



# EU strategy on adaptation to climate change

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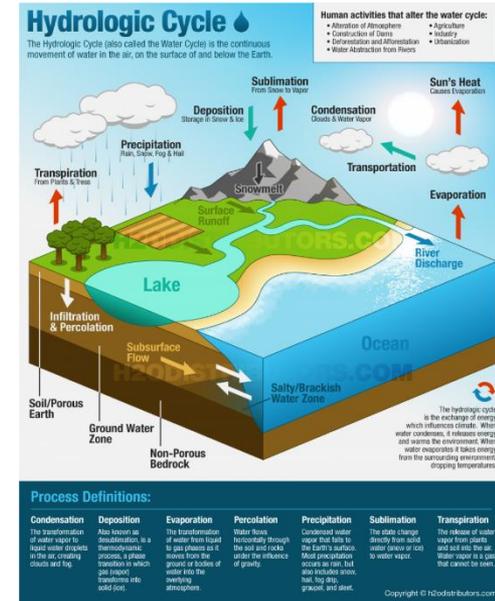
DG Climate Action, European Commission

Conference 'Back to the Nature: how green solutions can  
address the water challenges from global warming'

Brussels, 9 November 2021

# Climate change and water

- Climate change → water hazards
  - Intensive rainfall, cloud bursts → flooding ↑
  - More rain instead of snow, less glaciers → flooding ↑ and low water ↑
  - More evaporation, longer period without precipitation --> droughts ↑
  - Sea level rise → coastal flooding ↑
  - High temperature, shifting climate zones, less water → stress on ecosystems ↑
- Adaptation to climate change → integrated water management
  - River basins, ground & surface waters, land use
  - All sectors, all functions



# Impacts of CC in Europe

*Warming of 3°C in 2100:*

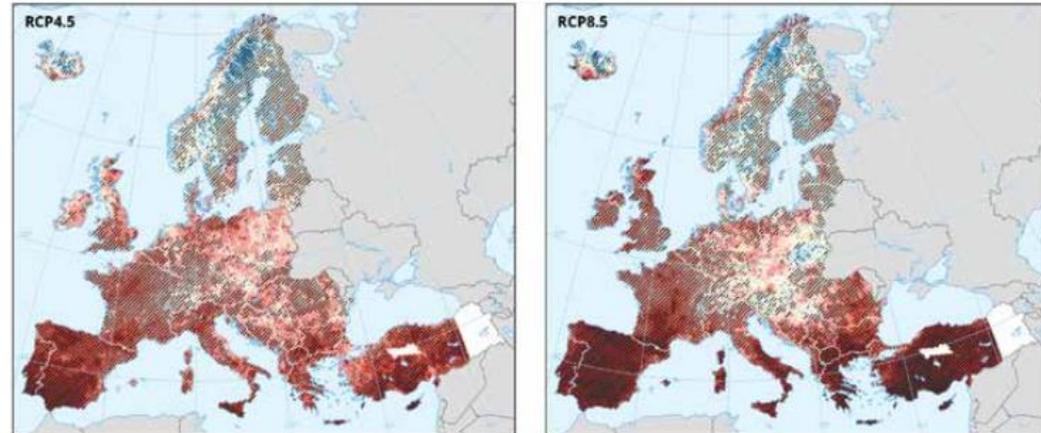
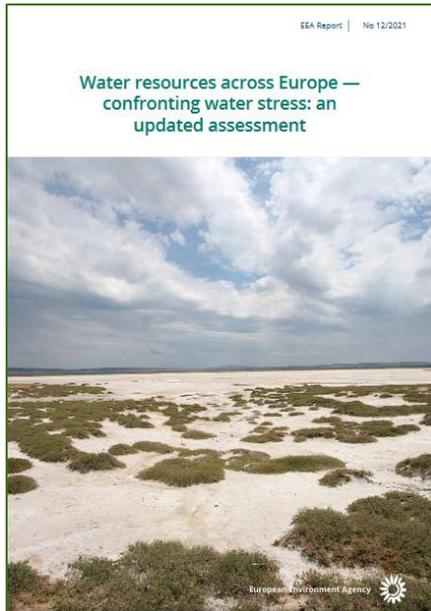
- River flooding:
  - 500.000 people/yr exposed 3x ↑
  - losses 50 billion €/yr 6x ↑
- Coastal flooding:
  - 2.2 million people exposed 22x ↑
  - Losses 250 billion €/yr 2x ↑
- Droughts:
  - Drought loss: 9 → 45 billion €/yr 5x ↑
- Wildfires
- Heatwaves
- Windstorms
- Biodiversity loss
- ....



