Welcome to the First Forum of the Mission on Adaption to Climate Change

We start at 10:00
Join us on Sli.do to submit your questions via
#ForumAdaptation
Join us on Social Media
#MissionClimate
#EUMissions
Opening Statements
Vasco Ilídio Alves Cordeiro
First Vice-President of the European Committee of the Regions, Member of the Regional Parliament of Azores

Frans Timmermans
European Commission’s Executive Vice-President for the European Green Deal

French Presidency of the Council of the European Union
Introduction to the Mission
Clara de la Torre  
Mission Manager

Connie Hedegaard  
Chair of the Mission Board

Kata Tüttő  
Chair of the ENVE commission and Green Deal Going Local working group of the European Committee of the Regions, Deputy Mayor of Budapest

Hans Bruyninckx  
Director European Environment Agency
The mission on adaptation to climate change: Knowledge to drive resilience and equality

Hans Bruyninckx | First Forum – Mission on climate change adaptation | 7 June 2022
EEA support:

- Data and knowledge for regional information on climate risks
- Guidelines and tools for adaptation solutions
- Monitoring/evaluation of implementation progress
- EIONET provides unique capabilities to facilitate implementation

Climate-ADAPT: mission knowledge hub/implementaion platform
The European Climate Risk Assessment

2016: Climate change impacts and vulnerability report

2021: Climate change hazards interactive report

2024: European Climate Risk Assessment

Europe's changing climate hazards — an index-based interactive EEA report

Climate change is happening and we need to get ready for more intense heatwaves, floods and storms, wildfires and water scarcity. Different climate-related hazards affect regions, sectors of the economy and members of society in different ways. Decision-makers need the best data and information to help them understand the imperatives and make the necessary preparations — adapted to the different scenarios and likely consequences. At European, national and sub-national levels, Europe's changing climate hazards, an interactive index-based EEA report, brings it all together with an overview of past and projected changes in Europe's most important climate hazards.
Climate-ADAPT strategy 2022-2024
Sharing knowledge for a climate-resilient Europe

Solutions for action on adaptation

As part of the European Green Deal, the EU launched the new EU Strategy on Adaptation to Climate Change. It complements actions to implement the EU’s long-term vision, which looks forward to 2050…

New EU Strategy on Adaptation to Climate Change

The European Climate Data Explorer provides interactive access to many climate indices from the Copernicus Climate Change Service in support of climate change adaptation.

Go to the European Climate Data Explorer

The European Climate and Health Observatory provides access to a wide range of relevant publications, tools, websites and other resources related to climate change and health.

Go to the European Climate and Health Observatory
European Climate and Health Observatory

We provide easy access to a wide range of relevant publications, tools, websites and other resources related to climate change and human health.

https://climate-adapt.eea.europa.eu/observatory

A knowledge hub with partnership at the core
Action on adaptation in EU Member States: a mixed picture

- All EU Member States (MSs) have a dedicated adaptation policy in place
- All EU MSs have prepared climate change impact assessments
- Some MSs have started evaluation of the strategies and identifying adaptation measures

https://climate-adapt.eea.europa.eu/#t-countries
EIONET: Supporting adaptation implementation at national and subnational level

Who we are

More than 500 institutions
38 countries
around 1500 experts
13 Eionet groups including adaptation
European Topic Centre on Climate change adaptation and LULUCF

What we do

over 50 publications a year
Climate Adapt + European climate and health observatory
European Climate Risk Assessment
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Hans Bruyninckx
Director European Environment Agency
Climate Adaptation in Europe and the Mission

From the EU Adaptation Strategy to regional adaptation plans

Moderator: Elena Višnar Malinovská
Head of Unit, Adaptation & Resilience to climate change
Elena Višnar Malinovská
Head of Unit, Adaptation & Resilience to climate change

Barbara SIMONIČ
Ministry of Environment and Spatial Planning, Member of EIONET, Slovenija

Peter Glas
Delta Programme Commissioner

Guillaume Riou
Vice-President of the Nouvelle-Aquitaine Region
FORUM ON THE MISSION ADAPTATION
Climate Adaptation in Europe and the Mission

Experience and views from Slovenia

7 June 2022

Barbara Simonič
Climate Change Unit
Climate Adaptation in Slovenia

- NAS 2016, review 2020
- Scenarios and IA 2014-ongoing
- VA in municipalities underway
- Projects and measures
EU strategy and cooperation

- Exchange of information
- Guidance and support
- Financial incentives for Regional SECAPs
EOINET in Slovenia

• Knowledge and guidance
• Forum for exchange
• Country specific promotion of ClimateADAPT
  – Guidance
  – Webinar
  – Training
EU mission on adaptation

