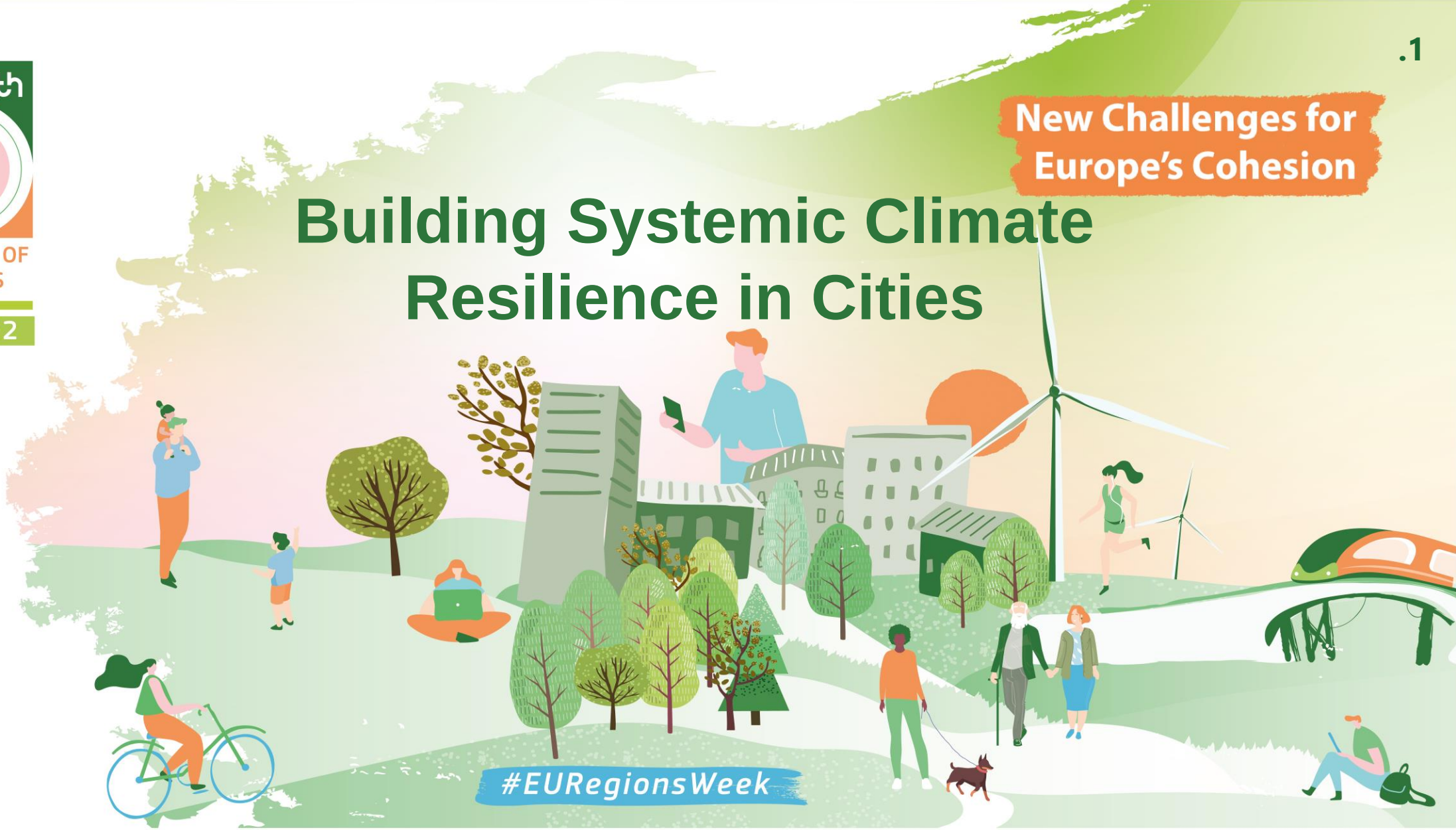
EUROPEAN WEEK OF REGIONS & CITIES
2003 - 2022

New Challenges for Europe's Cohesion

Building Systemic Climate Resilience in Cities



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Building Systemic Climate Resilience in Cities

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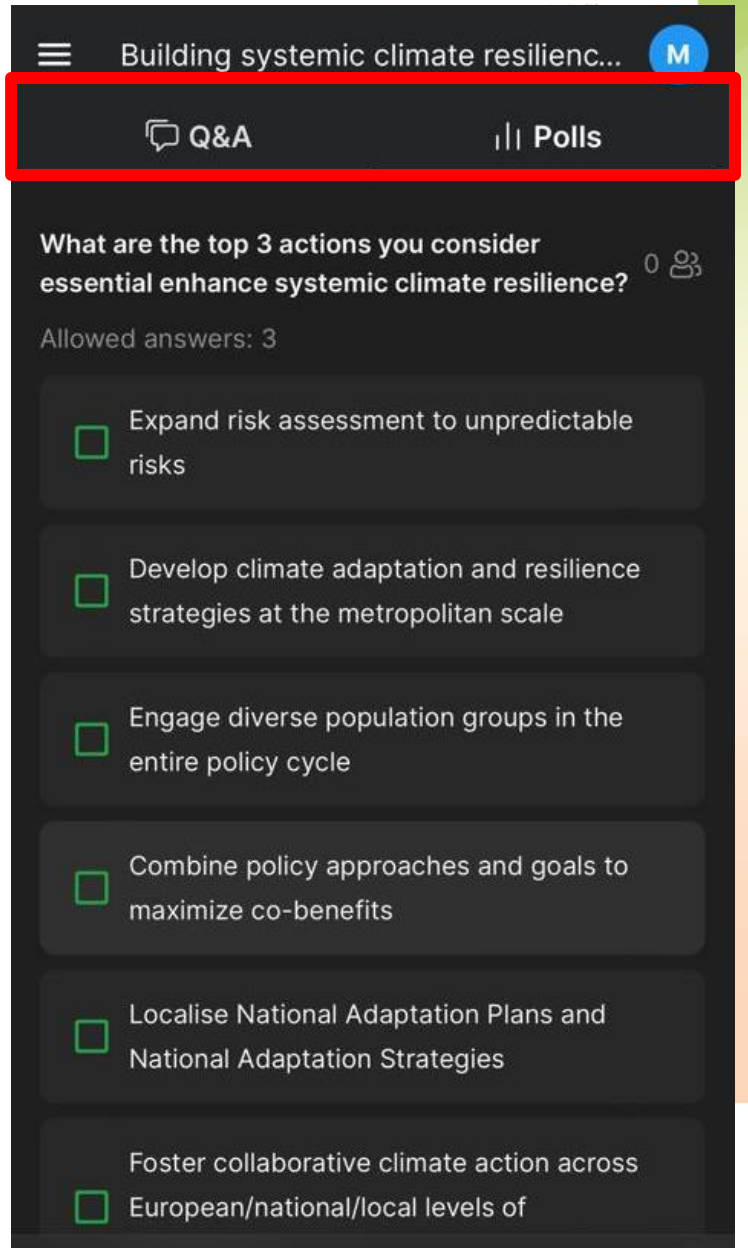

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New Challenges for Europe's Cohesion

Setting the scene:
TRANSFORMATIVE ROLE OF CITIES IN BUILDING SYSTEMIC CLIMATE RESILIENCE

Tadashi Matsumoto
Head of Unit, Sustainable Development and Global Relations

OECD

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Objectives and structure of the OECD project: on Building Climate and Economic Resilience in the Low-carbon Transition

- Ensuring that climate change is at the heart of thinking on economic resilience in the recovery from COVID-19 and in the face of ongoing disruptions
- As climate risks rise, recognising that climate cuts across all policy areas, requires systems thinking and a better understanding of non-linear effects and tipping points
- A key part of the new OECD-wide approach to climate, drawing on OECD's full multi-disciplinarity to develop concrete policy recommendations across four modules:

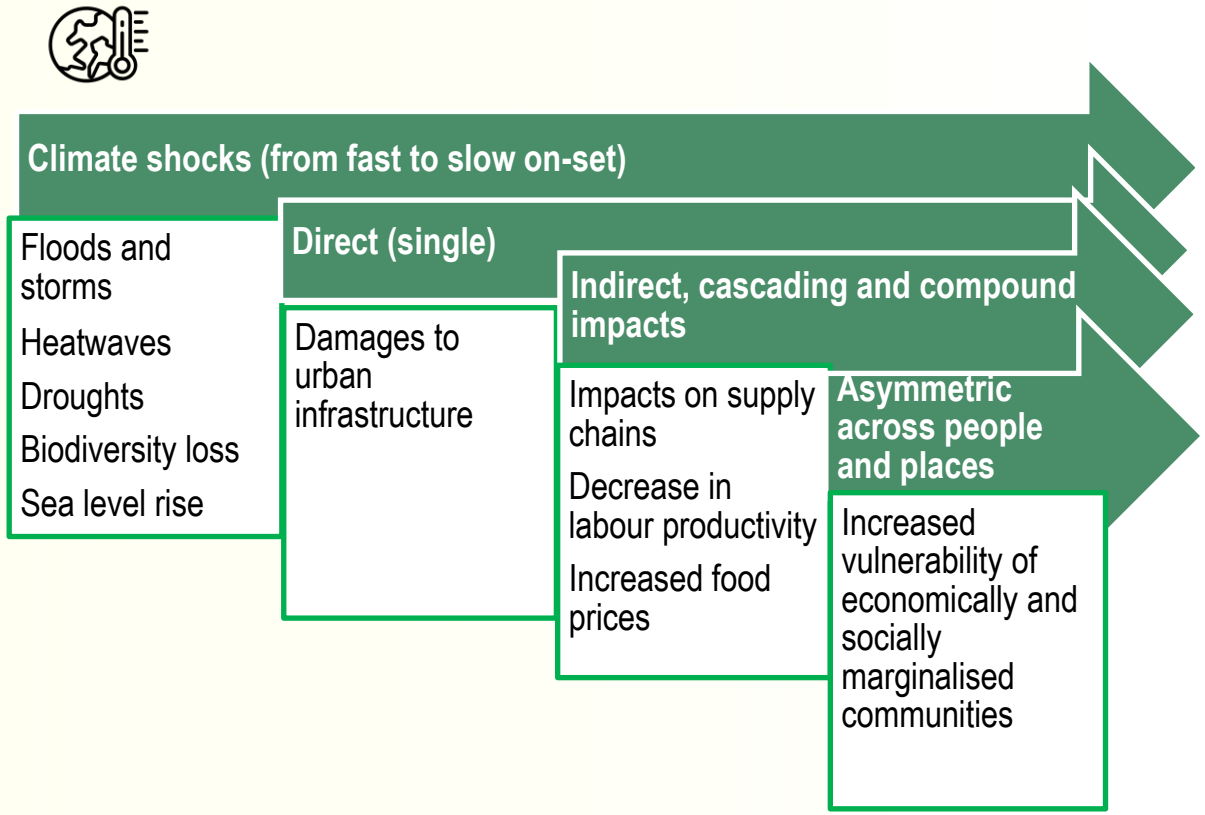
1. Reframing the climate challenge after COVID-19

