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# EU MISSIONS

**ADAPTATION TO CLIMATE CHANGE**

**Community of Practice**



#EUmissions #HorizonEU #MissionClimateAdaptation



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# Learning from each other: Assessing climate change risks and vulnerabilities

February 20th, 10:00hs CET



## January VRA events

- January 25th and 30th two seminars on VRA have been held:
  - <https://youtu.be/I2DqAaanGUM>
  - <https://www.youtube.com/watch?v=HqsyYScvq8Q>
- Tools presented:
  - Assessing Climate Change Risks and Vulnerabilities (Climate Risk Assessment): A DIY Manual (<https://climate-adapt.eea.europa.eu/en/mission/the-mission/resources>)
  - URBANPROOF Toolkit (<https://tool.urbanproof.eu/>)



## What do you consider to be the main challenge for a VRA?

0 2 1





# Agenda

Duration (min)	Agenda item
5	Welcome & opening remarks
20	Showcasing experiences
15	Q&A
45	Breakout session for sharing experiences
5	Closing remarks

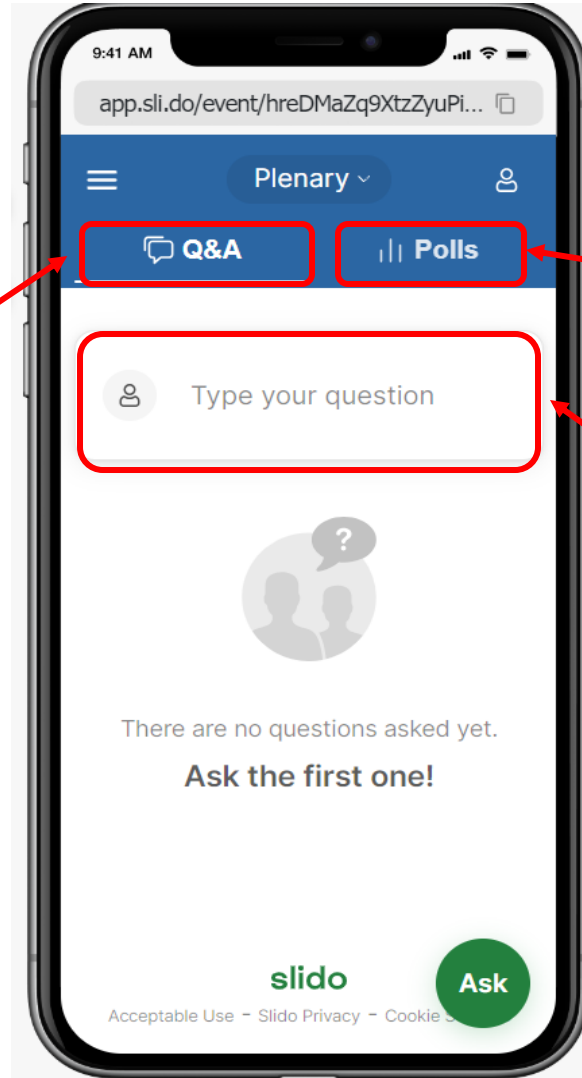


# Housekeeping

- The working language of the meeting is **English**.
- Please note that the **meeting is being recorded**.  
The recordings will be available at a later stage after processing.  
Breakout rooms are not recorded.
- Please keep your **microphone muted unless you are speaking**.
- Please turn your **microphone and camera on during the breakout rooms**.
- If you wish to speak, use the raise your hand option.



# Slido



Click here to ask a question.

Click here for accessing the polls.

Type your questions here.







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# Experiences and lessons learnt: Assessing climate risks and vulnerabilities

Miljenko Sedlar, Head of Climate, REGEA

City of Zagreb





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# Essentials – preparing the ground



## Preparing the ground

- Obtaining political support! (City councils on board!)
- Collecting initial information (analysis, historical data, other relevant strategic data...)
- Setting up the process
  - Governance model (who internally, who externally)
  - Resources (human, technical)
  - Funding – there will be need for expert support, data, analysis
- Stakeholders
  - Identification
  - Engagement
  - Recommended to use the **pentahelix approach** (local governance, businesses and industry, academia, NGO sector, general public)
- Increase awareness (extremely important!)