• Some interest from regions – no regional authority in Slovenia
• Harmonized risk assessment for the EU at the regional level
• Important to use the ClimateADAPT as the go-to one stop shop
• Importance of the societal transformational change for climate resilience
Thank you for your attention!
Elena Višnar Malinovská
Head of Unit, Adaptation & Resilience to climate change

Barbara SIMONIČ
Ministry of Environment and Spatial Planning, Member of EIONET, Slovenija

Peter Glas
Delta Programme Commissioner

Guillaume Riou
Vice-President of the Nouvelle-Aquitaine Region
Climate adaptation in the Netherlands, Lessons from the Delta Programme

Peter Glas, Delta Programme Commissioner
The Netherlands, a delta country
A history of water management

around 1580

around 1700

2000
20th Century: flooding and protection

- 1916 floods (North)
  Damming off the Southern Sea, creation of Lake IJssel (1931)

- 1953 flood disaster (South-West)
  Civil engineering solutions with dams and barriers
  First Delta Programme, the Delta Works, shortening our coastline

- 1993/1995 high water levels (rivers)
  New concepts: Room for the River and Building with Nature

- 2021 ‘Water bomb’ flooding in Germany, Luxemburg, Belgium, Netherlands
21st Century water management challenges

Sealevel rise (20 cm --> 100 cm/100y)

More/extreme storms?

More/intense rainfall

More summer drought

Spatial developments

Increased invested value

Increased river discharge + 10%

Decreased river discharge - 60%

Increased erosion

Salt intrusion

Subsidence 10 cm/100yr

More/Extreme storms?

More/intense rainfall

More summer drought

Spatial developments

Increased invested value

Increased river discharge + 10%

Decreased river discharge - 60%
2nd Delta Programme

2008 Delta Commitee
2010 Delta Commissioner
2011 Delta Act, Delta Fund (1 Bln/yr)
2011-pres. Annual Delta programme:

- Flood protection
- Fresh water availability
- Spatial Adaptation

2015 Delta decisions & strategies
2017 New safety standards
2020 first 6yr Recalibration
‘Water bomb’ – July 2021

Rainfall July 14-15 2021

Extreme rain

Meuse basin
Rhine basin
Severe floods
Evacuations
SAFE AGAINST FLOODING
SUFFICIENT FRESH WATER
RESILIENT AGAINST EXTREME WEATHER
NOW AND IN THE FUTURE
BASED ON UP-TO-DATE KNOWLEDGE
The National Delta Programme involves us all.
Long term horizon → Dealing with uncertainty

Uncertainty in drivers
• (climate change, demography, economy)

Uncertainty in politics
• (discontinuity in support, priority, funding)

Adaptive approach:
→ Scenario’s
→ Adaptive strategies
→ Flexible / robust measures
→ Monitoring and periodic recalibration

Securing implementation:
→ Delta Fund
→ Delta Commissioner
→ Delta Act
→ Annual progress report
Delta programme regions – three annual Delta Plans

Flood protection  Freshwater availability  Spatial adaptation
Science basis - IPCC and KNMI reports
Delta Plan on Flood Protection

1500km/30yrs

400mln/yr
Decission making on adaptive strategies and adaptive measures...

**Decision making in uncertain future**

→ adaptive *strategies*:
  - Clear in objectives,
  - Adaptable to actual conditions
  - Flexible in “way to go”
  - Do what is necessary now, keep future options open
  - Linking short term agenda’s with long term water challenges

**Implementation in uncertain future**

→ Flexible *measures* (“speed up/slow down”)
→ Building with Nature or *robust* design
→ Spatial reservations
Flexible measures? Building with Nature!

- **Soft solutions**:
  - **Galgeplaat shoal nourishment**
  - **Delfland coast Sand Engine**
  - **ES: oyster reefs as shore protection**
  - **Eastern Scheldt underwater garden**

- **Hard solutions**:
  - **IJsselmeer foreshore nourishment**
  - **Markermeer eco-levee**
  - **Noordwaard: willow forest foreshore**
  - **‘rich levee’**

- **Tidal**
- **Non-tidal**

- **Focus on ecosystem functioning**
- **Focus on infrastructure development**
Delta Plan on Spatial Adaptation – 7 steps

1. Stress tests in 45 regions / 345 municipalities (flood risk, heat, drought)
2. Risk dialogues with stakeholders on ambitions and way forward
3. Develop programme of measures
4. Link with other major transitions (e.g. green energy, housing, agriculture, biodiversity)
5. Stimulate / facilitate realization (2021-2026 stimulus programme)
6. Regulate and secure planning & building standards
7. Preparation for emergencies
Learning by doing!