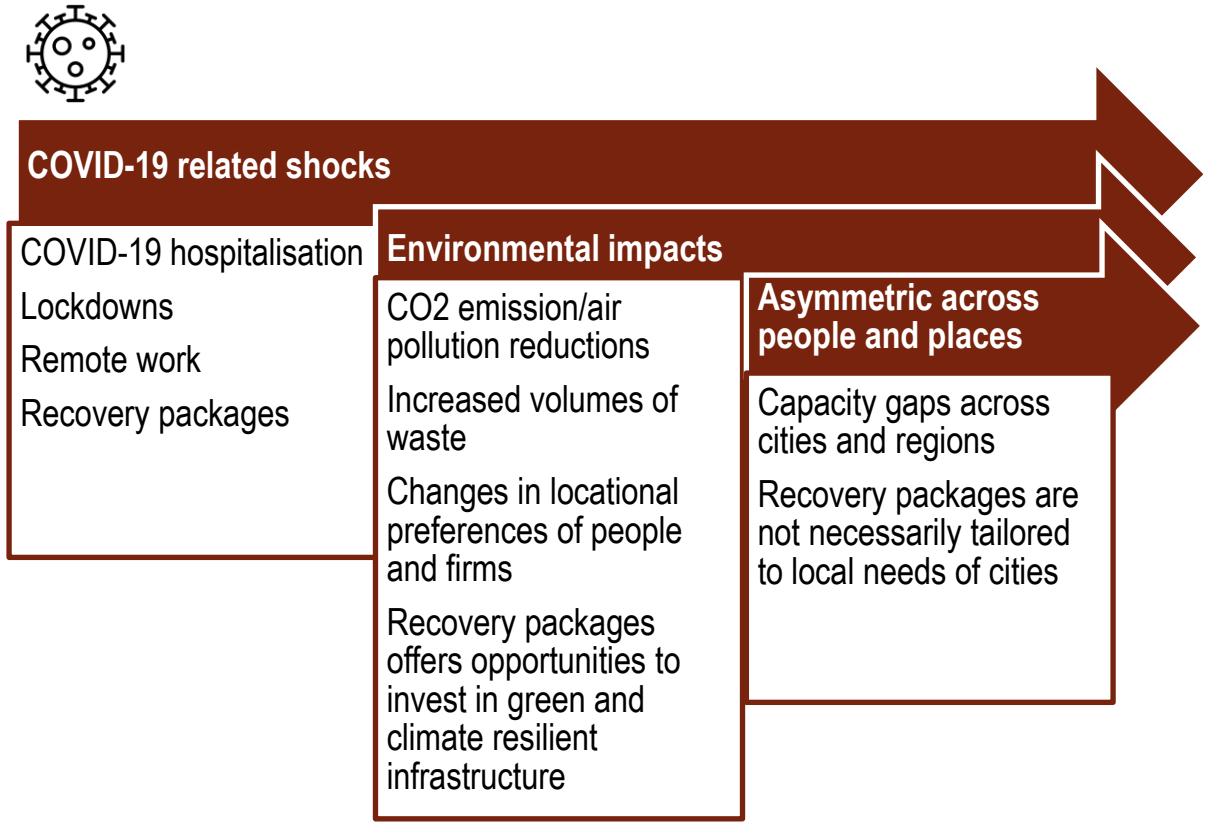
2. Accelerating the transition to net-zero emissions

3. Building Systemic Resilience to climate impacts

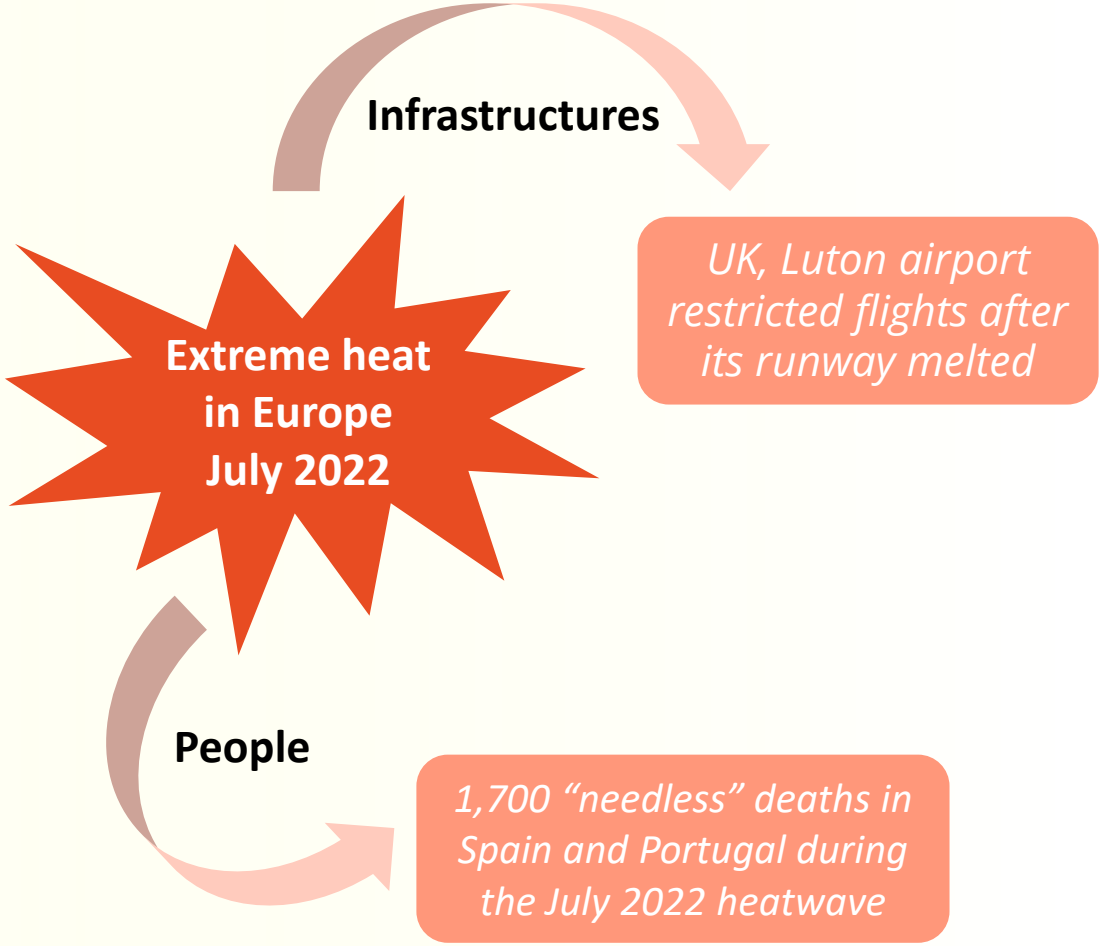
4. IPAC: Tracking progress towards climate goals

Climate shocks affect systems in cities, while shocks in other systems, in turn, affect climate

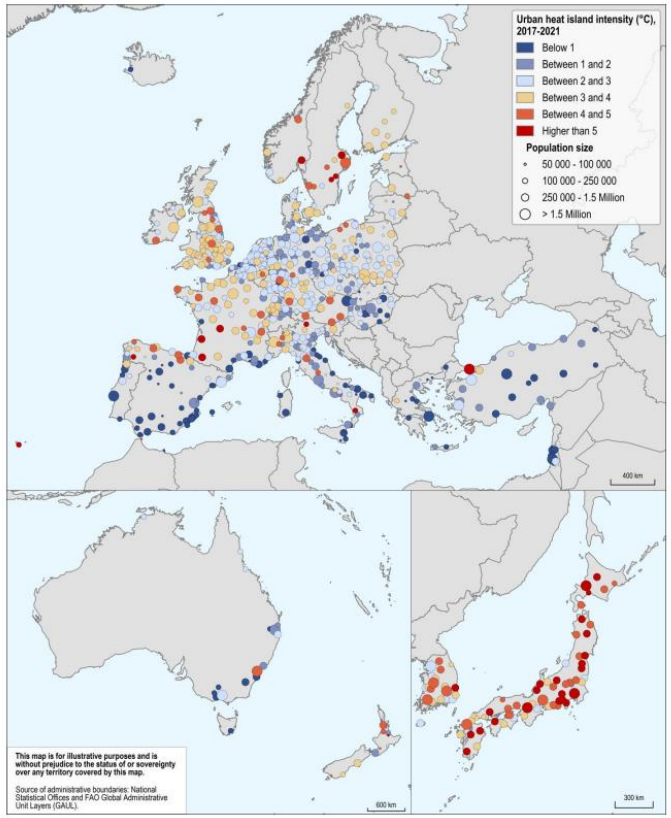




Extreme heat in cities affects people and infrastructures



Built-up lands in cities with more than 250 000 inhabitants are on average 3°C warmer than their surrounding area, this difference being almost twice as high as in cites with less than 100 000 inhabitants



(OECD, Forthcoming)

Key elements of systemic resilience in cities

Better understanding of **complex climate risks** in cities

Addressing **asymmetric impacts** across people and places

Synergies and **co-benefits** with other systems in cities

Co-ordination and engagement among diverse actors

Policy approaches to build systemic resilience

Expand risk assessment to unpredictable risks	*Climate Risk Assessment in UK*
Develop climate adaptation and resilience strategies at the metropolitan scale	*Disaster Mitigation and Adaptation Fund, Canada*
Combine policy approaches and goals to maximize co-benefits	*Multifunctional water management and green infrastructure in Rouen (France), Categorising heatwaves in Seville (Spain)*
Localise National Adaptation Plans and National Adaptation Strategies	*Resource Center for Climate Adaptation in France, National Climate Resilience and Adaptation Strategy in Australia*
Foster collaborative climate action across national/local levels of government	*Green roof strategy in Basel (Switzerland)*
Engage diverse population groups in multiple systems	*Local Energy and Climate Pact (LECP) in Flanders (Belgium)*