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# Assessing the risks and vulnerabilities



## You need to:

- Recognize past and present climate impacts (a lot of baseline data will be needed)!
- Understand the climate projections and future impacts.
- Identify vulnerable sectors (not all of them are equally vulnerable, stakeholders' communication is important) – **make sectorial workshops!**
- Identify main adaptation concerns and defining objectives.
- Get expert support, but also do a bit of de-mystification!



## How did we learn?

- From 2019 – onwards we were tracking and monitoring our assumptions and analysis.
- We initiated climate proofing for all the projects – that gave us a lot of insights and inputs for modification.
- The climate change effects gave us feedback!



# Lessons learnt

Climate parameter	Current risks	Anticipated risks		
	Current risk level	Intensity change	Change in occurrence	Time period
Extreme heat	High	Increase	Increase	Current risk
Extreme cold	High	Increase	Increase	Current risk
Urban flooding	Low	Increase	Increase	Long term
Drought	High	Increase	Increase	Current risk
Storms	High	Increase	Increase	Current risk
Land movement	High	Increase	Increase	Current risk
Fire of open space	Low	Increase	No change	Current risk

**Extreme heat** – good assessment, yet to general

**Extreme cold** – poor assesment

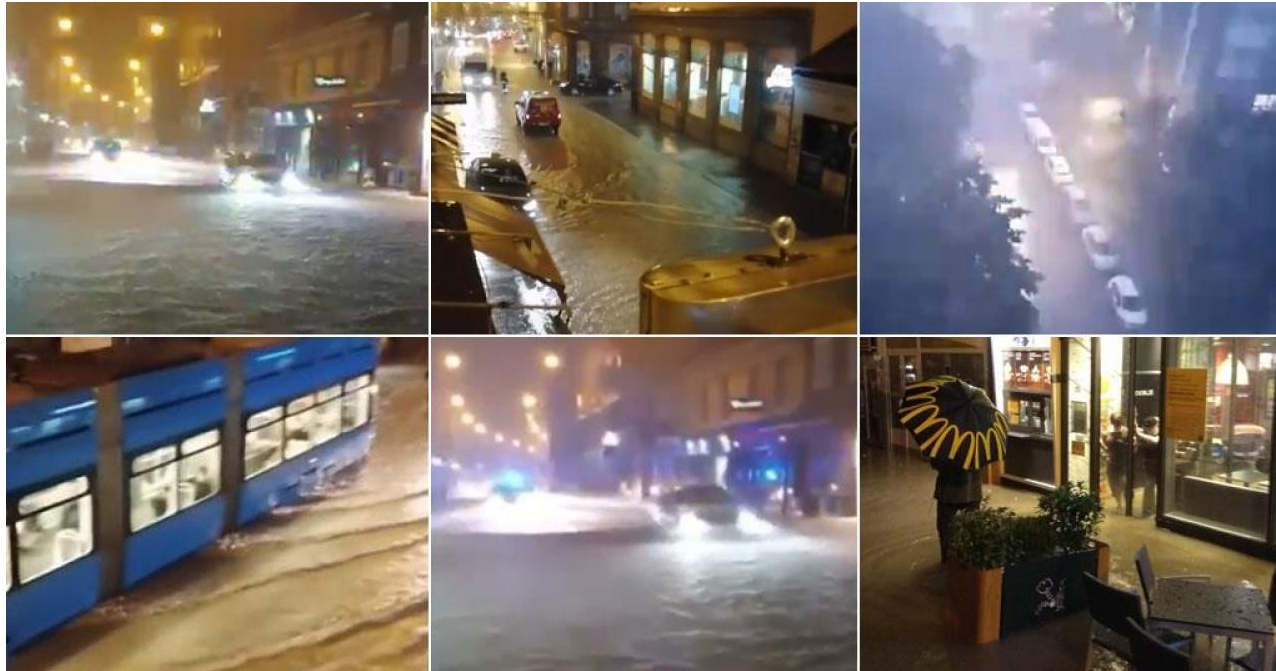
**Urban floding** – some wrong assumptions