Stimulus programma
600mln (2021-2026)
Water and Soil as a basis for Spatial Planning

- Government coalition agreement: “water and soil are the basis of spatial planning”

- Water and soil (and climate adaptation) will be at the heart of decision making in the 3 main transitions for the next coming years:
  - Building 1 mln houses;
  - Realising the energy transition;
  - Restoration of biodiversity
Delta Plan on Fresh Water Availability

Stimulus programme 800mln 2022-2027
EXTREME weather
TORRENTIAL RAIN
High discharge – July 2021

Map showing the areas affected by high discharge and extreme rain, with markers for Meuse basin, Rhine basin, severe floods, and evacuations.
July 2021: lessons (to be) learned

In the Netherlands a national evaluation has been commissioned. Aspects to be considered:

• “Unprecedented” weather conditions (area, rain intensity, season)
• Coinciding high water levels during summer with summer land use
• Connecting scales (continental, national, regional, local)
• International dimension including crisis management
• Relation water - land use (water retention, spatial planning, building and infrastructure guidelines)
Long-term thinking: lessons from the Delta approach

- Time scale 2020-2050-2100
  #AdaptNow!
- Integrated approach
- National & regional orientation combined
- Political-administrative, legal and financial conditions are key
- Values: Solidarity, flexibility, sustainability
- Create a Delta community (communication, annual conference, social media)
Good governance: multi-government co-operation

Create common basis for regional work and national integration by:

- Regional approach:
- Use specific responsibility of all government levels involved
- Involve stakeholders / interest groups and built acceptance
- Joint fact finding
- Collect creative and innovative ideas
- Combine with local developments

- Supervised by Delta Commissioner
- Progress, uniformity, coherence, transparency
- Annual proposal to Parliament
Beyond 2100...

Story line for a long term perspective

>2m SLR

Protect – open

Protect - closed

Seaward offensive

Tactical retreat
Thank you for your attention

Peter C.G. Glas MSc LLM
Delta commissioner

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https://english.deltaprogramma.nl/delta-programme
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A regional roadmap for transitions
- **84 100 km²** (32 471 sq.mi)
- **6,01 millions of inhabitants** (déc. 2021)
- **3rd economic region in France** with 177 billion € of GDP (2018)
- **1st destination for French tourists**
- **1st wooded region** in France
- **1st European area** in value of **agricultural production**
- More than **900 km of coastline**
- 153 public institutions for cooperation between cities
- 54 “territorial projects” (contracting with Regional authority)
>Regional roadmap voted in July 2019 dedicated to **environmental and energy transitions in Nouvelle-Aquitaine for 2030**

> Based on scientific works from **Acclimaterra** and **Ecobiose** Committees

> **Holistic and partnership** approach to embark on the transition and collectively succeed on our territory

1. Civic engagement
2. Agroecological transition
3. Business transition
4. Clean Mobility
5. A sustainable urban planning
6. A new energy mix
7. Zero waste objective
8. The preservation of biodiversity
9. The preservation of water resources
10. Preservation of agricultural and forest land
11. An exemplary administration

**11 goals of Néo Terra roadmap**
FOCUS ON... the main guidelines of 6th goal of the roadmap « A new Energy mix »

➢ 3 steps to change our relationship to energy

1. Sobriety
2. Energy Efficiency
3. Renewable energies

➢ Key Targets of the Roadmap

• 45% of renewable energy in 2030, 100% in 2050
• 30% of green gas injected in the grid in 2030, the Région exporting in 2050
The 6th goal of the roadmap « A new Energy mix »

We have resources to achieve 30% of GREEN GAS by 2030

- **110 biogas plants,**
  - Among them 31 with injection into the gas network

- **31 biogas plants with injection into the gas network**
- **280 more biogas plants**
FOCUS ON... the main guidelines of 8th goal of the roadmap « The preservation of Biodiversity »

- **Diversity** of terrestrial and aquatic ecosystems, threatened by global warming and **increased urbanization**

- **Key Targets of the Roadmap**
  - Creating 25 new regional natural reserves in 2030
  - Zero net destruction of wetlands by 2030
  - **Improving good farming practices** to restore and develop domestic and cultivated biodiversity
The 8th goal of the roadmap « The preservation of Biodiversity »

Workshop areas – agro ecology Results from CNRS workshop area of Chizé

➢ Regional natural heritage
➢ *Tetrax Tetrax*, near threatened species which 95% of French migratory population is receive in Nouvelle-Aquitaine
➢ Innovative design of management solutions for ecosystems
Need of a better knowledge basis to convince and develop public action: scientific research and political project closely linked.

- Regional level of governance: relevant for action. It must be articulated with the other local partners.

- New Human and financial conditions that force to prioritize: a new reading grid for projects needs to be built.

- The transversal approach is reinforced by recent events (pandemic, war, etc.).