Project history and next steps

- ✓ Scoping note of Building Systemic Climate Resilience in Cities – MAY 2022
- ✓ OECD Workshop on Building Systemic Climate Resilience – JULY 2022
- **Workshop at the EU Week of Regions and Cities - TODAY**
- **Policy Paper – Q1 2023**
- **Synthesis Report of the horizontal project – Q2 2023**

Thank you

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Website: www.oecd.org/cfe

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Panel discussion

New Challenges for Europe's Cohesion

Moderator

Mikaela Rambali
Policy Analyst
Climate Resilience and Adaptation, Environment Directorate

OECD

Presenters

Elisa Vivares
Head of Division of Territorial Development and Urban Policy

Ministry of Territorial Cohesion, Portugal

Seosamh Ó Laoi
Climate Adaptation Policy, Aarhus, Climate Adaptation and Engagement Division

Department of the Environment, Climate and Communications, Irish Government

Lykke Leonardsen,
Program Director for Resilient and Sustainable City Solutions

City of Copenhagen

Noémie Fompeyrine
Head of Resilience, Strategic Foresight, Research & Innovation

City of Paris

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Questions for discussion

New Challenges for Europe's Cohesion

- What are the main **climate shocks** in your city/country? How do they relate to other economic, social, health and environmental shocks? How do these shocks affect across **people and places**? Who and which places affect most?
- How do you **assess/measure** such climate-related risks? To what extent do you consider indirect, cascading or compounding risks in your assessment/measurement frameworks?
- What are **key elements and policy approaches** for you to build systemic climate resilience in your city/country? What are practices that are put in place / being considered?
- Which mechanisms, tools and processes can help generate **synergies and co-benefits** rather than trade-offs in addressing multiple policy objectives?
- What are key actions you are taking to enhance **horizontal / vertical co-ordination** among and across levels of government vital (in addressing complex climate risks / shocks in cities)?

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New Challenges for Europe's Cohesion

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Elisa Vivares
Head of Division of Territorial Development and Urban Policy

Ministry of Territorial Cohesion
Portugal

#EURegionsWeek

:

If nature has become territory, it makes little sense to talk about an “ecological crisis”, “environmental problems” or a “biosphere” to be rediscovered, spared or protected. The challenge is much more vital, more existential than that – and also much more comprehensible, because it is much more direct. When the rug is pulled out from under your feet, you understand at once that you are going to have to be concerned with the floor…

Bruno Latour,
Down to Earth, Politics in the new Climatic Regime

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New Challenges for Europe's Cohesion

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Lykke Leonardsen
Program Director for Resilient and Sustainable City Solutions

City of Copenhagen

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Copenhagen City

Lykke Leonardsen

Instagram: @meetcopenhagen
#meetcopenhagencity

COPENHAGEN
CAPITAL OF DENMARK

INHABITANTS

Municipality 632.000

Copenhagen area 1.300.000

Greater Copenhagen 3.900.000

Total area 77 ^{2}

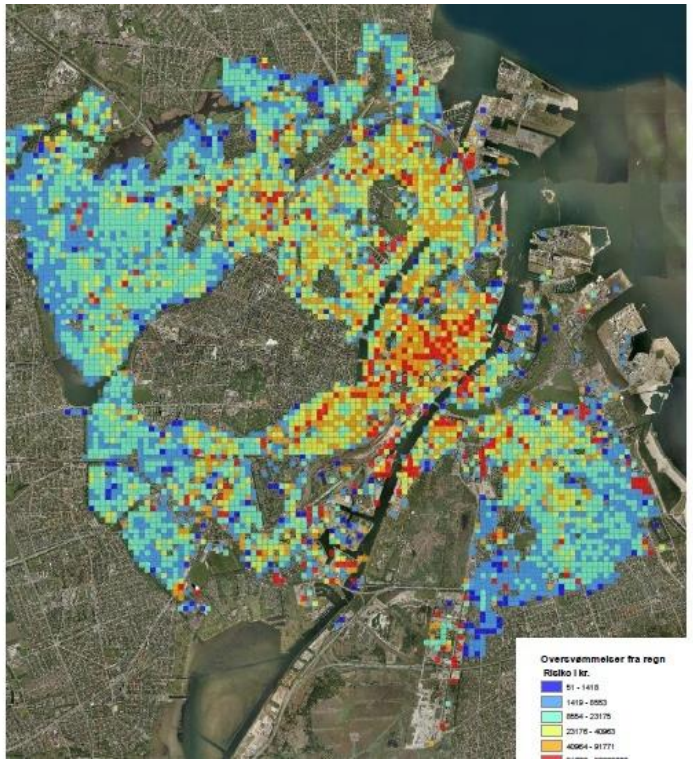
8.200 inhabitants/km^{2}

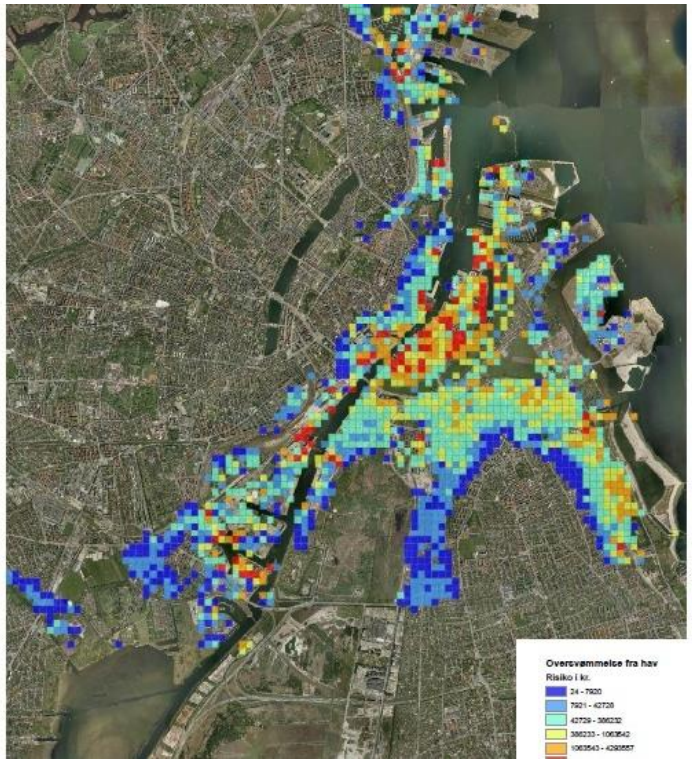
800 new inhabitants per month

Average age 36 years


2018

THE CHALLENGES





July 2011 –

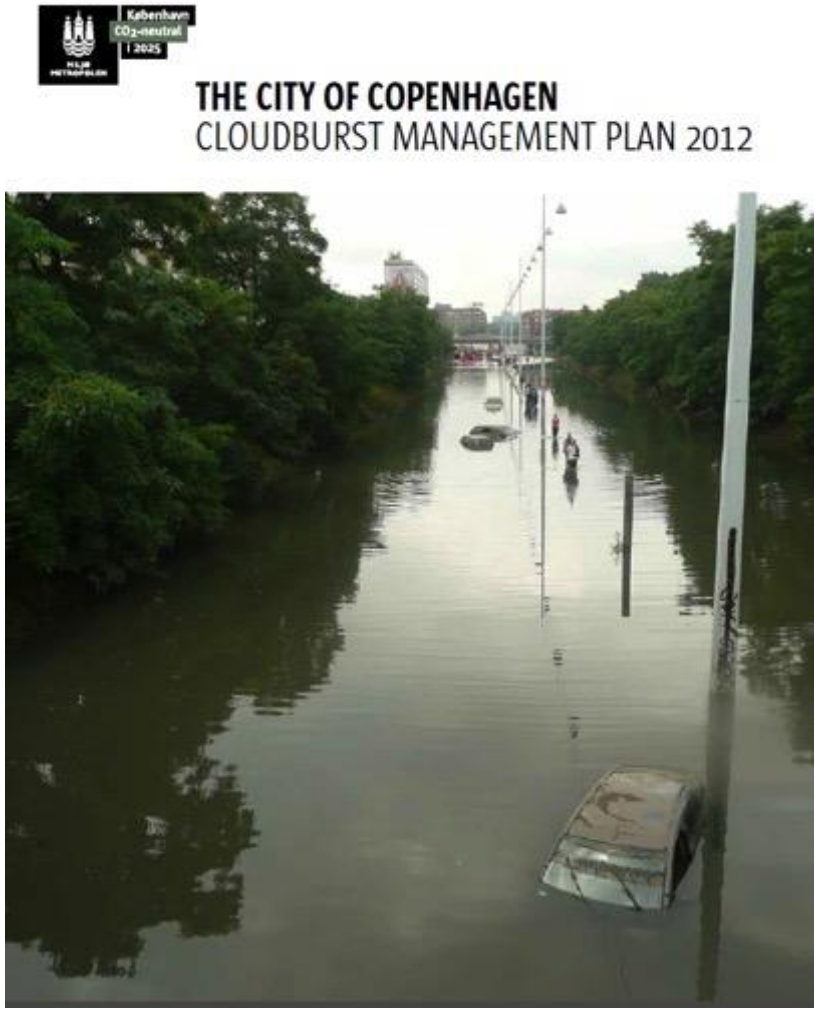
1000 year storm

- 150 mm rain in 2 hours
- Damages 1 billion dollars
- Damages to critical infrastructure
- A game changer for the city
- Development of a Cloudburst management Plan

