

*FEEM-UNIVE Side Event UNFCCC COP18*  
*The cost of climate change adaptation:*  
*new findings, old gaps and policy implications*  
*5th December 2012*

# Impacts, Vulnerability and Adaptation: European Overview

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# EEA member and cooperating countries



## EEA coverage

- Member countries
- Cooperating countries

The European Environment Agency is an Agency of the European Union.

Our task is to provide sound, independent information on the environment to policy-making agents and the public.

Currently 32 member countries and 7 co-operating countries.

Network of c. 400 national institutions.



# Climate change, impacts and vulnerability in Europe 2012 (indicator based report)

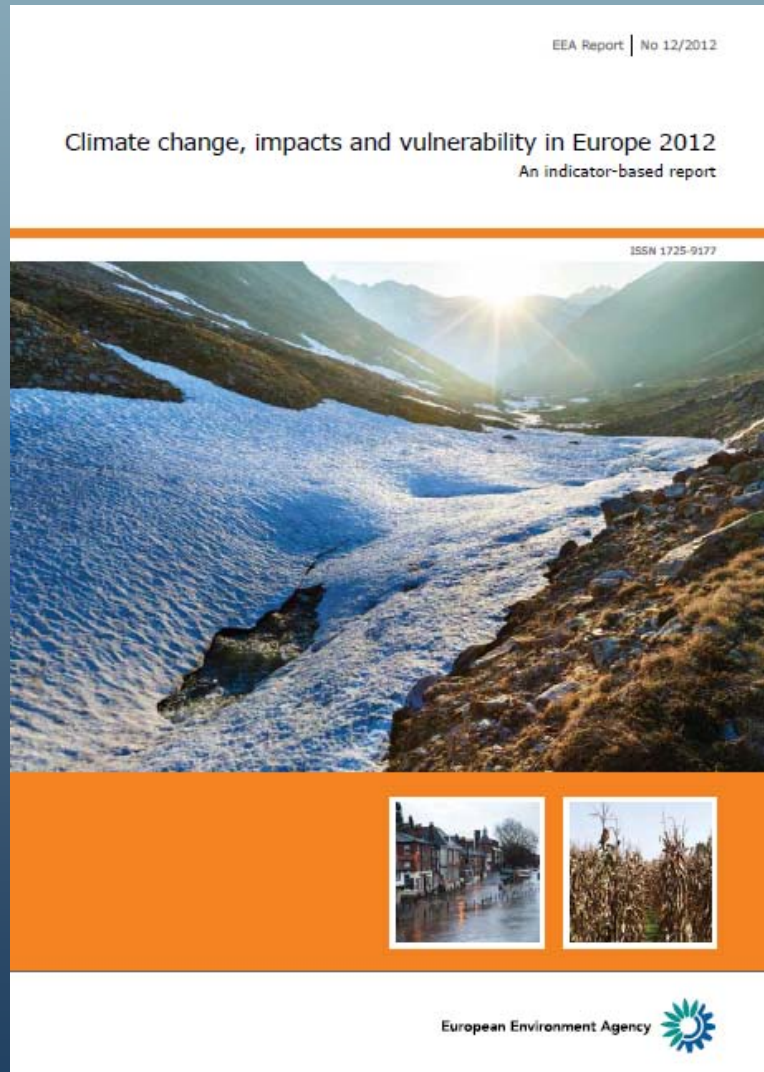
## Objectives:

- present past and projected climate change and impacts through indicators
- identify sectors and regions most at risk
- highlight the need for adaptation actions
- identify main sources of uncertainty
- demonstrate how monitoring and scenario development can improve the knowledge base

Report on adaptation actions (EU, national, sectoral) to be published early 2013

See:

<http://www.eea.europa.eu/pressroom/newsreleases/climate-change-evident-across-europe>





# Europe's key past and projected impacts and risks/vulnerabilities

## Arctic

Temperature rise much larger than global average  
Decrease in Arctic sea ice coverage  
Decrease in Greenland ice sheet  
Decrease in permafrost areas  
Increasing risk of biodiversity loss  
Intensified shipping and exploitation of oil and gas resources