- The desire to involve and enthuse all players: associations, companies, territories, users... towards a community of players gathered around the Neo Terra brand.
Thank You

Néo Terra - Transition énergétique et écologique en Nouvelle-Aquitaine (neo-terra.fr)
Diagnostics Climat et Biodiversité - Néo Terra - Région Nouvelle-Aquitaine (neo-terra.fr)

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Peter Glas
Delta Programme Commissioner

Guillaume Riou
Vice-President of the Nouvelle-Aquitaine Region
Break & Networking

We will be back at 12:00
Panel discussion:
Success factors for the Mission

Moderator: Johannes Klumpers – Head of Mission Secretariat
Markku Markkula
Vice-President of the European Committee of the Regions, Chair of the Espoo City Board and President of the Helsinki Region

Pirita Lindholm
Director European Regions Research and Innovation Network

Kirsten Dunlop
Chief Executive Officer Climate KIC

Valvanera Ulargui Aparicio
Directora General, Oficina Española de Cambio Climático (OECC), Ministerio para la Transición Ecológica y Reto Demográfico
ERRIN engagement so far
• Actively mobilising members
  • To inform about the mission
  • To provide inputs to the mission development process
• Group of ~30 regions actively engaging in the adaptation mission process
• Several meetings and exchanges with the Mission Secretariat
• Encourage and support members in applying to mission related projects

Key success factor: Close collaboration and continuous dialogue with regions and cities and their stakeholders
EU level
- Engagement of networks and other multipliers to connect regions and their stakeholders in the mission process
  - Sounding board meeting in February to discuss key issues (funding & financing, governance etc.)
  - Inputs on the mission charter, analysis of the current calls and recommendations to the Horizon Europe EU Missions work programmes
  - Encouraging regions and cities to join the mission and support the implementation process
  ➡️ Sign the implementation charter as “friend” of the mission

National level
- Increased multi-level governance collaboration
- National support frameworks

Local level
- Ecosystem approach – new collaboration model that ensures that all actors are engaging towards a common goal
Markku Markkula
Vice-President of the European Committee of the Regions, Chair of the Espoo City Board and President of the Helsinki Region

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EU MISSIONS
ADAPTATION TO CLIMATE CHANGE
Concrete solutions for our greatest challenges

#EUmissions #HorizonEU #MissionClimate
EIT Climate-KIC is a climate innovation agency and community working to catalyse transformation, using systems innovation as a key tool.
Systems innovation at work

- Policy and regulatory frameworks
- Education and skills
- Production
- Technology
- Funding and finance
- Behaviour
- Citizen participation
- Markets
EIT Climate-KIC Resilient Regions

Andalusia (ES)
- Foundation for Climate Research (FIC)
- Tecnalia
- Aquatec

Dolomites Regional Governments (IT)
- Fondazione Edmund Mach
- Hub Innovazione Trentino
- University of Trento

Glasgow City Region (UK)
- Sniffer
- Creative Carbon Scotland (CCS)
- Paul Watkins Associates (PWA)

Nouvelle-Aquitaine (FR)
- Sorbonne Université
- I4CE
- Foundation IDDRI
Example: Glasgow City Region Adaptation Strategy
Announcement of the first Mission Charter signatories (ATRIUM)
Lunch Break

We will be back at 14:30
Join us on Sli.do to submit your questions via #ForumAdaptation
Join us on Social Media #MissionClimate #EUMissions
Challenges experienced by regions

How do regions act on adaptation? What are the main challenges faced and are they overcome?

Moderator: Philippe Tulkens – Deputy Mission Manager
Czechia – Josef Jarý
Environmental Partnership Association, Nadace Partnerství

Germany – Viktor Haase
Head of Department Ministry for Environment, Agriculture, Conservation and Consumer Protection in North Rhine-Westphalia
&
Jürgen Schultze
TU Dortmund University

Hungary – Zsuzsanna Hercig
Life Logos 4 Waters Project Regional Coordinator, Coordination Office for Municipalities, Ministry of Interior

Belgium – Bart Somers
Vice-Minister President of the Flemish Government and Minister of Internal Affairs, Integration and Living Together in Diversity
Our contribution to the Strategy on Climate adaptation in the Czech Republic

Josef Jarý
Brussels Representative
The Adaptation strategy

The adaptation strategy is aimed at addressing all significant manifestations of climate change in the Czech Republic:

- long-term drought
- floods and flash floods
- heavy rainfall
- rising temperatures
- extremely high temperatures
- extreme winds
- vegetation fires
The Adaptation strategy – priority areas

Identified priority areas (sectors), which are expected to be the most affected by climate change

• Agriculture (soil, structure of farming land, agroforestry)
• Water regime in the landscape and water management (erosion, water retention, soil structure)
• Urban landscape (heats, missing green infrastructure)
• Biodiversity and ecosystem services (tree planting in cities and landscape)
The Adaptation strategy – targets

Czech Republic by 2050

- functional landscape structure,
- increased ecological stability, the scope and quality of the ecosystem services provided in urban areas
- uses the landscape and ecosystems in a sustainable way
- mitigates its adverse effects of climate change on the economy and ecosystems
The Adaptation strategy – our response