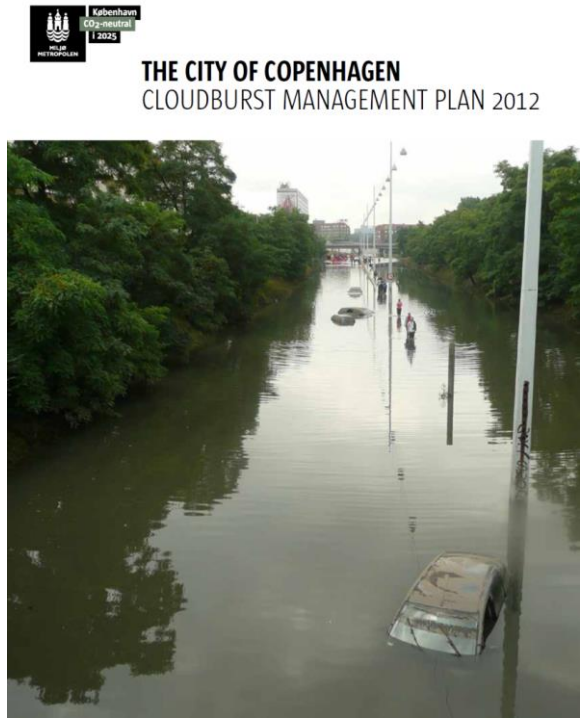
Cloudburst management plan vision

Service level: Max 10 cm of water in the streets in a 100 year rain event

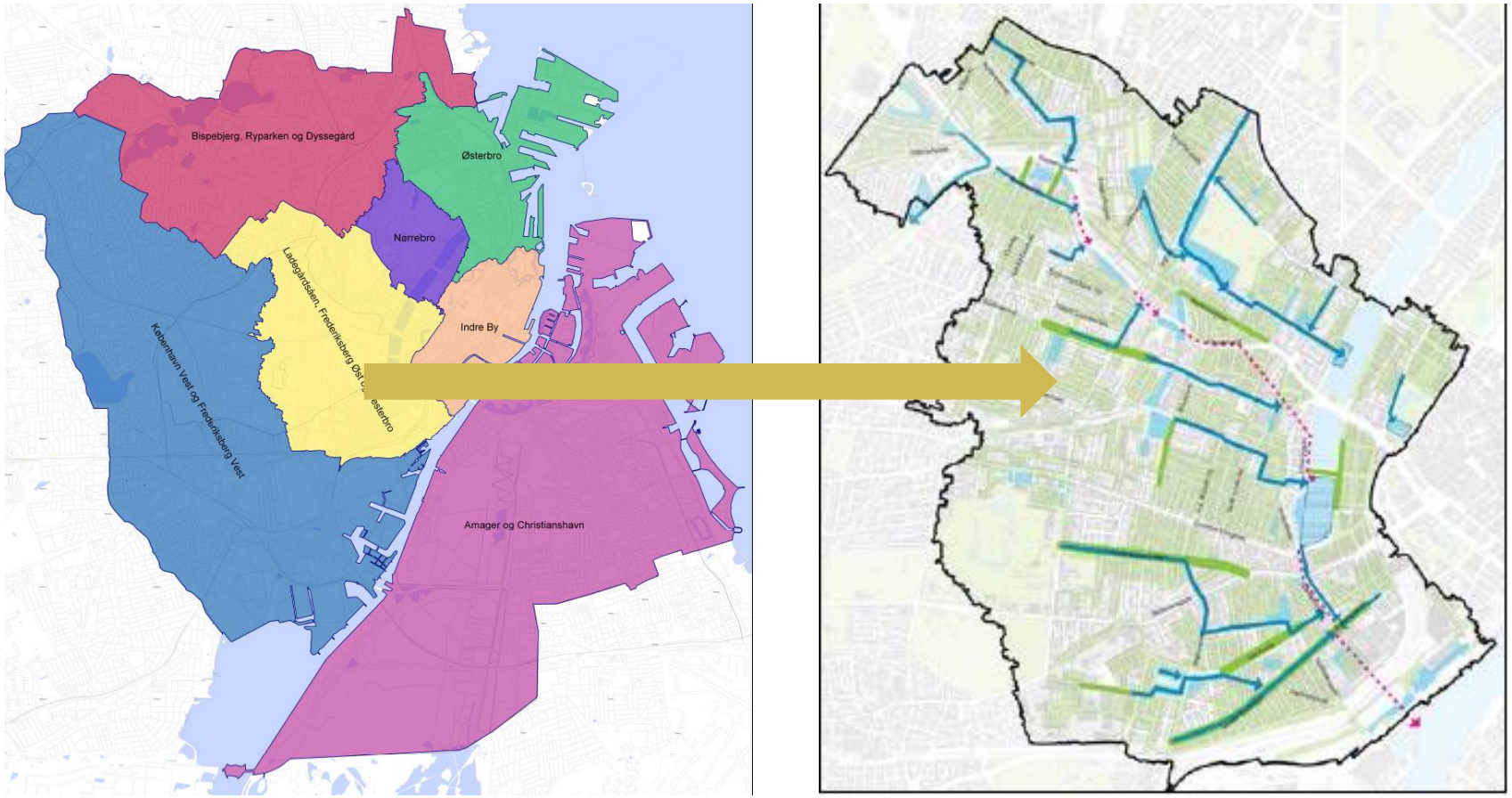
- The utility takes care of the water management on public land
  - The city takes care of urban space improvement in connection with cloudburst measures
  - Private landowners have to protect their own building and finance measures on private land



Following the natural flow of water

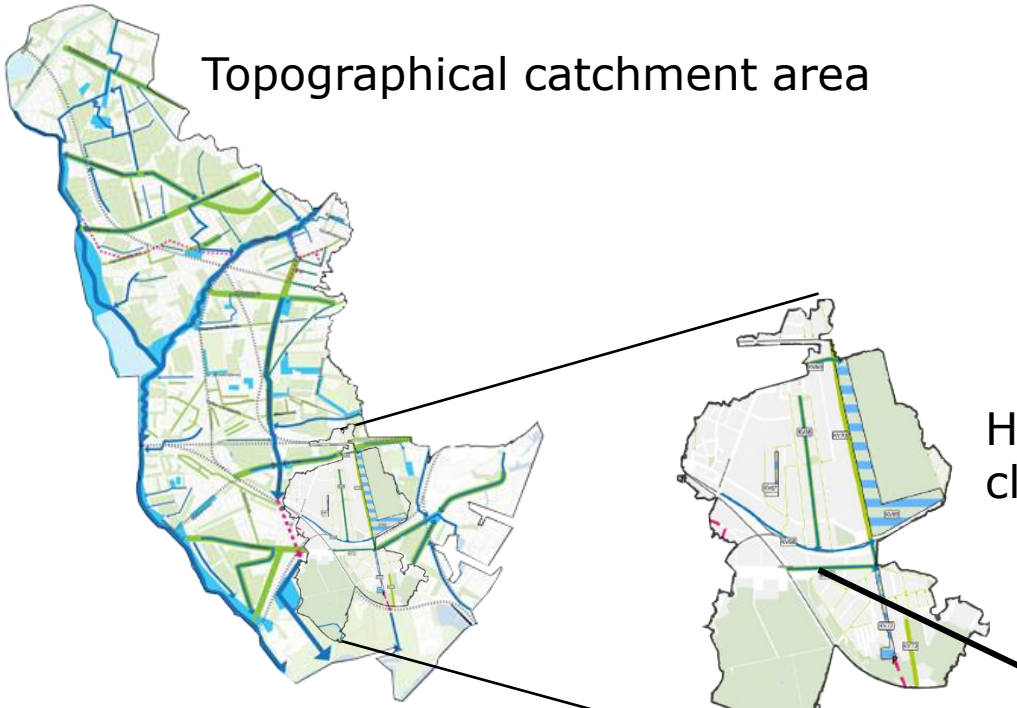


Dividing the city into catchments



City of Copenhag

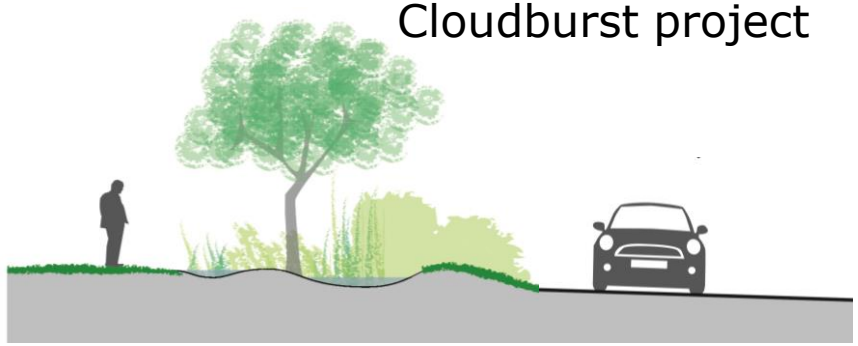
Masterplanning: New approach



Topographical catchment area

Hydraulically coherent cloudburst branch

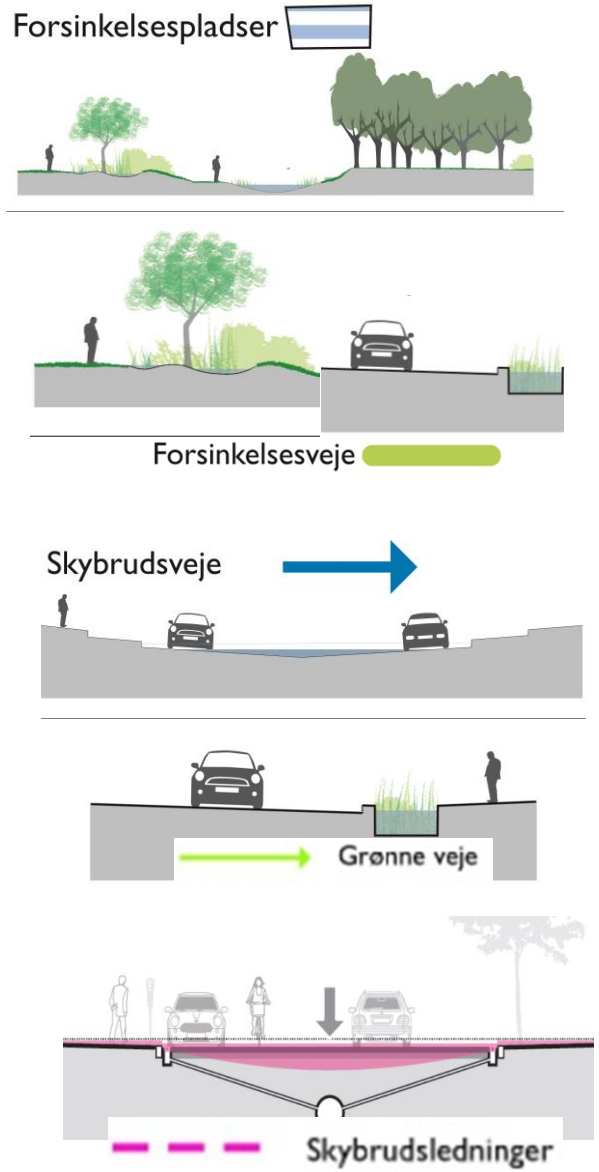
Implementation of Cloudburst project



The updated approach means better hydraulic synergy in the projects, as well as having a higher detail level