## Northern Europe

Temperature rise much larger than global average  
Decrease in snow, lake and river ice cover  
Increase in river flows  
Northward movement of species  
Increase in crop yields  
Decrease in energy demand for heating  
Increase in hydropower potential  
Increasing damage risk from winter storms  
Increase in summer tourism

## North-western Europe

Increase in winter precipitation  
Increase in river flow  
Northward movement of species  
Decrease in energy demand for heating  
Increasing risk of river and coastal flooding

## Coastal zones and regional seas

Sea-level rise  
Increase in sea surface temperatures  
Increase in ocean acidity  
Northward expansion of fish and plankton species  
Changes in phytoplankton communities  
Increasing risk for fish stocks

## Mountain areas

Temperature rise larger than European average  
Increase in glacier extent and volume  
Decrease in mountain permafrost areas  
Upward shift of plant and animal species  
High risk of species extinction in Alpine regions  
Increasing risk of soil erosion  
Decrease in ski tourism

## Central and eastern Europe

Increase in warm temperature extremes  
Decrease in summer precipitation  
Increase in water temperature  
Increasing risk of forest fire  
Decrease in economic value of forests

## Mediterranean region

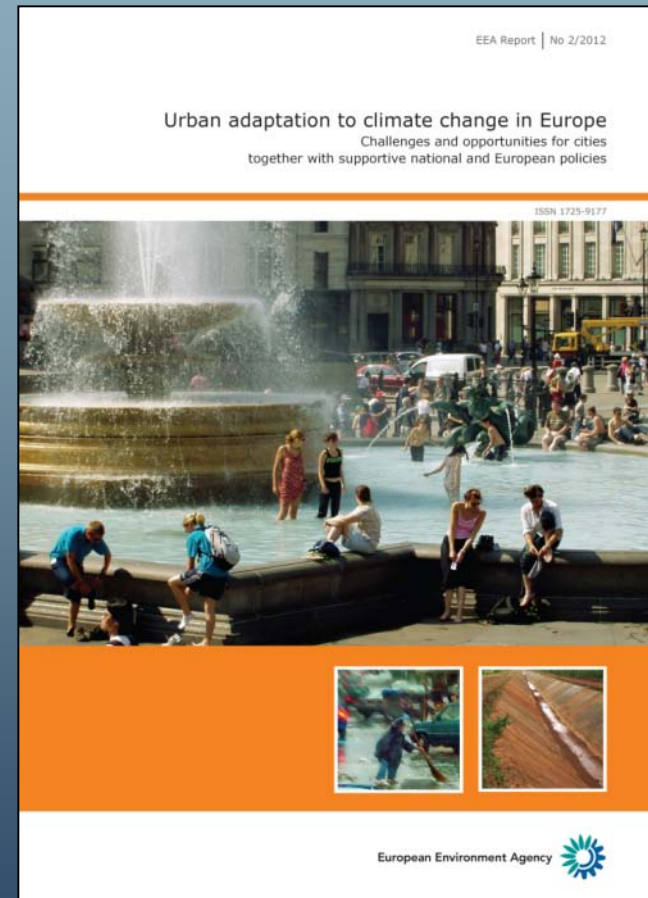
Temperature rise larger than European average	Increasing water demand for agriculture	Expansion of habitats for southern disease vectors
Decrease in annual precipitation	Decrease in crop yields	Decrease in hydropower potential
Decrease in annual river flow	Increasing risk of forest fire	Decrease in summer tourism and potential increase in other seasons
Increasing risk of biodiversity loss	Increase in mortality from heat waves	
Increasing risk of desertification		



# Urban adaptation to climate change

(EEA report published May 2012)

- Heat waves, flooding, water scarcity and droughts
- Planning urban adaptation
- Multi-level governance enabling urban adaptation



# European Union Adaptation Strategy

EU Strategy expected first half of 2013, building on 2009 White Paper:

Knowledge Base

Mainstreaming

Mix of policies

Co-operate with Member States and external partners



# European Climate Adaptation Platform Climate-ADAPT

- Supports governmental decision-makers in developing and implementing climate change adaptation strategies, policies and actions.
- Guided by advice from countries (agencies and ministries), Adaptation Steering Group (chaired by DG CLIMA), other organisations (e.g. WHO Europe), experts EU FP projects.
- EEA to maintain with Joint Research Centre of the European Commission.