EU Peseta IV report

# Drought

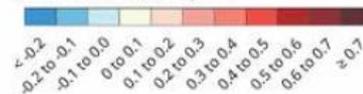
**Map 3.6** Projected change in meteorological drought frequency between the periods 1981-2010 and 2041-2070 under two climate change scenarios



Reference data: ©ESRI Data: ©European Commission. Source: Joint Research Centre

**Projected change in meteorological drought frequency between the periods 1981-2010 and 2041-2070 under two climate change scenarios**

Number of events per 10 years



At least two-third of the simulations used agree on the sign of change

No data

Outside coverage

0 500 1 000 1 500 km

## River floods & adaptation

		No Adapt Adapt	
	Today	3°C	3°C
Damage (€ billion/year)	7.8	48	8.6
People exposed (1000/year)	172	482	90

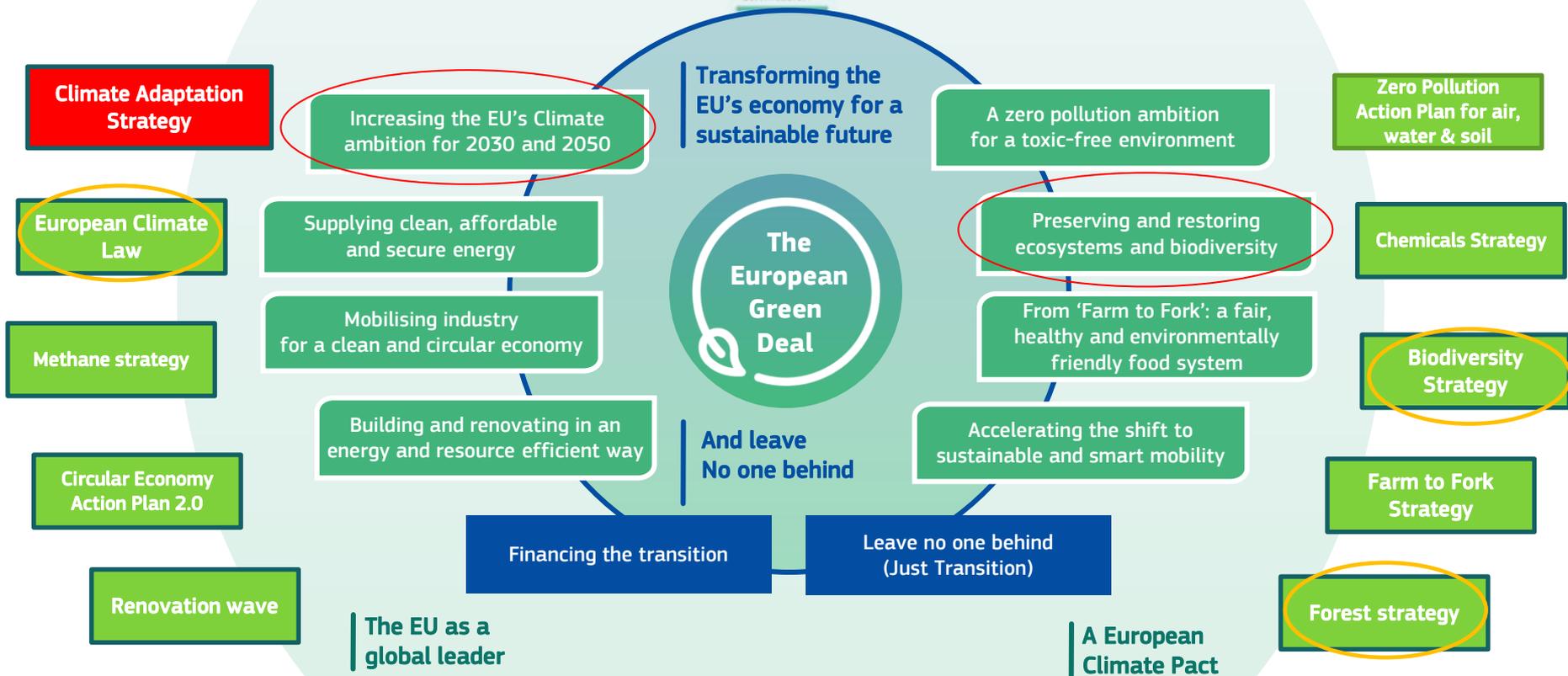
Adaptation leads to **82% reduction in damage** and **83% reduction in number of people exposed**