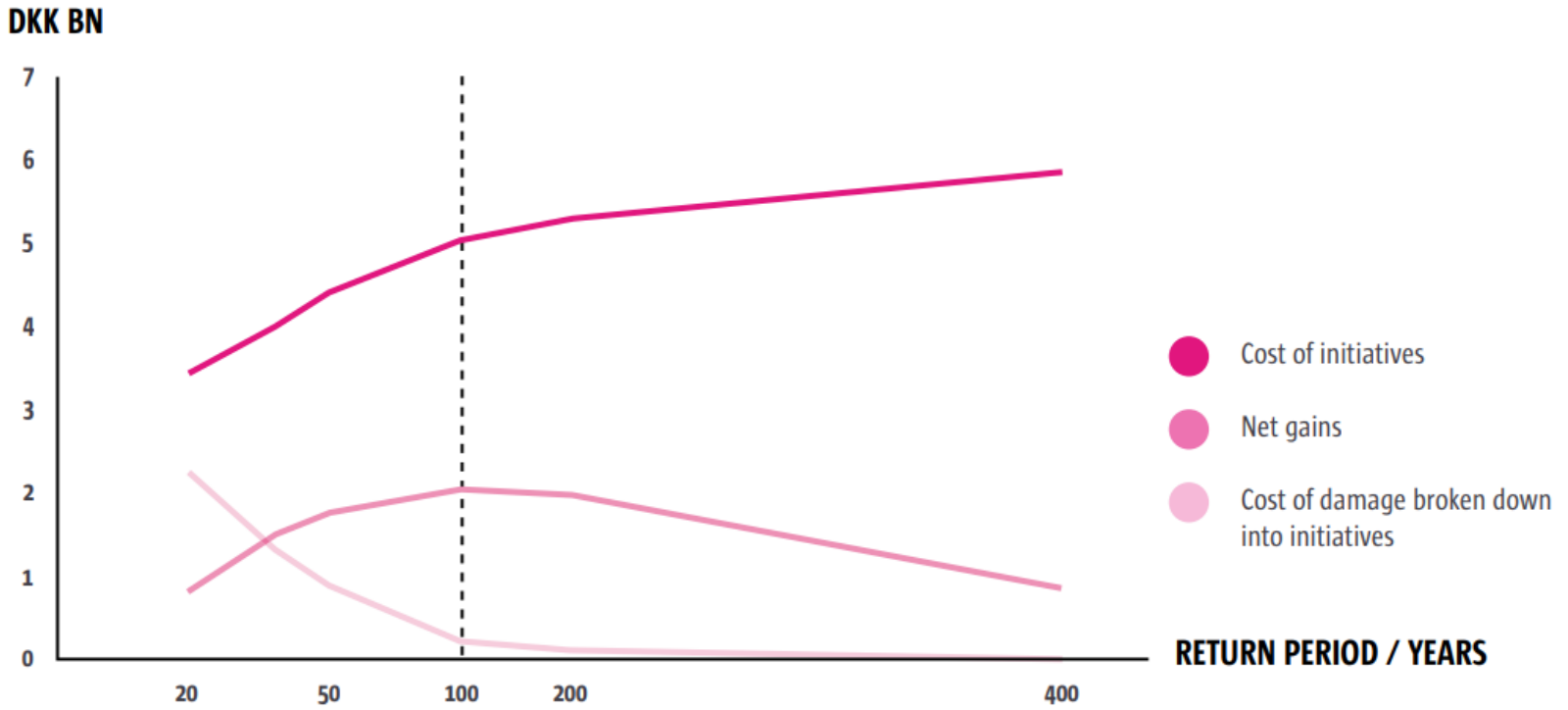
How do we manage the water

1. **Central delays – for storing water**
2. **Retention boulevards – delaying water**
3. **Cloudburst boulevards – transporting water**
4. **Green roads – transport and delay of water on small roads**
5. **Pipes transportation under ground**



How did we do it?

- Investments in a combination of measures able to handle extreme rainfall events and reduce the impact on the drainage system on all other precipitation days
- Providing the biggest socio-economic savings on damage costs resulting from intensive rainfall compared to the cost of implementing the measures;
  - Draining water to the sea
  - Storing stormwater
- Change in national legislation



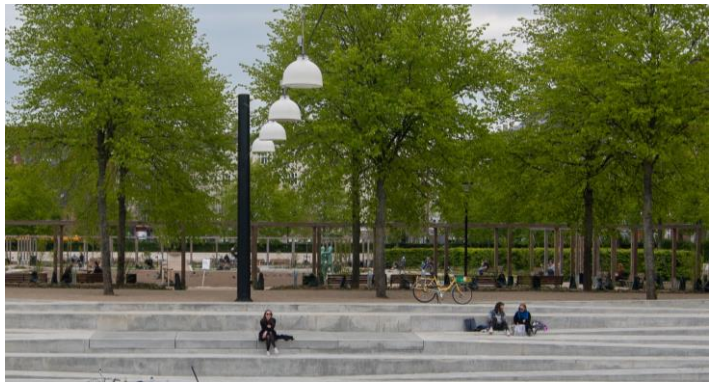
Financing: A new scheme for climate adaptation

'Co-financing' makes it possible to finance CLIMATE ADAPTATION SOLUTIONS through the water rates.

URBAN SPACE IMPROVEMENTS on the other hand is tax-financed and is therefore part of the city budget.

Multifunctional solutions

- Allows us to use adaptation to transform the city as part of the adaptation process
- Adaptation as the backbone for urban development



Climate adaptation – with co-benefits

- Recreational value
- Biodiversity
- Meeting places – social resilience
- Health
- Improved microclimate
- Accessibility and safety
- Economic growth

Measures connected

350 individual projects

Implementation period: 20-30 Years

Total cost: EUR 1.6 bill.

Utility: EUR 1.15 bill.