**Adaptation measures planned** – in scope ok, in terms of urgency and size improvements are needed!





# Reflection on risk assessment in 2018!



July 2020, Zagreb







# Reflection on risk assessment in 2018! Urban flooding!

## Key facts:

**1. Drainage system capacity is insufficient.** Built in 18th and 19th century. Uncontrolled urbanization has put too much pressure on it! It is usually designed based on:

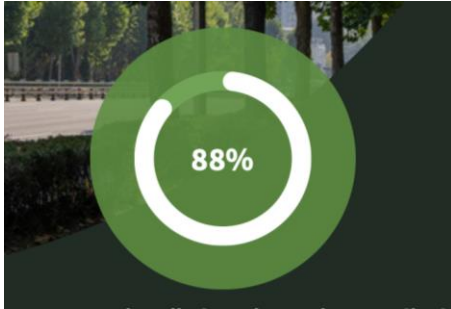
- a) Max expected rainfall in certain time period (changed)
- b) Frequency of occurrence (changed)
- c) Size of the urban area (growing)
- d) Number of inhabitants (growing)
- e) Obsolete piping in many parts of the City

**2. Combined storm water and fecal drainage system.** Same system absorbs rainwater, fecal waters and waters from the Sljemee mountain in the vicinity of the City

- a) Systems need to be separated
- b) Rainwater from roofs directed to green surfaces or harvested (need to increase green surfaces area, green roofs, natural retentions...)
- c) **We need a new hydraulic model of water management - started**



## Zagreb case – baseline related to urban heat!



Increase of medium heat impact related to urbanization and climate change (diff between 1961. – 1990. and 1991. – 2020.

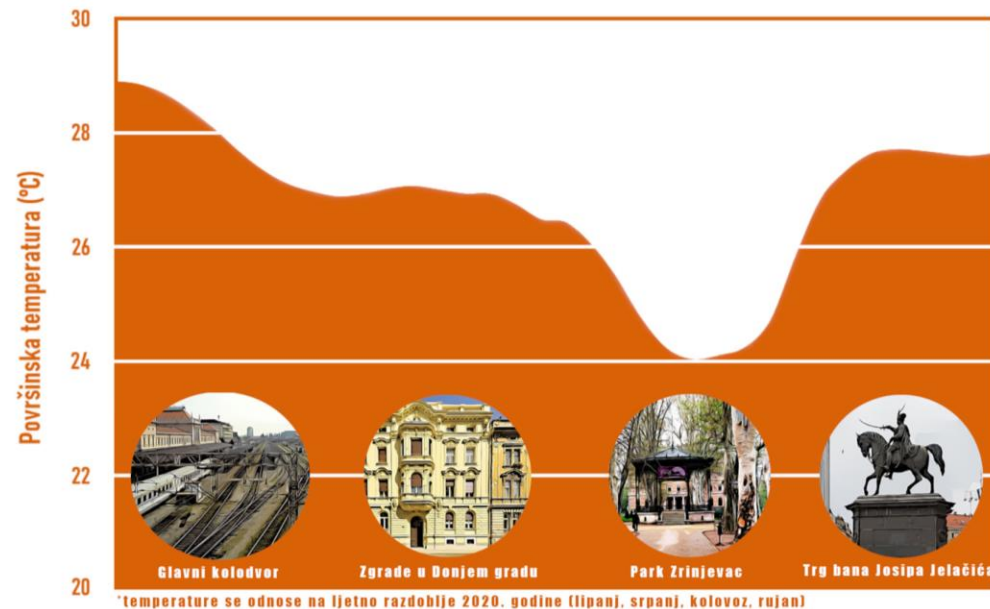
### Key facts:

1. Impact of heat is significant (average daily temperatures, increase of min and max temperatures, rise of heat indexes...)
2. Urban heat increase is a combination of global climate change and rate of urbanization
3. Buildings inhabited by vulnerable groups are concentrated in densely built areas of the city, thus more exposed to the heat
4. Urban heat island is present on the level of the city, but some areas are more critical



## Urban heat assessment!

Assessment was far too general – more detailed assessment needs to be performed!  
Detailed heat pressure analysis was performed!



