various levels of governance (examples: informing policies and plans, supporting participatory processes and generating funding proposals).

Efficiency

- Climate-ADAPT resources (EEA and Commission) were limited, taking into account the increase in user demands and the available knowledge

Coherence

- Climate-ADAPT aims to be coherent with other EU platforms, which are also continuously developing (climate change services; disaster risk reduction; sectoral)

EU Added value

- Climate-ADAPT adds value as the main reference for “state-of-the-art” knowledge on adaptation in Europe, supports learning and increases the coherence of EU member states regarding better informed decision-making.

Complementarity (additional)

- Climate-ADAPT aims to be complementary to transnational and national knowledge platforms. Information is not duplicated, but users are guided to the relevant information sources.



Next steps in 2018

- **Outcomes used for the priority setting of 2018 work** on Climate-ADAPT
- **Draft EEA report on Climate-ADAPT evaluation** sent (early Jan. 2018) to Eionet consultation with countries and experts
- Publishing the evaluation outcomes in a EEA Report (Q2)
- Present the outcomes of the evaluation to user/provider in a **EEA Webinar** (Q2)
- Discussing the implementation of the outcomes with EEA member countries in the annual **EEA Eionet Workshop on CCIVA** (6/7 June 2018)
- Update the Multi-annual Climate-ADAPT work plan to uptake the evaluation outcomes



Foto: EEA

Example of key EEA-ETC/CCA activities

Enhancing the coherence of climate change adaptation (CCA) & disaster risk reduction (DRR)

EEA Report (2017) “Climate change adaptation (CCA) and disaster risk reduction (DRR) in Europe”