Tåsinge Square – the first water park

Sct Kjelds square/Bryggervangen

Sct Kjelds Square/Bryggervangen

Sct Annæ Square - before

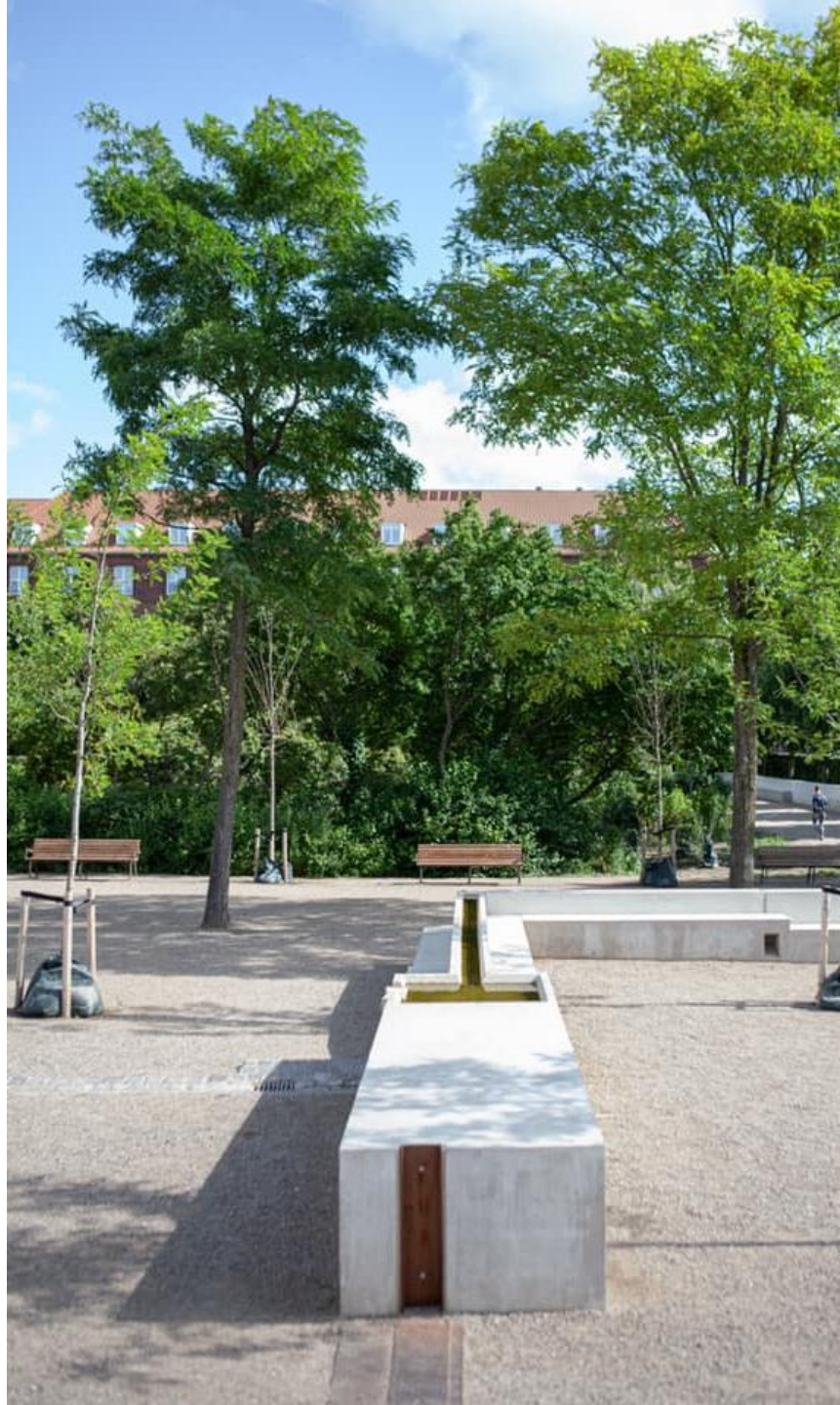
Sct Annæ Square - after

Scandiagade

Scandiagade

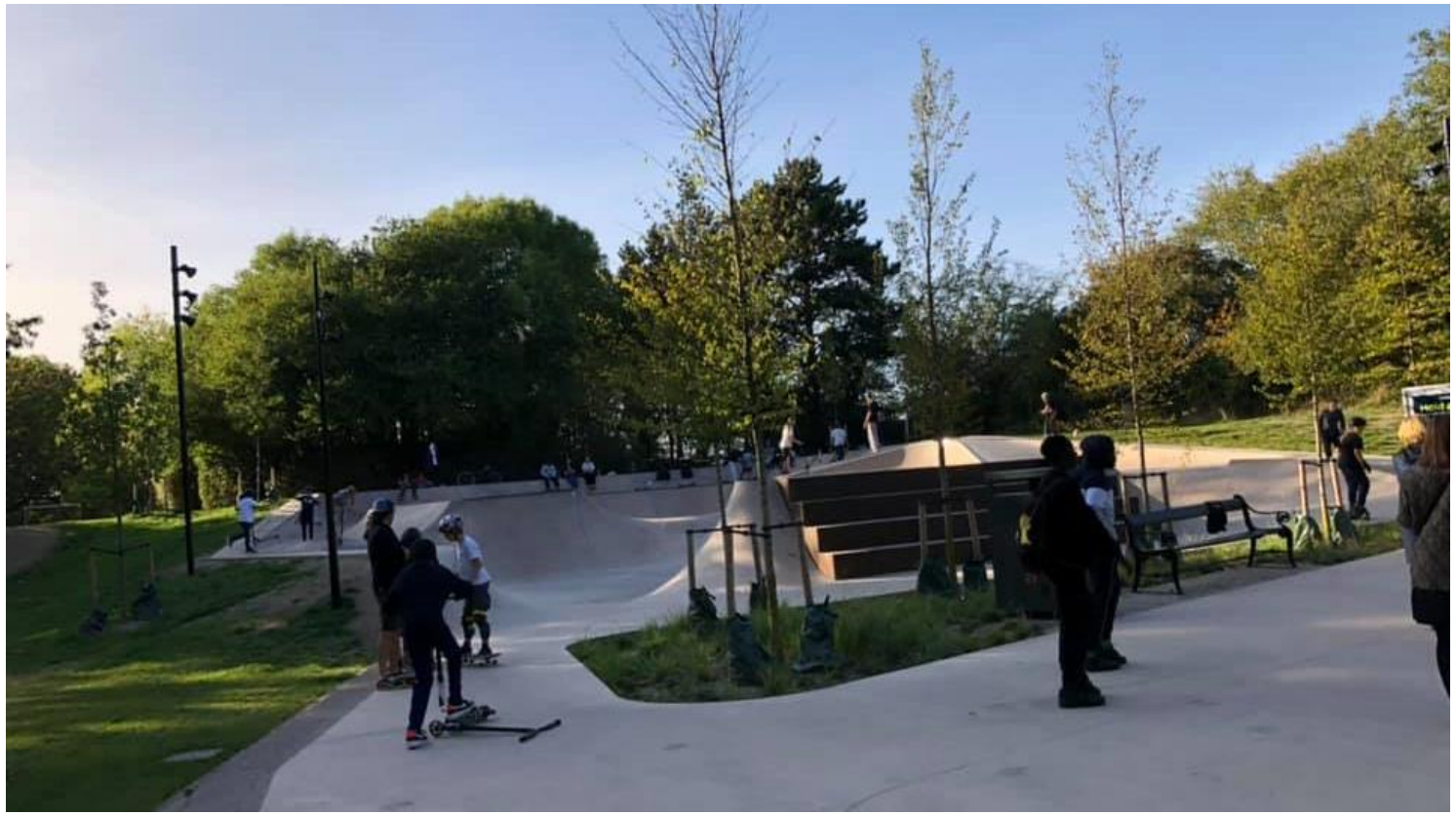
Enghave Park

Enghave Park



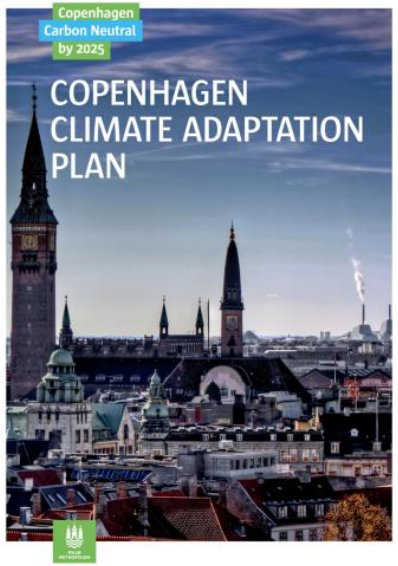
Remiseparken

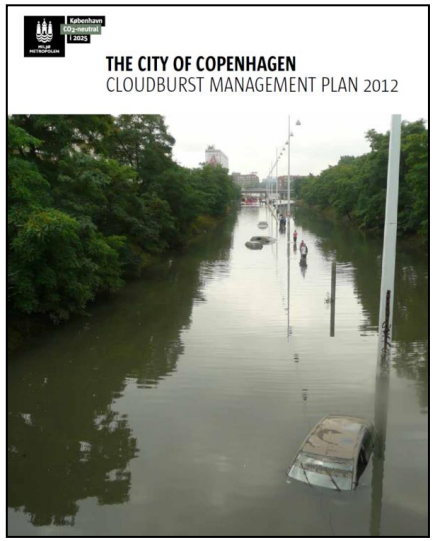
Remiseparken

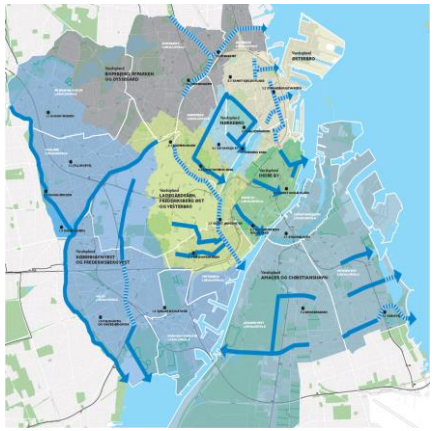


- Dynamic planning is not easy
- Involve all city agencies from the beginning!
- Constant organisational and political backup
- Economic – keeping prices low – and keeping adaptation from stopping economic development
- Different wishes to urban life – how do we fit in?
- We need to work within the existing infrastructure in the city
- Clash of professions

TIME LINE OF ADAPTATION PROCESS IN COPENHAGEN







August 2011

Plan approved by City Council

December 2012

Plan approved by City Council

2013-2014

Preparation af plan for each water catchment area

November, 2015

Political decision for implementation

Thanks for listening

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Noémie Fompeyrine
Head of Resilience, Strategic Foresight, Research & Innovation

City of Paris

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Seosamh Ó Laoi
Climate Adaptation Policy, Aarhus, Climate Adaptation and Engagement Division

Department of the Environment, Climate and Communications, Irish Government

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An Roinn Comhshaoil,
Aeráide agus Cumarsáide
Department of the Environment,
Climate and Communications

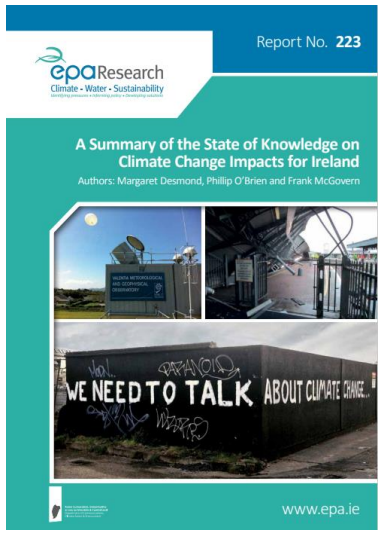
An overview of local adaptation in Ireland

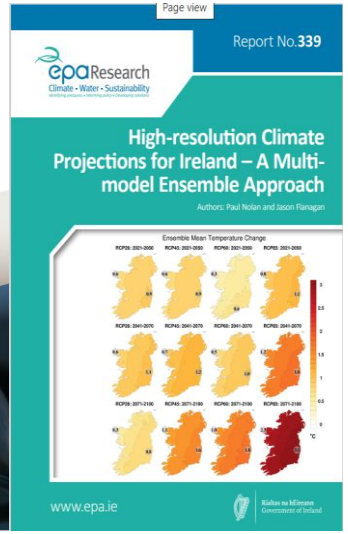
Seosamh Ó Laoi

11 October, 2022

Climate Impacts- Ireland

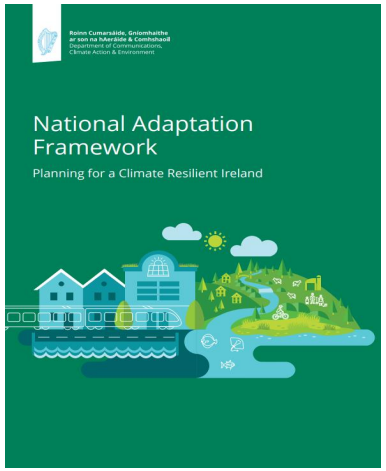
- Observations show that Ireland's climate is changing in terms of sea level rise, increases in average temperature, changes in precipitation patterns and weather extremes.
- Temperatures have increased by about 0.9°C over the period from 1900 to 2019 - an average of about 0.075°C per decade.
- The overall trend is upwards and consistent with global patterns of change.
- Climate change is expected to have diverse and wide-ranging impacts on Ireland's environment, society and economic development, including on managed and natural ecosystems, water resources, agriculture and food security, human health and coastal zones.
- The most immediate risks to Ireland from climate change are predominantly those associated with changes in extremes, such as floods, droughts and storms.
- Our understanding of the impacts of climate change continues to be updated via research undertaken across Government(see panels across).