## Coastal floods & adaptation

		High emissions	
	Present	No adapt	Adapt
Damage (€ billion/year)	1.4	239	23
People exposed (million/year)	0.1	2.2	0.8

Adaptation leads to **90% reduction in damage** and **63% reduction in people exposed**

# European Green Deal



# The EU Adaptation Strategy

[COM\(2021\)82 Final](#), 24 February 2021

Vision: by **2050** the EU will be a **climate-resilient society**, fully adapted to the unavoidable impacts of climate change

Objectives:

- **Smarter adaptation** – improving knowledge and managing uncertainty.
- **More systemic adaptation** – support policy development at all levels and sectors.
- **Faster adaptation** – speeding up adaptation across the board.
- **Stepping up international action** for climate resilience



© picture: Peter Löffler

## Smarter adaptation:

*improving knowledge and managing uncertainty, by*

- Pushing the frontiers of **knowledge** on adaptation
- More and better climate-related **risk and losses data**
- Making **Climate-ADAPT** the authoritative European platform for adaptation knowledge



# More systemic adaptation

*support policy development at all levels and sectors, by:*

- Improving adaptation strategies and plans
- Fostering local, individual, and just resilience
- Integrating climate resilience in macro-fiscal policy
- Promoting nature-based solutions for adaptation \*



# Faster adaptation

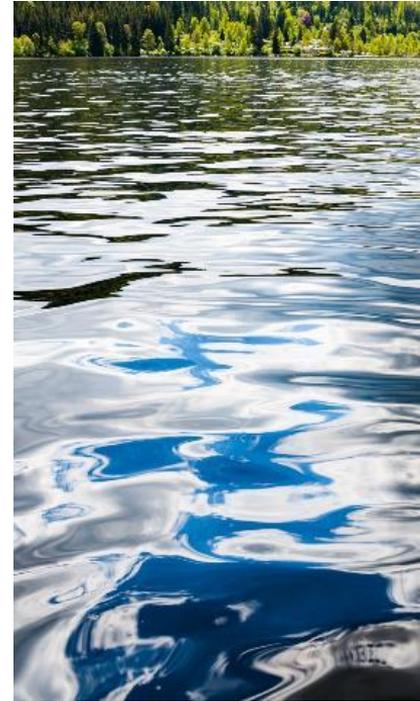
*speeding up adaptation across the board, by:*

- Accelerating the rollout of adaptation solutions
  - Mission on Adaptation, Healthy Soil and Healthy Oceans & Inland Waters
- Reducing climate-related risk
  - Enhance climate proofing guidance
  - Develop an EU-wide climate risk assessment
- Closing the climate protection gap
- Ensuring the availability and sustainability of freshwater \*



## Promoting nature-based solutions for adaptation

- Continue to incentivise and assist Member States to rollout nature-based solutions, through assessments, guidance, capacity building and EU funding
- Develop the financial aspects of nature-based solutions and foster the developments of financial approaches and products that also cover nature-based adaptation
- Propose nature-based solutions for carbon removals



## Ensuring the availability and sustainability of freshwater

- Climate-resilient, sustainable use & management of water across sectors & borders
- Stable and secure supply of drinking water
- Reduce water use:
  - Water-saving requirements for products
  - Encourage water efficiency and savings
  - Wider use of drought management plans
  - Sustainable soil management and land-use



# Challenges and opportunities for the water sector

- Water, climate adaptation & biodiversity
- Common Implementation Strategy of the *Water Framework Directive and Flood Directive*
  - Quantitative water management → promote NBS
    - reduce climate-related risks
    - ensure the availability and sustainability of fresh water
- Biodiversity Strategy
  - EU nature restoration Plan → at least 25,000 km of free-flowing rivers
- Missions under Horizon Europe:
  - Adaptation to Climate Change
  - Restore our Ocean and Waters
  - A soil deal for Europe

## Restoration of the sponge function of the landscape



### Tools for natural water management

1. Room for the River
2. Green Cities
3. Stream and floodplain restoration
4. Restoring wetlands 'sponges'
5. Converting coniferous to deciduous forest

Figure 1. Tools for natural water management. In a basin approach a broad array of measures is taken which together – not in isolation – generate the desired effect: less peak flooding, shorter periods of drought.

Nov 2017



Restoration of the marshes in the valleys of the middle mountains of the Rhine basin for flood and drought risk reduction

'the sponges approach'

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# Thank you

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