

## Managing water sustainably to strengthen urban resilience

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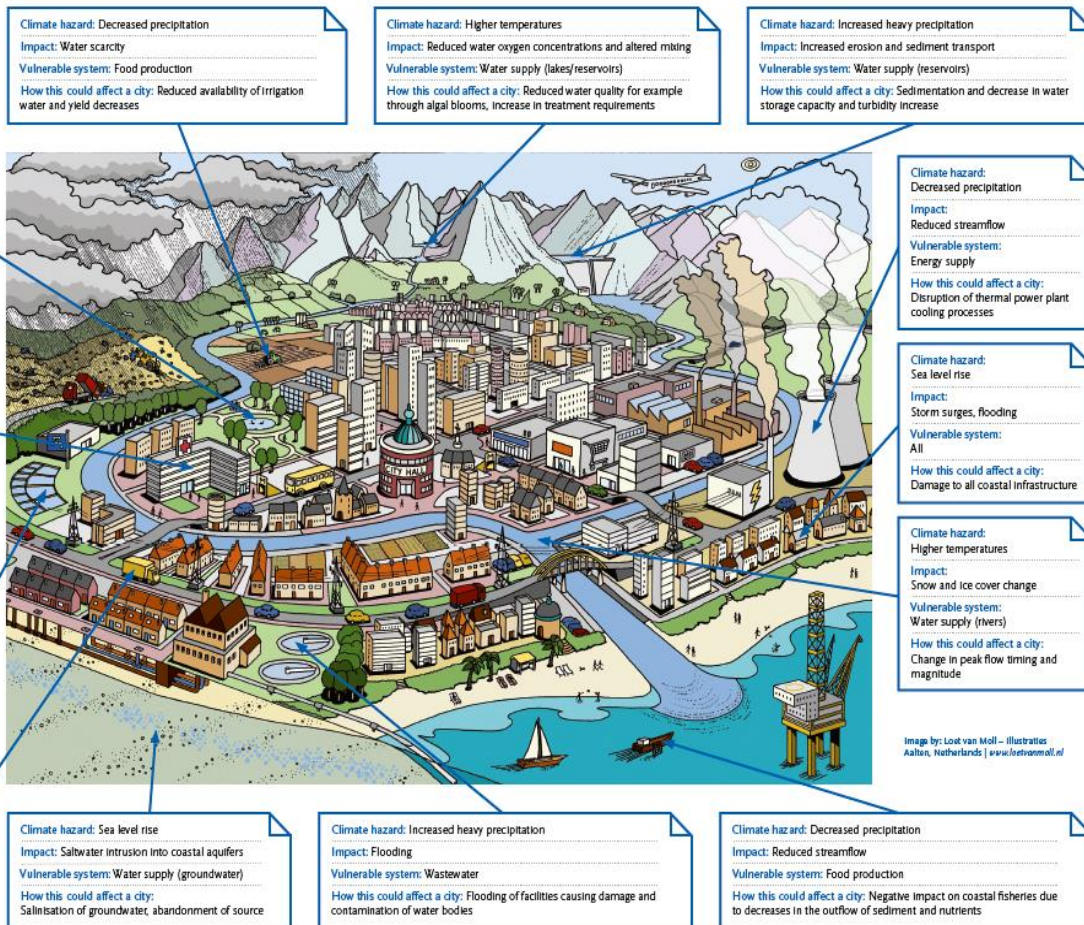
UBC Talks:  
Water as a resource in a climate-resilient city  
25 May 2021



# Overview

- Climate change impacts on urban water systems
- ICLEI's resilience development pathway
- Relevant EU policies
- Integration key to leverage multiple benefits (with city examples)
- The Green City Accord
- The next European Urban Resilience Forum