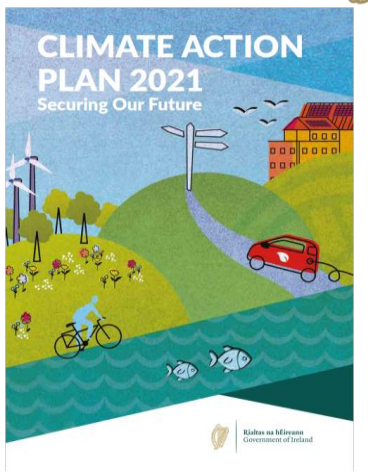




National Adaptation Policy

- **Legislative basis for adaptation policy set out in Climate Action and Low Carbon Development Act 2015 and Climate Action and Low Carbon Development (Amendment) Act 2021.**
  - *Requirement to prepare a National Adaptation Framework(2018) and review periodically.*
  - *Requirement for Departments to prepare sectoral plans covering key adaptation relevant sectors under their remit.*
  - *Annual Climate Action Plans to include adaptation measures.*
  - *Local Authorities to prepare LACAPs covering mitigation and adaptation developed in line with National Guidelines(every 5 years)*





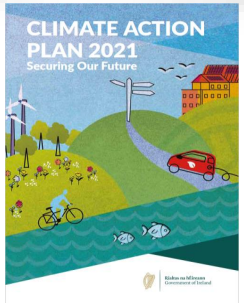
Theme	Sector Level	Lead Department for Sectoral Adaptation Plans
Natural and Cultural Capital	Seafood	Department of Agriculture, Food and the Marine
	Agriculture	
	Forestry	
	Biodiversity	Department of Housing, Local Government and Heritage
	Built and Archaeological Heritage	
Critical Infrastructure	Transport Infrastructure	Department of Transport
	Electricity and Gas Networks	Department of the Environment, Climate and Communications
	Communications Networks	
Water Resource and Flood Risk Management	Flood Risk Management	Office of Public Works
	Water Quality	Department of Housing, Local Government and Heritage
	Water Services Infrastructure	
Public Health	Health	Department of Health

National Adaptation Policy

- 9 Sectoral Plans were completed in 2019 covering 12 key sectors identified by Government. Plans will be updated over time and new priority sectors identified.

- Local Adaptation Strategies prepared in 2019 under NAF by all 31 local authorities._National Guidelines(2018) developed to ensure consistency. New requirement for Local Authority Climate Action Plans(LACAPs)

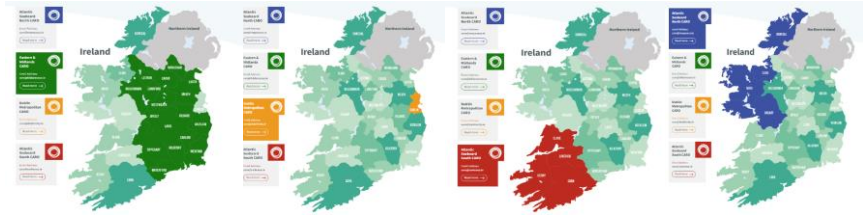
- Chapter 21 of Climate Action Plan covers adaptation. Other adaptation measures included in other relevant chapters such as Transport, Agriculture and Built Environment. Still need to fully align with national adaptation policy and planning.



Climate Action Regional Offices(CAROs)

- Established in 2018, business case developed by LAs , www.caro.ie
- €10 million commitment by D/ECC over 5 years.
- Lead local authority running each office.
- 4 Offices in total.
- Annual work programme covers all 4 offices.
- Regional coordinators plus small team of staff in each office.
- Coordinate and support adaptation planning across their regions.
- Initial focus on adaptation but role has expanded to mitigation.
- Currently coordinating development of Guidelines for development of Local Authority Climate Action Plans required under Climate Act
- Budget commitment renewed and increased for next 5 years.

Climate Action Region	Local Authority Functional Area	Lead Authority	Coordinator
Atlantic Seaboard North	Donegal, Sligo, Mayo and Galway City and County	Mayo County Council	David Mellett dmellett@mayococo.ie
Atlantic Seaboard South	Clare, Limerick, Kerry, Cork County and Cork City	Cork County Council	Kevin Motherway Kevin.Motherway@CorkCoCo.ie
Dublin Metropolitan Region	South Dublin, Fingal, Dun Laoghaire-Rathdown and Dublin City	Dublin City Council	David Dodd david.dodd@dublincity.ie
Eastern and Midlands	Louth, Meath, Wicklow, Wexford, Kildare, Carlow, Kilkenny, Laois, Offaly, Westmeath, Longford, Leitrim, Tipperary, Cavan, Monaghan, Roscommon and Waterford	Kildare County Council	Breda Maher bmaher@kildarecoco.ie



CARO

Local Authority Adaptation Strategies

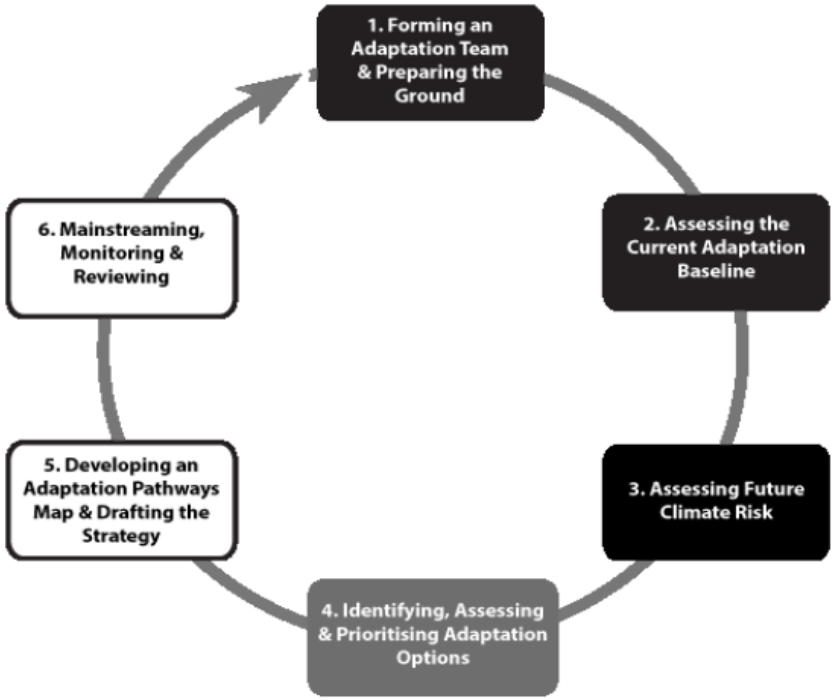
- e.g. Kildare County Council

Extreme Weather Events

Increased frequency & intensity of storms

Longer periods of drought

Extreme rainfall leading to flooding



Local Authority Adaptation Strategies

e.g. Kildare County Council

121 Actions across six Goals:

- **Grey**: Technical/Engineering
- **Green**: Natural environment
- **Soft**: Policy, Influence behaviour

Actions also encourage climate change mitigation

CARO – project examples

Project: Review of Coastal Erosion/Sea Level Rise Implications

The CARO working with the local https://www.fingal.ie/site-rity-coastal-erosion-policy in the ASBS region carried out a review of coastal erosion challenges and requirements of local authorities.

The report updates some of the findings of the 2017 Fingal County Council "Local Authority Coastal Erosion Policy and Practice Audit" and expands on the scope by considering further sources of information available since the document was published.

The report was presented to LA Climate Action Steering Group and National Coastal Change Management Strategy Steering Group and to the CCMA CATN Committee in September. Approval was received from the CATN Committee to progress to a Scoping Project (Phase 1). This project will look at the development of guidance and training requirements for Local Authorities in the area of coastal erosion.

Project: Exploiting Economic Opportunities from Climate Action

This project was established to identify ways in which local government could promote economic activity arising from climate action, through its economic development remit. The initial stages of of the project included analysis of climate action policy at EU, national, regional and local levels.

A Project Steering group was formed and chaired by Ms Anna-Marie Delaney, CE Offaly County Council on behalf of the CCMA Business, Enterprise, Innovation and Urban/Rural Development committee. Maynooth University were engaged to survey local authorities, including LEOs to ascertain the capacity challenges within the sector and to complete a policy analysis report.

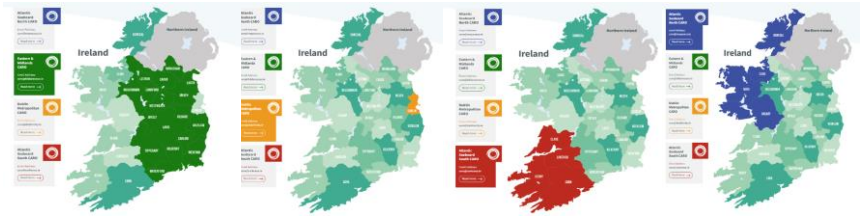
Project: Development of the WIRE App

The local authority adaptation strategies identified the need to gather and organise data on the impacts of weather events locally in order to inform climate adaptation planning into the future.

The Weather Impact Register, or WIRE App, was developed by CARO and supported by the Public Sector Innovation Fund to help meet this need. The system provides a GIS based tool to help local authorities to record and review the impacts of weather events and climate trends in their areas. A supporting App was developed to assist in gathering the weather impact information and targeted at those local authority staff that will be on the ground responding to these events as part of the emergency response teams.