The screenshot shows the homepage of the European Climate Adaptation Platform (CLIMATE-ADAPT). The header features the European Union flag and the text "CLIMATE-ADAPT European Climate Adaptation Platform". Navigation links include "Glossary", "Contact", "Sitemap", "Legal notice", and "About". A search bar is located in the top right corner. Below the header, a green navigation bar contains links: "Home", "Adaptation information", "EU sector policies", "Countries and other areas", "Tools", "Links", and "Search the database". The main content area is divided into several sections:

- Adaptation support tool:** A circular diagram with numbers 1-6 and the text "New to adaptation? Use the Adaptation Support Tool".
- What are European countries doing?:** A map of Europe with a dropdown menu to "Choose your country" and a "GO" button.
- Climate Change Adaptation in Europe:** A section titled "The European Climate Adaptation Platform (CLIMATE-ADAPT) aims to support Europe in adapting to climate change. It is an initiative of the European Commission and helps users to access and share information on:" followed by a list of bullet points: "Expected climate change in Europe", "Current and future vulnerability of regions and sectors", "National and transnational adaptation strategies", "Adaptation case studies and potential adaptation options", and "Tools that support adaptation planning". A "Read more" link is provided.
- Search the database:** A search bar with a magnifying glass icon.
- News:** A section with a header image of Earth from space and a list of news items, including "25 April 2012. Survey on Adaptation strategies for European Cities - DG Climate Action invites cities to participate in a survey on their".
- Events:** A section with a header image of a conference and a list of events, including "24 April 2012. First Baltadapt Policy Forum, Berlin, Germany" and "12-15 May 2012. ICLEI, Resilient Cities 2012. 3rd Global Forum on Urban".
- EU sector policies:** A section with a header image of a field and a list of policies, including "Agriculture & Forestry" and "Water management".
- EU information systems:** A section with a header image of a globe and a list of systems, including "Wise Water" and "Biodiversity".

<http://climate-adapt.eea.europa.eu>





# Sectoral coverage in Climate ADAPT

Sectors	Number of countries mentioning sector	List of countries
Water management and water resources	21 countries	AT, BE, BG, CH, CY, CZ, DK, ES, FI, GR, HU, IE, IT, NL, NO, LV, PL, PT, SK, SI, UK
Forests and forestry	19 countries	AT, BG, CH, CY, CZ, DK, ES, GR, HU, IE, IT, LT, LV, PL, PT, RO, SK, SI, UK
Agriculture	18 countries	AT, BG, CH, CY, CZ, DK, ES, GR, HU, IE, IT, LV, PL, PT, RO, SK, SI, UK
Biodiversity, ecosystem services	16 countries	AT, CH, CY, CZ, DK, ES, GR, HU, IE, IT, LT, NO, PL, PT, SK, UK
Human health and wellbeing	15 countries	AT, BE, CH, CZ, CY, DK, ES, HU, IT, LT, PL, PT, SK, SI, UK





# Sectoral coverage in Climate ADAPT



# Comparison of countries actions

- National adaptation strategies: 14 (AT, BE, CH, DE, DK, ES, FI, FR, HU, MT, NL, PT, SE, UK)
- Some of these also have adaptation action plans
- Impacts, vulnerability and adaptation assessments : 17 (AT, BE, CH, CZ, DE, DK, ES, FI, FR, HU, LT, NL, NO, RO, PT, SE, UK)
- Research programmes: 4 (FI, NL, NO, SE)
- Web Portal
  - Broad: 7 (AT, DE, DK, FI, NO, SE, UK)
  - Narrow: 8 (BE, ES, FR, HU, LT, NL, PT, SI)
- Monitoring of adaptation (indicators): 2 (DE, UK)