## Examples of potential effects of climate change at the urban level



# ICLEI'S PATHWAYS TO SUSTAINABILITY



LOW EMISSION  
DEVELOPMENT



NATURE-BASED  
DEVELOPMENT



EQUITABLE  
AND PEOPLE-  
CENTERED  
DEVELOPMENT



RESILIENT  
DEVELOPMENT



CIRCULAR  
DEVELOPMENT

## **Resilient development:**

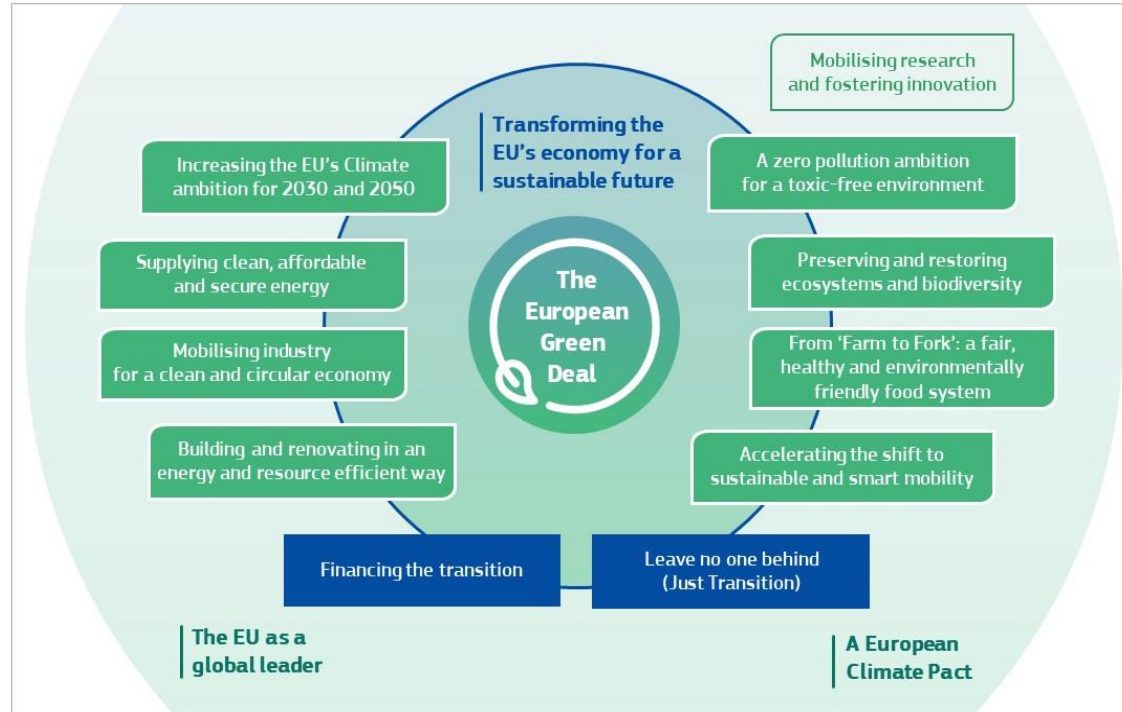
→ to anticipate, prevent, absorb and recover from shocks and stresses, in particular those brought about by rapid environmental, technological, social and demographic change, and to improve essential basic response structures and functions of the systems

# New EU Adaptation Strategy (2021)

- Smarter adaptation
- Faster adaptation - highlighting needs for better water management:
  1. Ensuring the availability and sustainability of freshwater
  2. Sharply reducing water use
  3. Ensuring drinking water quality
- More systemic adaptation – incl. as cross-cutting priorities:
  1. Integration in national fiscal frameworks
  2. More nature-based solutions
  3. Focus on local adaptation plans

„The local level is the bedrock of adaptation“

# The EU Green Deal



# Integration:

## from water to resilience to sustainability

- Integrate the urban water cycle:  
water supply – waste water – storm water
- Integrate the wider water cycle: city – watershed
- Integrate actors: local government – water utilities – regulators –  
water users – the general public ...
- Integrate municipal sectors (and departments):  
water – landuse – urban planning – energy – green infrastructure –  
biodiversity - circular economy- climate change mitigation and  
adaptation ...