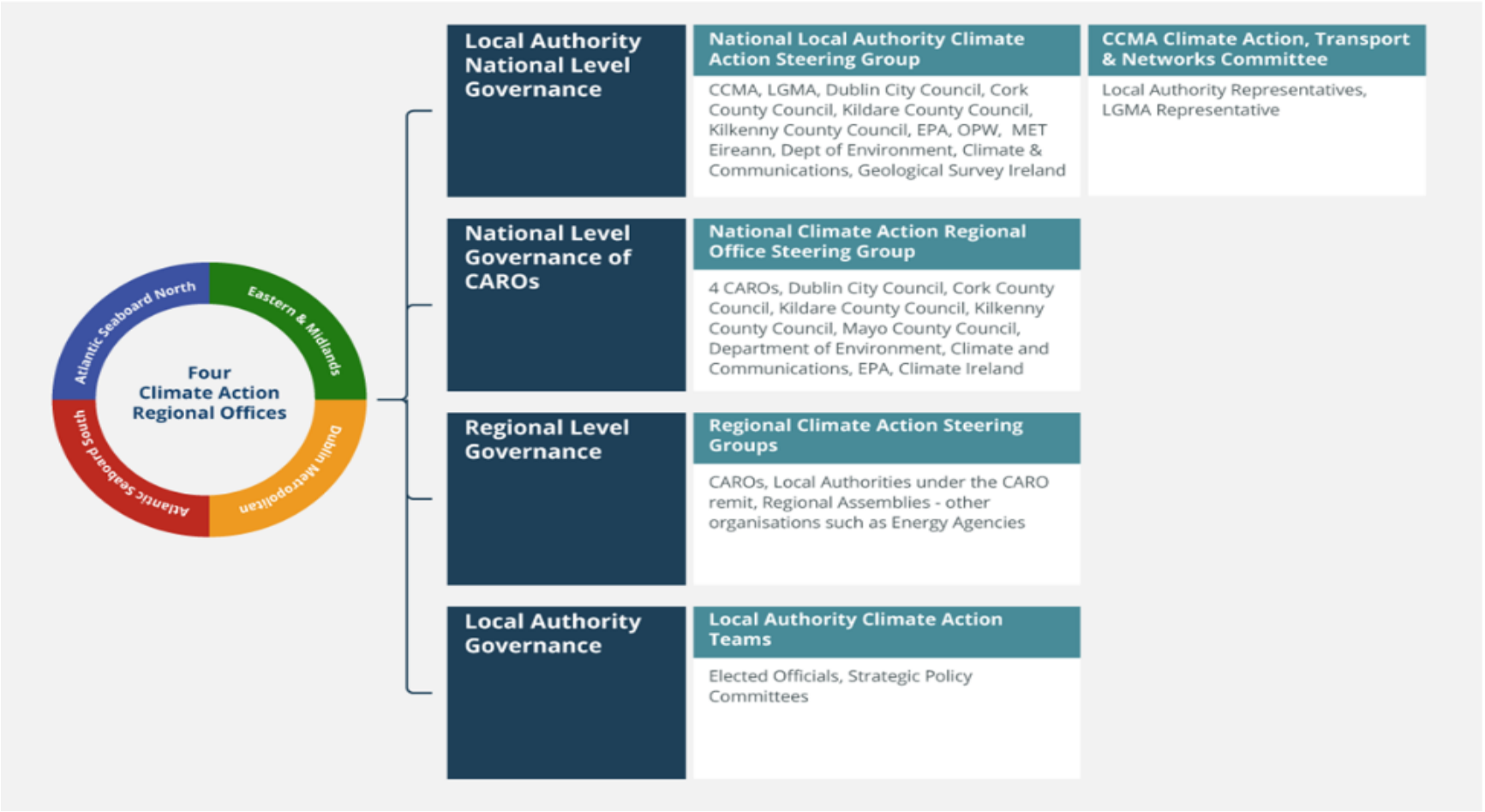
Project: Development of Guidance on Climate Adaptation of Regional & Local Roads

Phase 1: Scoping (Status: Complete); work included engagement with all 31 LAs to identify gaps in existing guidance/systems. CARO ASBS prepared a Scoping Document following research into existing asset management systems, risk assessments and prioritisation methodologies. The final report was issued in January 2021 and outlined recommendations, key requirements and topics to be considered in the guidance notes in Phase 2 and included the appointment of an engineering services consultant.



CARO

CARO- Governance



Local Authority Climate Action Training Programme

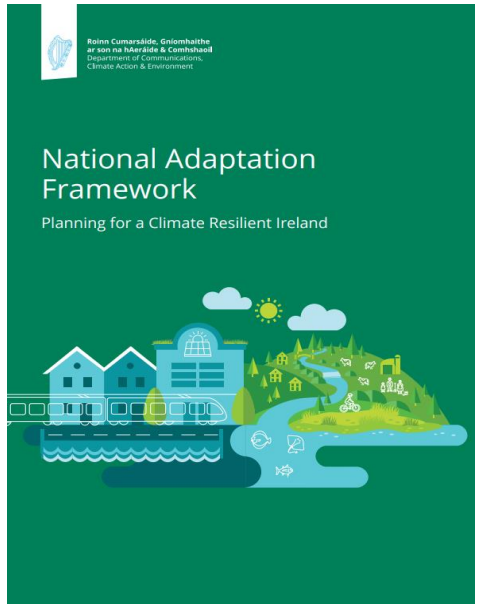
- Funding provided by D/ECC to implement the Local Authority Climate Action Training Plan(2019).
- Programme managed by Kildare County Council, Tipperary County Council and Local Authority Services National Training Group (LASNTG)
- Suite of six training pillars, each tailored and designed to specific target groupings with Local Authorities(see panel across).
- Courses to date have targeted
    - *LA leadership*
    - *Climate action teams*
    - *Online climate action training for all LA grades.*
    - *LA planners*
    - *LA staff involved in Flood risk management*
- Courses in development
    - *LA outdoor staff*
    - *LA Community engagement*
    - *Enterprise.*
- Over 13000 LA staff received online or in person training in 2021.

Local Authority Climate Action Plans(LACAPs)

- The Climate Action and Low Carbon Development Act 2021 was commenced on the 23 July 2021. Section 16 of the Act requires each Local Authority to prepare a climate action plan, specifying the mitigation and adaptation measures to be adopted by the Local Authority.
- Local Authorities will have 12 months to complete their individual plans once requested by the Minister, with the request to be made within 18 months of the coming into operation of the Act.
    - Phase 1: Completion, preparation, and transition
    - Phase 2: Development of Local Authority Climate Action Plan (LACAP)
    - Phase 3: Implementation of LACAP
- DECC is working with the Environmental Protection Agency (EPA), Climate Action Regional Offices (CAROs), Local Authorities, and the Sustainable Energy Authority of Ireland (SEAI) and have finalised a set of statutory guidelines detailing the approach Local Authorities are to take in the development and implementation of Local Authority Climate Action Plans.
- Decarbonisation zones are also being incorporated into the statutory guidelines for Local Authority plans.
- LA CAPs allow for a coherent, consistent and systematic approach that allows for the sharing of resources, delivery of tailored but broadly consistent local strategies, and then a systematic feedback mechanism providing direct input into the delivery of the national CAP.
- This will strengthen the mutual supports between national and local government.

Review of NAF

- Existing NAF currently being reviewed by Department in line with statutory requirements.
- Stakeholder and public consultations to invite views on the review of Ireland's existing NAF.
- Submissions made to this consultation will inform the recommendations to the Minister regarding the NAF that will guide national adaptation priorities over the coming years.
- Focus on examining how to better align local and national (vertical) and across Government(horizontal) as well as between all sectors and local government.



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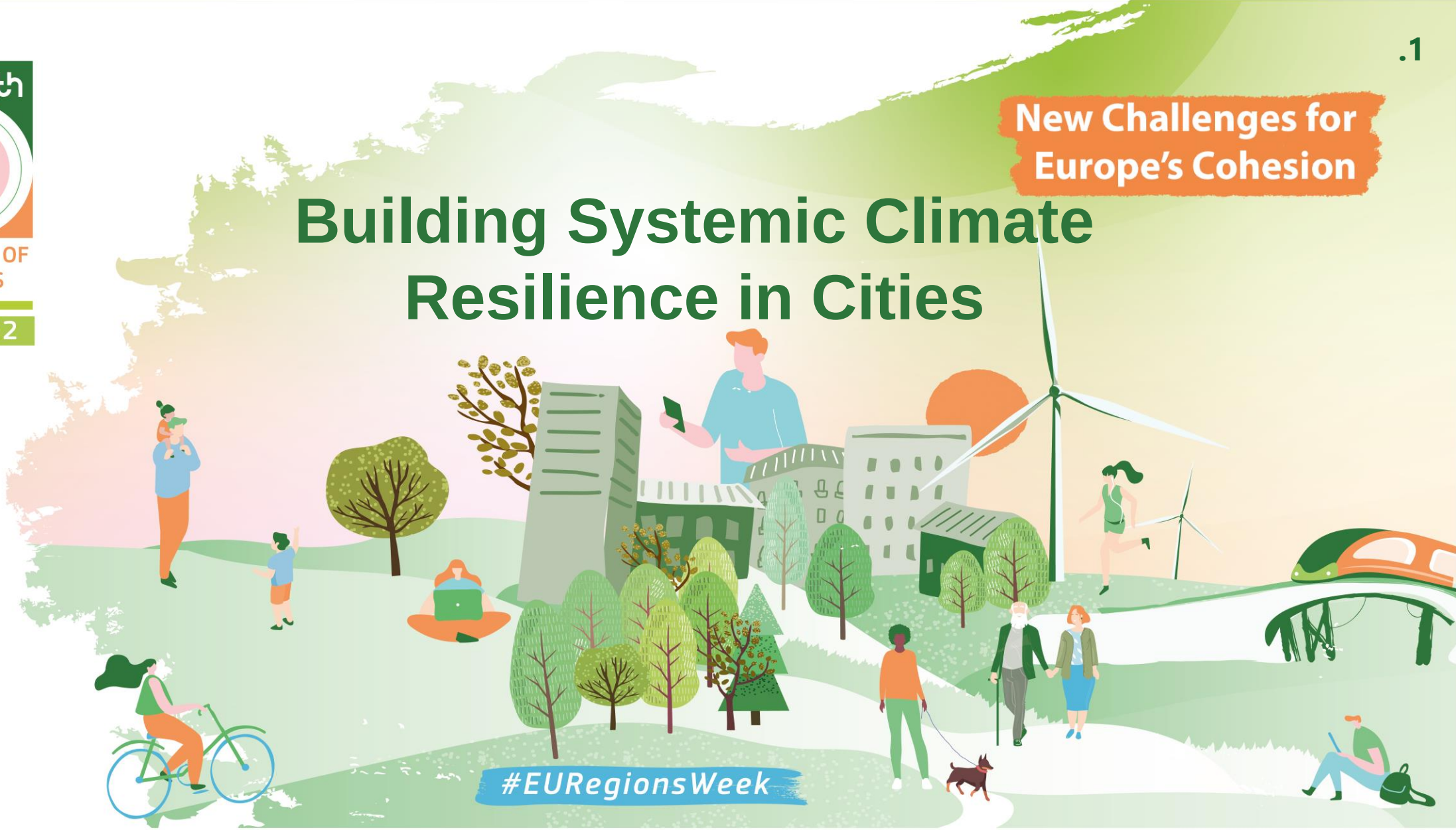

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