We have identified couple of priorities for ourselves

- Apart of the Life Tree Check project the Foundation initiated two campaigns
  - Planting for the future (Planting4Future) https://www.sazimebudoucnost.cz/ and
  - Living Soil https://www.ziva-puda.cz/
PLANTING4FUTURE
10 million trees for the Czech Republic

3 BILLION TREES FOR EUROPE

LESSONS LEARNED FROM THE CZECH TREE PLANTING INITIATIVE
P4F initiative launched in 2019
10 million trees in 5 years – 1 for each citizen!
9 YEARS TO COMPLETE EU's AMBITIOUS PLEDGE

Since 20th May 2020 – publication of the EU biodiversity strategy for 2030 (1,362,927 from CZ)

2,942,296 trees planted in the EU as part of the 3 Billion Trees Pledge
GROWING IMPORTANCE OF TREES FOR CLIMATE ADAPTATIONS

- calming urban heat islands in cities (Climate strategy)
- recovering damaged agriculture landscape and soils (synergy with Farm to Fork strategy)
- recovering biodiversity (Biodiversity strategy)
- nature based carbon sequestration is minor: one tree planted in 2020 absorbs $1.2 \text{ tons of CO}_2$ by 2050! (in 2018 the overall emissions per person in CZ was 12.19 tons/year 10x more than trees absorbs in 30 years!!)
STARTING POINT 2019

- Integrated data on reforestations available, NOT on planting in cities or in open landscapes!
- Initiating workshop of key stakeholders – success of the Trees of Liberty campaign 2018

Scattered data available in 2019:
- Prague: ca 100,000 annually, bigger cities – small thousands
- Nature conservation agency: cca 50,000 annually
- Other state agencies: not known
- Private sector, farmers, individuals: no data
- Sales from nurseries: small hundreds thousands

Result of 2019 working group:
10 million trees (one per citizen) is realistic in 5 years, if the campaign reaches out the whole nation = need for planting movement!
The Czechs Plant for Future

<table>
<thead>
<tr>
<th>No. of trees</th>
<th>MARCH 2020</th>
<th>MARCH 2021</th>
<th>MARCH 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>563,028</td>
<td>1,064,300</td>
<td>2,008,952</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>No. of volunteers</th>
<th>MARCH 2020</th>
<th>MARCH 2021</th>
<th>MARCH 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>471</td>
<td>2,670</td>
<td>5,502</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No. of planting events</th>
<th>MARCH 2020</th>
<th>MARCH 2021</th>
<th>MARCH 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>471</td>
<td>574</td>
<td>5,502</td>
<td></td>
</tr>
</tbody>
</table>
WHICH TREE SPECIES?

Good news: The most frequent are deciduous trees, mainly oak, lime and maple. More sustainable compared to reforestations.
PLANTING STRUCTURES

As for as number of plantations, most frequent are alleys (2,323 events), though majority of trees were planted as forest parks, mainly as restoration after mining.
The most active planters are municipalities (2,429 plantations), followed by public institutions (1,145 events), by NGOs (798 actions) and by individual citizens (723 events).
More than 58,000 people joined planting since 2019. Most of them came for events organized by municipalities (23,639), NGOs (13,458) or from companies (10,709). Growing involvement of the corporate sector.
Grants and management – how

- Integrated financial sources (companies, individuals, governmental money)
- Financial support for community planting (approx. 500,000 EUR in 2022)
- Removal of legislative obstacles for planting
- Technical support of communities in plantations and in tree aftercare
- Tree planting public events organised by Partnership Foundation
SUMMARY

- Planting events and emotions are driven by communities and citizens, but volumes of trees are delivered by big institutions.
- After 3 years of intensive campaign 1 million / year is registered. Restorations of mining areas are key in numbers (60+ %)
- 2 mil/Y is realistic for 10 million CZ once road management and all municipalities are on board. Government should be included.
- Scale of the EU: 0,9 billion could be realistic by 2030 if supported by an extensive integrated campaign and networking.
- Ambitious 3 billion pledge could only be reached if agroforestry is included and supported on large scale.
FOR RESILIENT CITIES AND HEALTHY LANDSCAPES

WWW.SAZIMEBUDOUCNOST.CZ
Czechia – Josef Jarý
Environmental Partnership Association, Nadace Partnerství

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Climate Change Adaptation in NRW

Forum Mission Adaptation; 7 June 2022

Viktor Haase, Head of Division VIII, Ministry for Environment NRW
Jürgen Schultze, Katharina Schrot, TU Dortmund University
Climate change impacts in NRW

Extreme weather events, in particular:

- Heavy rain/flooding
- Heat/warmth
- Drought
- Storm
Climate Change Impacts NRW
Heavy rain/ flooding (e.g. July 2021)
Climate Change Impacts NRW
Identification of areas impacted by heat - future

