The EU Adaptation Strategy:
The role of EEA as knowledge provider
European Environment Agency

- Supporting and informing policy development and implementation by data, indicators and assessments
- **33 member** and six collaborating **countries** (ministries and environment agencies)
- Main target audience: **policymakers** at European and national levels
- **Networking:** annual Eionet workshop with all countries, expert meetings
- Supported by **European Topic Centres**, e.g. on adaptation see: [http://cca.eionet.europa.eu/](http://cca.eionet.europa.eu/)
EEA products and services on climate change impacts, vulnerability and adaptation

**Impacts and vulnerability**

**CCA & DRR**

**National adaptation**

**Urban adaptation**

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

**Climate-ADAPT**
EU Climate Adaptation Strategy

“to contribute to a more climate resilient Europe”

<table>
<thead>
<tr>
<th>Priority 1: Promoting action by Member States</th>
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<tr>
<td>Action 1. Encourage MS to adopt Adaptation Strategies and action plans</td>
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<td>Action 2. LIFE funding, including adaptation priority areas</td>
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<td>Action 3. Promoting adaptation action by cities along the Covenant of Mayors initiative</td>
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<th>Priority 2: Better informed decision-making</th>
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<td>Action 4. Knowledge-gap strategy</td>
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<th>Priority 3: Key vulnerable sectors</th>
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<td>Action 6. Climate proofing the Common Agricultural Policy, Cohesion Policy, and the Common Fisheries Policy</td>
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<td>Action 8. Promote products &amp; services by insurance and finance markets</td>
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EU funding for climate action

• LIFE Programme - €864 million for climate projects in 2014-2020 (split between mitigation and adaptation)

• At least 20% of EU budget 2014-2020 to climate-related action (€180 billion)

• European Fund for Strategic Investment—half of the approved funds are climate related

• H2020 research projects: over € 225 million spent on adaptation research projects starting between 2014-17
Climate change is affecting all European regions – but adaptation needs differ across regions

Arctic region
- 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
- Some new opportunities for the exploitation of natural resources and for sea transportation
- Risks to the livelihoods of indigenous peoples

Atlantic region
- Increase in heavy precipitation events
- Increase in river flow
- Increasing risk of river and coastal flooding
- Increasing damage risk from winter storms
- Decrease in energy demand for heating
- Increase in multiple climatic hazards

Mountain regions
- Temperature rise larger than European average
- Decrease in glacier extent and volume
- Upward shift of plant and animal species
- High risk of species extinctions
- Increasing risk of forest pests
- Increasing risk from rock falls and landslides
- Changes in hydropower potential
- Decrease in ski tourism

Coastal zones and regional seas
- Sea level rise
- Increase in sea surface temperatures
- Increase in ocean acidity
- Northward migration of marine species
- Risks and some opportunities for fisheries
- Changes in phytoplankton communities
- Increasing number of marine dead zones
- Increasing risk of water-borne diseases

Boreal region
- Increase in heavy precipitation events
- Decrease in snow, lake and river ice cover
- Increase in precipitation and river flows
- Increasing potential for forest growth and increasing risk of forest pests
- Increasing damage risk from winter storms
- Increase in crop yields
- Decrease in energy demand for heating
- Increase in hydropower potential
- Increase in summer tourism

Continental region
- Increase in heat extremes
- Decrease in summer precipitation
- Increasing risk of river floods
- Increasing risk of forest fires
- Decrease in economic value of forests
- Increase in energy demand for cooling

Mediterranean region
- Large increase in heat extremes
- Decrease in precipitation and river flow
- Increasing risk of droughts
- Increasing risk of biodiversity loss
- Increasing risk of forest fires
- Increased competition between different water users
- Increasing water demand for agriculture
- Decrease in crop yields
- Increasing risks for livestock production
- Increase in mortality from heat waves
- Expansion of habitats for southern disease vectors
- Decreasing potential for energy production
- Increase in energy demand for cooling
- Decrease in summer tourism and potential increase in other seasons
- Increase in multiple climatic hazards
- Most economic sectors negatively affected
- High vulnerability to spillover effects of climate change from outside Europe
Transnational actions (Baltic sea region, example)

Adaptation in Baltic Sea Region

Policy Framework

The European Union Strategy for the Baltic Sea Region (EUSBSR) is the first macro-regional strategy in Europe. It aims at reinforcing cooperation within this large region in order to face various challenges and promote a more balanced development in the area. The Strategy also contributes to major EU policies.