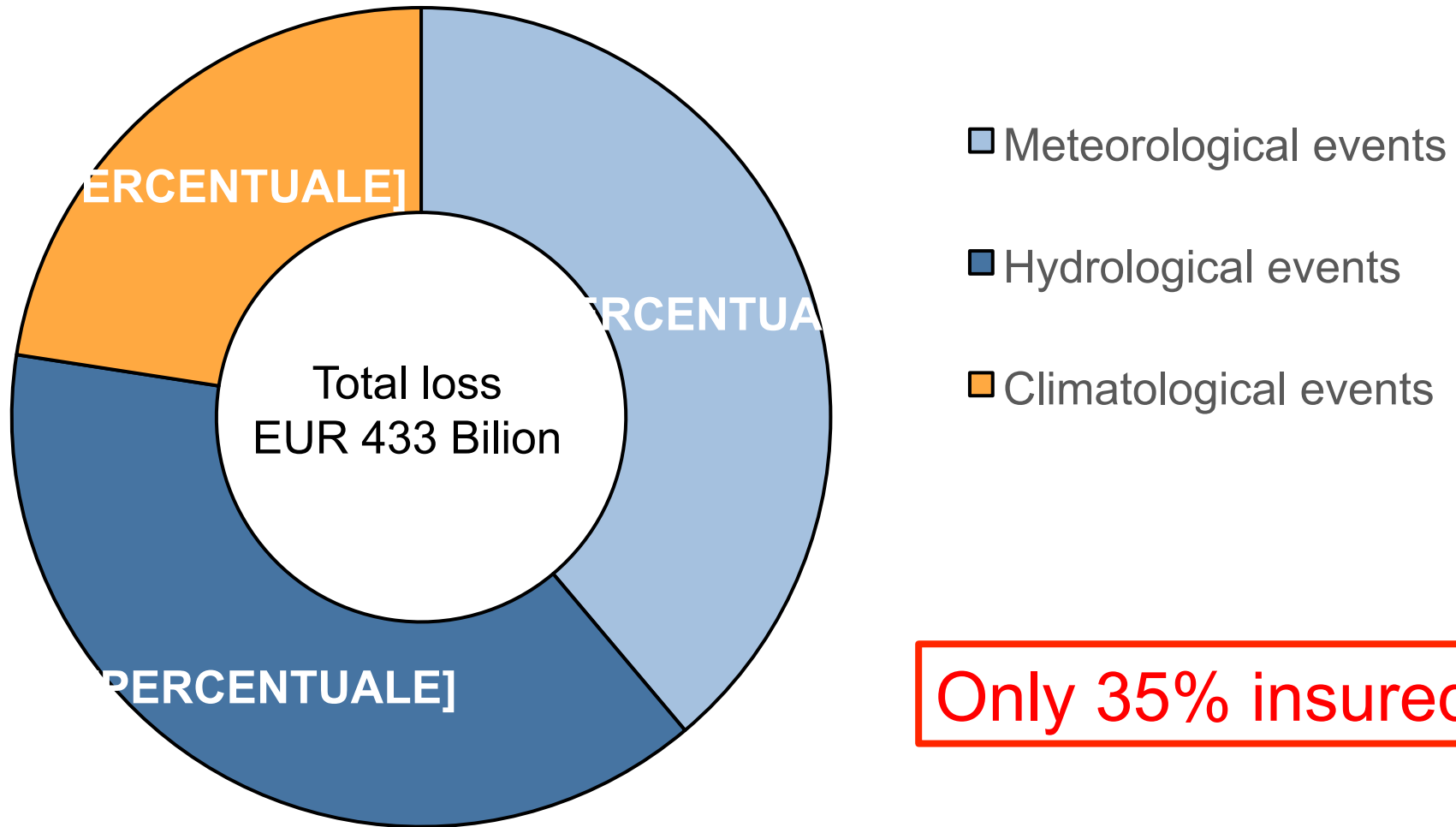


The EEA report presents:

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

<https://www.eea.europa.eu/publications/climate-change-adaptation-and-disaster>

Economic losses between 1980 and 2015 in Europe



Source: Munich Re, 2016

Benefits in enhancing coherence between CCA & DRR

CCA

Focus on past trends and future projections and addressing uncertainty
Origin and culture in science

Environment ministries and agencies

Reducing vulnerability and increasing resilience of societies

DRR

Focus on present and addressing existing risks and all hazards

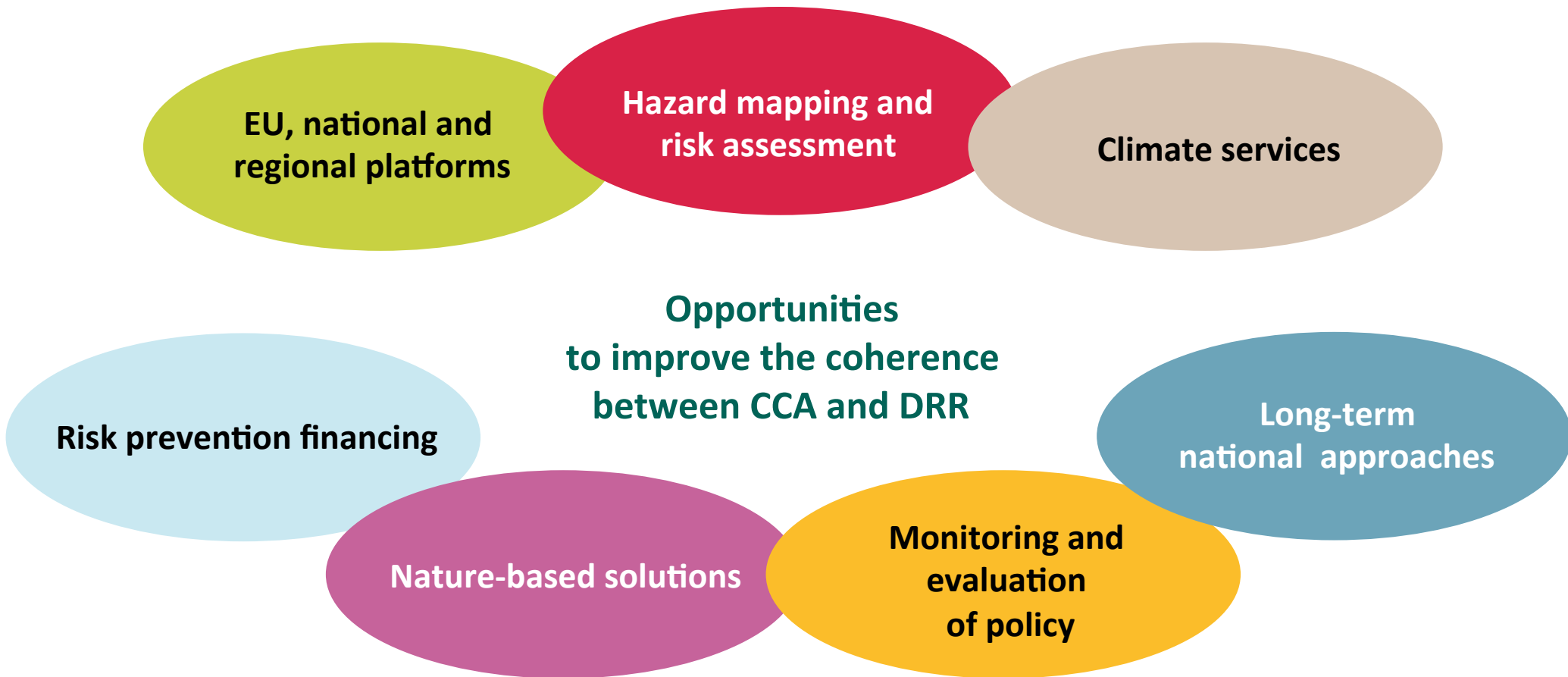
Origin and culture in humanitarian assistance and civil protection