**Today**

Population particularly affected by heat stress

- Proportion of total population

6.9 mio. people = 40%

**Future**

Population particularly affected by heat stress with a +1K increase in temperature

- Proportion of total population

14.3 mio. people = 80%
Climate Change Impacts NRW
Drought and Storm

Drought (2020)

Source: Inge Lüdtke, LWK NRW

Storm (e.g. 2022)

Source: Zeit 2022, Paderborn

Source: Westfalen-Blatt (2022), Paderborn

Source: Spiegel 2022, Lippstadt
Climate change in NRW – Challenges

- Climate change is already happening
- Adaptation and resilience are equally important as mitigation
- Climate change adaptation is a cross-cutting issue
- Needs to involve
  - all levels of governments
  - all relevant sectors and departments
  - all relevant stakeholders
NRW Climate Adaptation Act

- Legislative division and reorganization of climate policy action areas by:
  - Amendment of the Climate Protection Act (MWIDE)
  - Nation's first Climate Adaptation Act (MULNV)

→ both legislative processes were running in parallel in different departments
NRW Climate Adaptation Act

§ 1 Purpose of the Act
§ 2 Definitions
§ 3 Climate adaptation targets
§ 4 Implementation of climate adaptation targets by the State Government
§ 5 Climate adaptation by other public bodies
§ 6 Requirement to give consideration

§ 7 Generic preparedness
§ 8 Climate Adaptation Strategy
§ 9 Monitoring
§ 10 Responsibilities of the State Agency for Nature, Environment and Consumer Protection
§ 11 Advisory Council
§ 12 Entry into force
NRW Climate Adaptation Act

§ 3 Climate adaptation targets

- Limiting the **negative effects** of climate change
- Climate adaptation as a **service of general interest**

(1) “The negative impacts of climate change shall be limited by the respective competent public authorities through the elaboration and implementation of adaptation measures specific to each field of action and adapted to the respective region.”

(2) “Adaptation to climate change shall in particular also serve the prevention of hazards, the health of individuals and the general public, the safeguarding of a humane environment, the protection of the natural life support systems, also in view of the responsibility for future generations, and the promotion of a sustainable and competitive economy. Measures pursuant to paragraph 1 shall be aligned accordingly.”
NRW Climate Adaptation Act

- § 4 & 5 Implementation of climate adaptation targets by the State Government and other public bodies
  - The State Government shall act as a role model
  - The ministry in whose area of responsibilities a particular field of action largely falls shall assume the coordination.
  - Allocation of importance of Green Infrastructure
  - „Coherence regulation“: Review Acts and regulations for climate resilience compatibility
  - Climate adaptation concepts as a recommendation
  - Climate adaptation as part of services of general interest
NRW Climate Adaptation Act

- § 6 Requirement to give consideration
  - Transfer from Federal Climate Protection Act to climate adaptation
  - The need for **climate adaptation must always be taken into account in political and planning decisions** in the future

(1) „In their planning and decision-making, public bodies shall take into account the purpose of this Act and the objectives set for its fulfilment in an interdisciplinary and integrated manner.”

- § 7 Generic preparedness

(1) „The task of climate adaptation is an important task for society as a whole. All persons and relevant community stakeholders and players are called upon to participate in the effort to achieve results.”
NRW Climate Adaptation Act

- § 8 Climate Adaptation Strategy
  - Preparation of a climate adaptation strategy (shall be updated at least every five years)

- § 9 Monitoring
  - Monitoring climate developments, impacts of climate change on humans, nature, environment and social, economic and employment impacts
  - Overview of the measures implemented in the adaptation strategy
  - Overview of the effects of the adaptation measures

- § 11 Advisory Council
  - Representatives of relevant community and research-focussed sectors in the state
  - Advising on climate adaptation policy in North Rhine-Westphalia
Climate Adaptation in NRW - Approach

“16 Fields of Action”

- Human Health
- Water Mgmt. and Flood Control
- Soil
- Biodiversity & Nature Conservation
- Agriculture and Fishing
- Forest Management
- Transport and Infrastructure
- Energy Sector
- Finance and Insurance Industry
- Industry and commerce
- Tourism
- Building and Living
- State and Regional Planning
- Urban Devt. and Municipal Planning
- Disaster Management
- Information, Education, Networks

Ministry for Environment, Agriculture, Conservation and Consumer Protection of the State of North Rhine-Westphalia
# Climate Adaptation in NRW - Approach

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<thead>
<tr>
<th>“Adaptation Matrix”</th>
<th>Heavy rain/flooding</th>
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Climate Adaptation in NRW - Approach

“Pyramide of Climate Adaptation“

- „Mainstreaming“ and Strategies in all 16 Fields of Action
- Structures & Networking
- Concepts, Legal regulations
- Science- & Data Provision
- Consulting, Education & Information
- Funding & Financing
Stakeholders