# An integrated and cyclical management cycle

- Assess and evaluate the process
- Evaluate effectiveness of actions based on baseline data
- Assess and review new information and drivers
- Report back to stakeholders
- Provide recommendations for next cycle



- Development of project plans
- Development of partnerships
- Implementation and monitoring of actions

- Securing mandate for the adaptation process
- Involving politicians
- Drafting a council resolution
- Engaging the public

- ❖ Organisational set-up:
  - Team formation
  - Work plan development
  - Stakeholder identification and mapping
  - Communication plan development
- ❖ Vulnerability assessment:
  - Governance & management inventory and analysis
  - Climate, urban systems and social groups review
  - Vulnerability assessment

- ❖ Adaptation strategy & action plan development:
  - Identification of adaptation options
  - Identification of linkages to plans and projects
  - Identification of barriers and drivers
  - review of funding sources
  - Formulation of adaptation indicators

# Integration to leverage multiple benefits

While working on making the water sector more resilient, consider how to:



improve citizens' quality of life



support livelihoods and the local economy



use resources more efficiently – more bang for the buck!



enhance multi-sectoral cooperation and governance, incl. on biodiversity, air quality, energy efficiency, transportation ... etc.

# Think water adaptation – think urban greening!

## Ex. of Ghent, Belgium

“Structural vision 2030 – Room for Ghent”  
(for both: for climate neutrality and to make Ghent more robust to climate change)

- Focus on spatial measures
- For climate ‘robustness’ – development of coherent blue-green network
- Greenery and water together to mitigate heat-island effects/cooling city down in summer time
- In preparation: allowing more space for water, water storage in public spaces.
- City as a ‘sponge’



# Think water adaptation – think biodiversity enhancement!

## Ex. of Almada, Portugal

ReDuna project – restoration of S. Joao da Caparica Sand Dunes

- Along 1,1 km of coast, willow fences planted
- Use of native dune plant species
- Seeds collected from nearby area to preserve local genetic integrity of site
- After 4 years. roots more than 4m deep and very dense, strong root network to stabilize dune

Co-benefit: enhanced biodiversity – ca. 50 new wildlife species attracted



reDuna project, ALMADA. SOURCE: S.Joao da Caparica 2015

# Think water adaptation – think new urban developments!

## Ex. of Berlin, Germany

- Berlin is a frontrunner in Germany in promoting the sponge city approach
- In 2017, Berlin Senate agreed on new regulation for housing developments to make decentralised stormwater management compulsory
- annual reduction ("decoupling") of 1% of built areas from which stormwater is directly discharged into combined sewer system
- Ca. 1,400 housing projects are currently underway that need to follow these new requirements



Photo by Francesco Ungaro/Pexels

# Green City Accord

Clean and Healthy Cities for Europe



# Green City Accord

- Cities initiative launched by European Commission
- Background: implementation of a number of environmental directives lagging behind
- Also in support of EU Green Deal (thus EU Biodiversity Strategy, Zero Pollution Action Plan, Circular Economy Action Plan ...)
- Cities commit themselves to become cleaner and healthier by 2030
- Focus areas: air, nature/biodiversity, waste/Circular Economy, noise – and WATER

## Green City Accord – water goal

- To improve **quality of water bodies** and **efficiency of water use**

I.e. Signatory cities:

„... pledge to improve the ecological and chemical status of our local water bodies, to contribute to the protection of water sources that supply our drinking water, and to increase the efficiency of water use in our cities by 2030.“

# Green City Accord at EU Green Week

## Virtual exhibition – informal sessions

General information: 2 June, 10:00 - 11:00 CEST

3 June, 16:00 - 16:30 CEST

More specific on water: 3 June, 10:00 - 11:00 CEST

[greencityaccord.eu](https://greencityaccord.eu)

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# European Urban Resilience Forum

- Co-organised by ICLEI & EEA
- Next edition (hybrid event) :  
**Malmö, 19-20 October 2021**
- Indicative thematic topics:
  - green recovery and financing
  - health and well-being
  - biodiversity for low-carbon development
  - coastal adaptation planning



# CONTACTS

## ICLEI EUROPE

The ICLEI European Secretariat is based in Freiburg (Germany) with offices in Brussels (Belgium) and Berlin (Germany).

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