Search Results

- Publications and reports (33)
- Information portals (2)
- Maps, graphics and databases (1)
- Guidance (1)
- Tools (1)
- Research and knowledge projects (18)
- Case studies (1)
- Organisations (6)

BALTADAPT STRATEGY
for adaptation to climate change in the Baltic Sea Region
A proposal preparing the ground for political endorsement throughout the Baltic Sea Region

Baltic Earth
Earth System Science for the Baltic Sea Region

BTEX Assessment of Climate Change for the Baltic Sea Basin
2009-2014

Second Assessment of Climate Change for the Baltic Sea Basin
Springer Open Access, 2015
Download here...
### National Adaptation Strategies

- 25 Member States have developed National Adaptation Strategies
- 16 have developed National Adaptation Plans

#### EEA countries:

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| Turkey        |      |      |      |      |      |      |      |      |      |      |      |      |      |

* National Adaptation Strategy (NAS) updated
Evolution of urban adaptation knowledge in Europe

- **2012**: EEA report on urban adaptation - challenges and opportunities
- **2013**: Climate-ADAPT - EU Adaptation Strategy
- **2014**: Launch of Mayors Adapt Initiative
- **2015**: Merge of Mayors Adapt and Covenant of Mayors
- **2016**: EEA report on urban adaptation - transforming cities in a changing climate
- **2017**: Merge of Covenant of Mayors and Compact of Mayors
- **2018**: Evaluation of EU Adaptation Strategy
- **2019**: Launch of Urban Adaptation Partnership
- **2020**: EEA Financing Urban Adaptation report

European Environment Agency
Climate-ADAPT: the European Climate Adaptation Platform

Management and maintenance: EEA joint with DG CLIMA

Scope: Supports adaptation strategies, policies and actions; Complementary to national platforms

Intended Users: Experts and decision makers, researchers

Dissemination and sharing: Newsletter; Webinars; Conferences, workshops

- Over 730 urban database items (2,400 in total)
- 41 urban adaptation case studies
- Urban Adaptation Support Tool
- Urban Vulnerability Map Book
- 61 city profiles of Mayors Adapt signatories
- 260,000+ visitors (March 2013 - April 2017)

http://climate-adapt.eea.europa.eu/
National Climate Adaptation Platforms (example DK)
“Urban adaptation to climate change in Europe 2016”

Analyses on various topics: (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

“Financing urban adaptation” (February 2017)

- **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

European cities have started to act on adaptation

Source: EEA, 2017 (Urban Vulnerability Map Book)
Cities participating in initiatives promoting adaptation

- Global Covenant of Mayors / Compact of Mayors
- Making Cities Resilient
- 100 Resilient Cities
- C40
- EGCA/EGL

Source: Climate-Adapt, Urban Vulnerability Map Book
Copenhagen Cloudburst Plan as backbone for physical development in the City

Copenhagen (Denmark) implements the next decades a cloudburst plan with 300 projects, combining green, blue and grey solutions costing 1.5 billion Euro.

Adding more urban nature, increasing biodiversity and creating a liveable city.

Storm water storage space at Tåsingeplads in Copenhagen, Denmark.
Key challenges for urban adaptation in Europe

• Closing the gap between front-runners and cities just starting to work on adaptation
  – Exchange of knowledge
  – Funding: sources and support to access them

• Embracing transformative approach to adaptation – moving beyond coping and incremental changes

• Developing and maintaining supportive governance framework at all levels: EU, national and local
  – Providing relevant guidance on adaptation
  – Appropriate presentation of existing knowledge

• Mainstreaming adaptation into various municipal work areas

• The need for an integrated approach to adaptation and mitigation
Further information on EEA: https://www.eea.europa.eu/


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