- Citizens
- Private Sector
- Public authorities (Municipalities, Cities, Gov. Districts)
Stakeholders – Private Sector

- Private companies as problem solvers?
- Goal: Climate adaptation **BY** companies with the help of products and services to reduce climate impacts (climate adaptation economy)

→ Potential for numerous (global) business models
Network Climate Adaptation & Companies NRW

- Central point of contact, especially for SMEs
- **Goal**: Increased awareness, networking, support to:
  - Operational climate adaptation
  - Development of sustainable products, technologies or services for climate adaptation (climate adaptation economy)
Planned: ResilienceExpo

- Regular series of trade fair-like events every 2 years
- International character:
  - Visibility of the transformation of the region
  - Development of sales markets for regional enterprises
- Objectives:
  - Demonstrating solutions for climate adaptation
  - Creation of a networking venue on the topic of climate adaptation
  - Establishment of the Rhenish mining area as a pioneering region for the climate adaptation economy
Stakeholders – Public Authorities

- 5 Governmental districts (Regierungsbezirke)
- 54 Counties (Kreise) and district-free cities (kreisfreie Städte)
- 396 Municipalities (Kommunen)

→ 18 million inhabitants
→ most populous federal state - over 20 % of the population of Germany
Municipalities

- GIS-based Information System on Climate Effects and Adaptation
- Current and future funding programs
- ECA: „European Climate Adaptation Award“
- Municipal Consultancy for Climate Adaptation
- …
Municipal Consultancy for Climate Adaptation

Awareness raising

Consulting

Support

Events, Information

Via phone/ email

On site

Info sessions in councils

in the application process and project selection
Municipal climate adaptation concepts

Proportion of municipalities and districts in NRW with a climate adaptation concept in the period 2013 - 2020 in %

- Municipalities
- Counties
The project LIFE Roll-outClimAdapt is funded by the EU's LIFE environmental programme and co-financed by MULNV NRW.

Project duration: 01/07/19 – 31/03/23

Partner regions
District of Wesel
District of Siegen-Wittgenstein
District of Minden-Lübbecke
District of Lippe
District of Steinfurt
District of Soest
District of Coesfeld
Gemeente Zwartewaterland and Kampen, NL

Partner institutions
TU Dortmund University, Social Research Centre
TU Dortmund University, Institute for Spatial Planning
German Institute of Urban Affairs (difu)
PROGNOS AG
BEW Bildungszentrum
University of Twente
ZDF Digital

NRW- Environment Minister Ursula Heinen-Esser:
“Evolving Regions is the flagship for climate change adaptation in rural areas for NRW”
Evolving Regions

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www.evolvingregions.com
@EvolvingRegions
Evolving Regions: overarching aims

Evolving Regions has three specific aims:

1. **SELF-EMPOWERMENT:**
The participating regions will become climate resilient by establishing further cooperation, further climate knowledge, new dialogue formats and network structures in order to develop themselves as a region in the future.

2. **INTEGRATION INTO PLANNING PROCESSES:**
The overarching theme of climate adaptation will be integrated into local and regional planning processes.

3. **KNOWLEDGE EXCHANGE AND ROLLOUT:**
The Evolving Regions project will make available the roadmap procedure, which has been further developed in the regions, with maps on climate impacts, dialogue formats, exemplary strategies and bundles of measures, as well as monitoring concepts for other regions and potential service providers of the climate adaptation economy.
The Evolving Roadmapping Approach

**POLITICAL ANCHORING**

- **CLARIFYING THE MANDATE**
  Formulation of the region's goals taking into account the initial situation

- **SCOPING**
  Examination of the initial regional situation and definition of focal points for processing

- **FORECASTING**
  Addressing the expected future and developing a shared vision

- **BACKCASTING**
  Concrete planning of the desired future

- **ROADMAP PREPARATION**
  Preparation of the roadmap as an integrated planning document

**STORYTELLING**

**INTEGRATION IN EVERYDAY TASKS**

**MONITORING**

07.06.2022

Evolving Regions
The Evolving Roadmapping Approach

**POLITICAL ANCHORING**

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**STORYTELLING**

**INTEGRATION IN EVERYDAY TASKS**

**MONITORING**

- Co-productive development of measures
  - Expertise of the stakeholders
  - Jointly defined vision for the region
  - Results of the climate impact analysis

- Joint process management by moderation and regional partners

- Thematic field 1
- Thematic field 2
- Thematic field 3
Key factors of the approach

- Involvement of relevant administrative levels and cross-sectoral approach.
- Actors contribute their knowledge, competences and resources to a joint process, joint products and coordinated implementation planning; subsequent efforts and costs are shared.
- Cooperation of actors on an equal basis; joint and parallel analysis and reflection of the challenges.
- Needs, interests, guiding principles, goals and expectations of all regional actors are taken into account.
- Improved cooperation experiences as well as network and collaboration structures in the region.
Current status of the regional processes