Civil protection ministries and agencies

Benefits

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

Opportunities to improve the coherence between CCA and DRR



ETC/CCA contributions

- **ETC/CCA** supported the EEA in:
 - overall report contents coordination
 - co-leadership of most report chapters
 - contributing to specific report chapters (e.g. on weather and climate related natural hazards)

ETC/CCA contributions

- **ETC/CCA** supported the EEA in:
 - overall report contents coordination
 - co-leadership of most report chapters
 - contributing to specific report chapters (e.g. on weather and climate related natural hazards)

Involved CMCC Research Divisions

- **RAAS** - Risk Assessment and Adaptation Strategies (*Task Manager*)
- **CSP** - Climate Simulations and Predictions
- **REHMI** - Regional Models and Hydrogeological Impacts

Example of key EEA-ETC/CCA activities

Urban adaptation to climate change – overview, funding and social vulnerability

Evolution of urban adaptation knowledge in Europe



Urban adaptation knowledge on Climate-ADAPT



- Over 730 (on 2.500) urban **database** items
- 41 urban adaptation **case studies**
- **Urban Adaptation Support Tool**
- **Urban Vulnerability Map Book**
- 61 **city profiles** of Mayors Adapt signatories



Work on urban adaptation

- EEA Report “**Urban adaptation to climate change in Europe 2016**. Transforming cities in a changing climate” (2016)
- EEA Report “**Financing urban adaptation to climate change**” (2017)
- ETC CCA Technical paper “**Social vulnerability to climate change in European cities** – state of play in policy and practice” (2018)



Work on urban adaptation

- EEA Report “**Urban adaptation to climate change in Europe 2016**. Transforming cities in a changing climate” (2016)
- EEA Report “**Financing urban adaptation to climate change**” (2017)
- ETC CCA Technical paper “**Social vulnerability to climate change in European cities** – state of play in policy and practice” (2018)

**Involved CMCC
Research Division**

ECIP - Economic
analysis of Climate
Impacts and Policy
(Task Manager)

EEA Report “Urban adaptation to climate change in Europe 2016”

The EEA report **analyses**: (multi-level) governance, knowledge base, awareness, planning, economics, monitoring and reporting.

Key messages

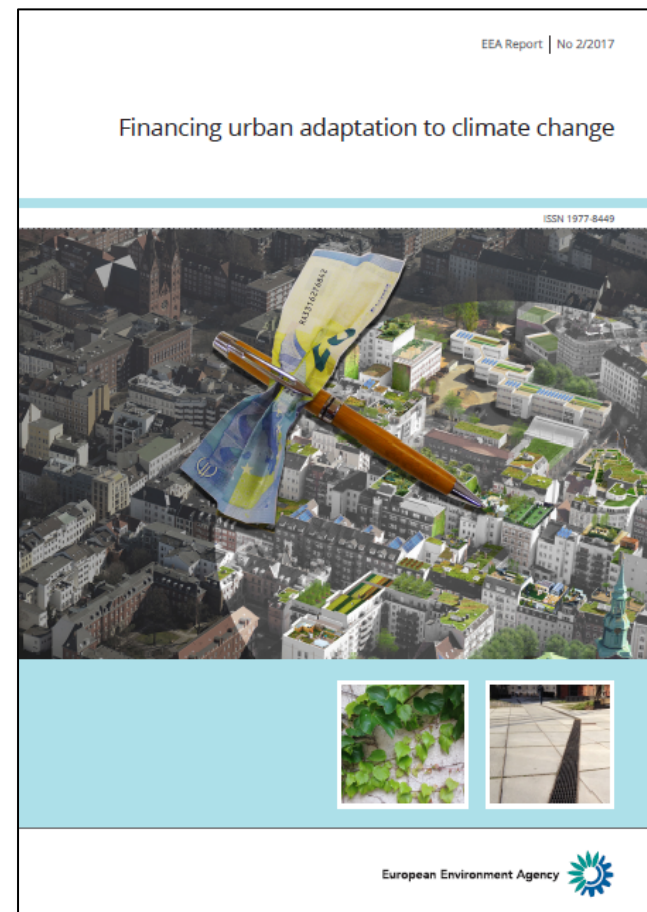
- **Adaptation has started** in European cities
 - Mainly at planning stage
 - Implementation by front-runner cities
- **Low cost and ‘soft’ solutions** are predominant
- Emphasis on **nature-based solutions** (green infrastructure)
- **Need for transformative adaptation** (long-term, systemic approach)