Wesel, Steinfurt, Soest, Siegen-Wittgenstein: completed

Exchange NL + ER
NRW: completed

Coesfeld, Minden-Lübbecke: last process steps
Lippe: will be completed in autumn
## Thematic fields worked on in the regions

<table>
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<tr>
<th>Region</th>
<th>Themenfelder</th>
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| Wesel                   | **Adaptation in Landscape areas**  
  - Sustainable land use  
  - Forest management  
  - Agriculture  
  - Water management |
| Steinfurt               | **Adaptation in Urban areas**  
  - Resilient cities + villages  
  - Settlement development  
  - Resilient buildings and spatial planning |
| Siegen-Wittgenstein     |                                                                            |
| Soest                   |                                                                            |
| Minden-Lübbecke         |                                                                            |
| Coesfeld                |                                                                            |
| Lippe                   | 07.06.2022                                                                  |

**Specific Topics**
- Healthy living conditions
- Tourism
- Biodiversity
- Education for climate adaptation
- Disaster management
- Just resilience
Evolving Regions

Structure of transfer and mainstreaming activities

Regional processes

- Capacity building in the regions
- Consolidation in the regions and permanent staff for climate adaptation
- Consultants training and Learning labs
- (Inter-)national knowledge exchange
Thank you very much for your attention!

Contact:
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TU Dortmund/Evolving Regions: juergen.schultze@tu-dortmund.de
Czechia – Josef Jarý
Environmental Partnership Association, Nadace Partnerství

Germany – Viktor Haase
Head of Department Ministry for Environment, Agriculture, Conservation and Consumer Protection in North Rhine-Westphalia
&
Jürgen Schultze
TU Dortmund University

Hungary – Zsuzsanna Hercig
Life Logos 4 Waters Project Regional Coordinator, Coordination Office for Municipalities, Ministry of Interior

Belgium – Bart Somers
Vice-Minister President of the Flemish Government and Minister of Internal Affairs, Integration and Living Together in Diversity
Local climate adaptation by NWRMs - The LIFE-MICACC project
The average temperature is rising
More heat wave days
Extreme weather events more often
Summer precipitation decreases (drought risk)
Winter precipitation increases (flood risk)

What about water balance?

Does water means risk/danger?
OR
Water is a real value, a treasure to be preserved.
**MUNICIPALITIES**
Climate change is a global challenge, however the most effective way is to act locally.

- Municipalities have first-hand experiences at the settlements → feel the consequences, see the damages of climate change
- They know the potential resources → involvement of unused areas, other local opportunities
- They know the local stakeholders → can involve and mobilize them
- They form local strategies and plans → have the potential power to integrate CCA approach into these documents

Municipalities are key actors in coordinating CCA locally.

**NWRMs**
Climate change happens more often and in a not predictable way. Balance water surplus and water scarcity.

Solutions that are:
- low cost, relatively cheap
- small-scale
- design and implement quickly
- close-to-nature (not concrete)
- resuse abandoned areas for water retention
- ecological aspects, biodiversity are taken into account
- win-win: good for flora&fauna, and for humans
- sustainable for the long run
- innovative

NWRMs must have a place besides the traditional water management (grey) solutions.
THE 5 PILOT SITES– 5 MODEL SOLUTIONS

- Slowing the flow with leaky wooden dams
- Multi-basin wetland to manage inland water inundation
- Complex floodplain adaptation model
- Drought risk management based on water retention
- Water retention by grey water reuse
The term "NWRM" sounds more familiar than before.

More and more municipalities are interested in similar projects.

Water retention built into the national OPs as required element.

There is higher interest and openness among experts.
LIFE LOGOS 4 WATERS PROJECT

Disseminate the use of Natural Water Retention Measures (NWRMs)

Support climate governance on local and regional level

Catchment level cooperation between municipalities and stakeholders

Education of stakeholders in key NWRM affected sectors

Nationwide citizen education and information sharing
THANK YOU FOR THE ATTENTION!

Zsuzsanna HERCIG

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LIFE LOGOS 4 WATERS regional coordinator
Ministry of Interior of Hungary

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Break & Networking

We will be back at 16:00
Panel discussion:

What does the Mission need to take from these experiences?

Moderator: John Bell – Director DG RTD
Connie Hedegaard
Chair of the Mission Board

Normunds Popens
Directorate-General for Regional and Urban Policy

Hanna Zdanowska
Mayor of Łódź, Member of the Green Deal Going Local Working Group

Frank McGovern
JPI Climate
Closing remarks

Clara de la Torre
Mission Manager
Please join us for the Cocktail in the Atrium