<https://www.eea.europa.eu/publications/urban-adaptation-2016>

EEA Report (2017) “Financing urban adaptation to climate change”

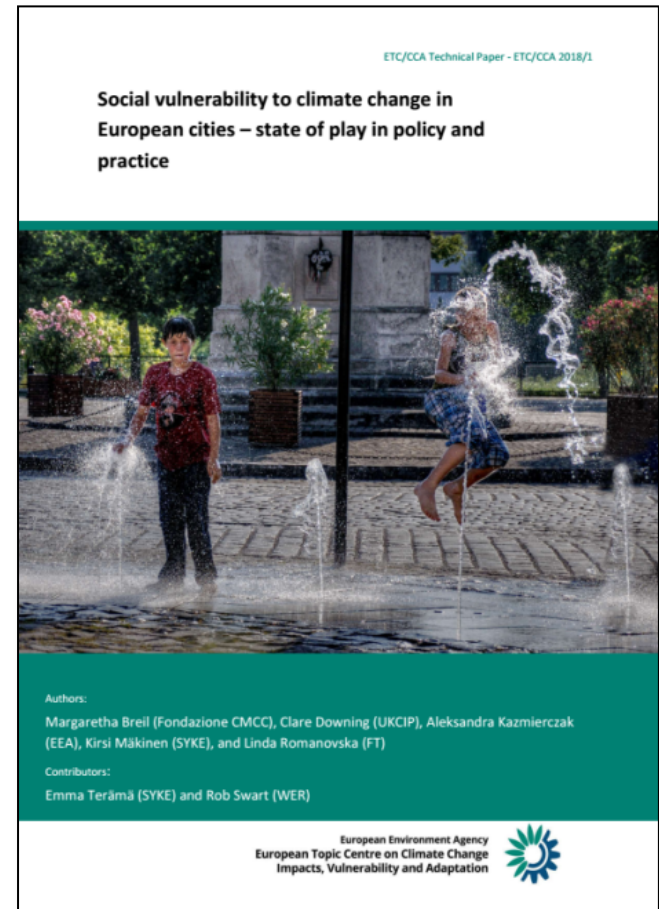
- **Case studies** that analyse 11 cities across Europe – inspiration for other cities
- **Key messages**
 - **Public funds** for adaptation measures can be **difficult to find**
 - **Cities may lack the capacity** to find funding sources and apply for money
 - **Integrating climate adaptation** in requirements for new investments or redevelopments **will save money** in the long term
 - Demonstrating **multiple benefits of adaptation solutions** (e.g. green infrastructure) can increase the chance of securing funding



<https://www.eea.europa.eu/publications/financing-urban-adaptation-to-climate-change>

ETC/CCA (2018) Technical Paper on Social vulnerability to climate change

- **Overview** on the state of play on research and policy addressing social vulnerability and justice in urban climate change adaptation
 - Consideration and understanding of social vulnerability and inequalities in relation to climate change needs to be part of design of urban adaptation planning and solutions.
 - While some pioneer cities have started taking action in this respect, **in most European cities there is still limited awareness or work** about this issue.
- Input to EEA (2018) report on social inequalities in relation to climate change impacts, air pollution and noise



http://cca.eionet.europa.eu/reports/TP_1-2018

Thank you for your attention

Silvia Medri (CMCC)
ETC/CCA Manager/Coordinator
silvia.medri@cmcc.it

Q&A session



To participate in the Q&A Session, please use the chat room provided by the Go-to-Webinar system



Forthcoming CMCC Webinar

**Blue Growth: science, society and innovation.
Added value applications from the European
Copernicus Marine Environment Monitoring
Services in the Mediterranean and Black Seas**

Presenter: Giovanni Coppini
CMCC, «Ocean Predictions and Applications» Division

*27 March 2018
12:30 pm CET*



cmcc
Centro Euro-Mediterraneo
sui Cambiamenti Climatici

Thank you for attending this CMCC webinar.

This webinar was recorded and will be uploaded to the CMCC website: www.cmcc.it

If you have any further question about the webinar, please email: venice@cmcc.it