- Heat pressure is not equally distributed
- Temperature parameter is mostly dependant on atmospheric/climate influence but local conditions can modify them
- Synergistic effect of those parameters can cause amplification, for example heat waves
- Heat pressure in the City is extreme

# Not much of a surprise, but...

## City is warming up!

All four main meteorological weather stations are showing increase of temperature and **reclassification of climate classes!**

- Grič, Maksimir and Pleso weather stations – from moist moderate warm climate with warm summers (Cfb) to moist moderate climate with hot summers (Cfa) (due to increase of average daily temp in July above 22C)
- Puntijarka weather station – from moist snow-forrest climate (Dfb) to moderately warm climate (Cfb) – due to increase of monthly average temp of coldest month January, that no longer goes below -3C
- **What really happened**
  - Mountain area now has the climate City used to have
  - City climate is now more similar to the climate of the mediterranean cities



## Key barriers identified

- Unwillingness to accept the fact that climate is changing
- Silo approach in handling the process
- Lack of data
- Lack of sectorial specific analysis
- Separated budgeting (if any) for “climate related” projects – adding on the silo approach
- Spatial plans obstacles
- Lack of knowledge and capacity



## What did we learn?

- Mainstreaming of adaptation is crucial for success
- Enabling conditions related to strategies and spatial plans need to be in place
- Every budget line in the city budget needs to be assessed towards adaptation (common sense assumed)
- Approach needs to be systemic (VRA is just a small part)
- We have to re-think everything, innovations are key
- Adaptation is not just a cost, is also an opportunity for growth and development



## What do/did we do?

- Our resilience plan is in constant update
- We are undertaking systemic approach to mainstream adaptation in all processes and budgeting
- updating spatial plans to set ground for resilience projects
- developed a guideline to climate proof all projects – it is a part of permitting process
- Using the research and innovation projects results to implement and upscale solutions
- Raising awareness and building capacities





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**BEGIN  
AGAIN**



# Sharing experience: Drents AdaptatieBeeld

## A thematic impact tool

Jennifer Brécheteau

Province of Drenthe



# Presentation content:

- Short introduction of Drenthe
- The development of the impact tool
  - Why we developed the tool
  - How we developed the tool
- Structure of the tool
- Added value and challenges



# Short introduction of Drenthe

- One of the 12 provinces of the Netherlands
- Surface 2.680,4 km<sup>2</sup> with approximately 500.000 inhabitants
- 12 municipalities
- Rainfall dependant



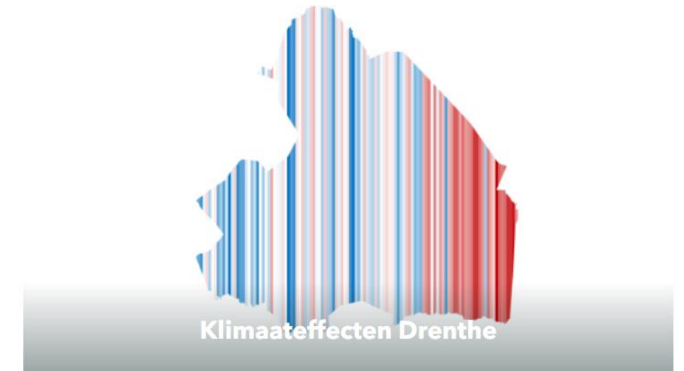


# Why develop a impact tool for the Province

- Lack of overall insights in the effect of climate change for Drenthe
- Thematic specific impact information
- Focus on effects but also on impact



Aan de slag





# How we developed the tool

- In collaboration with two companies
  - Tauw Nederland
  - Climate Adaptation Services
- Multiple model calculations
  - Precipitation most complex one
- Developed as a dynamic tool



# Structure

All the impact pages are structured the same way

1. Overview of the effects and impacts
2. The climate change effects
3. Where does this result in impacts
4. A map viewer



Overzicht effecten en impacts  
klimaatverandering



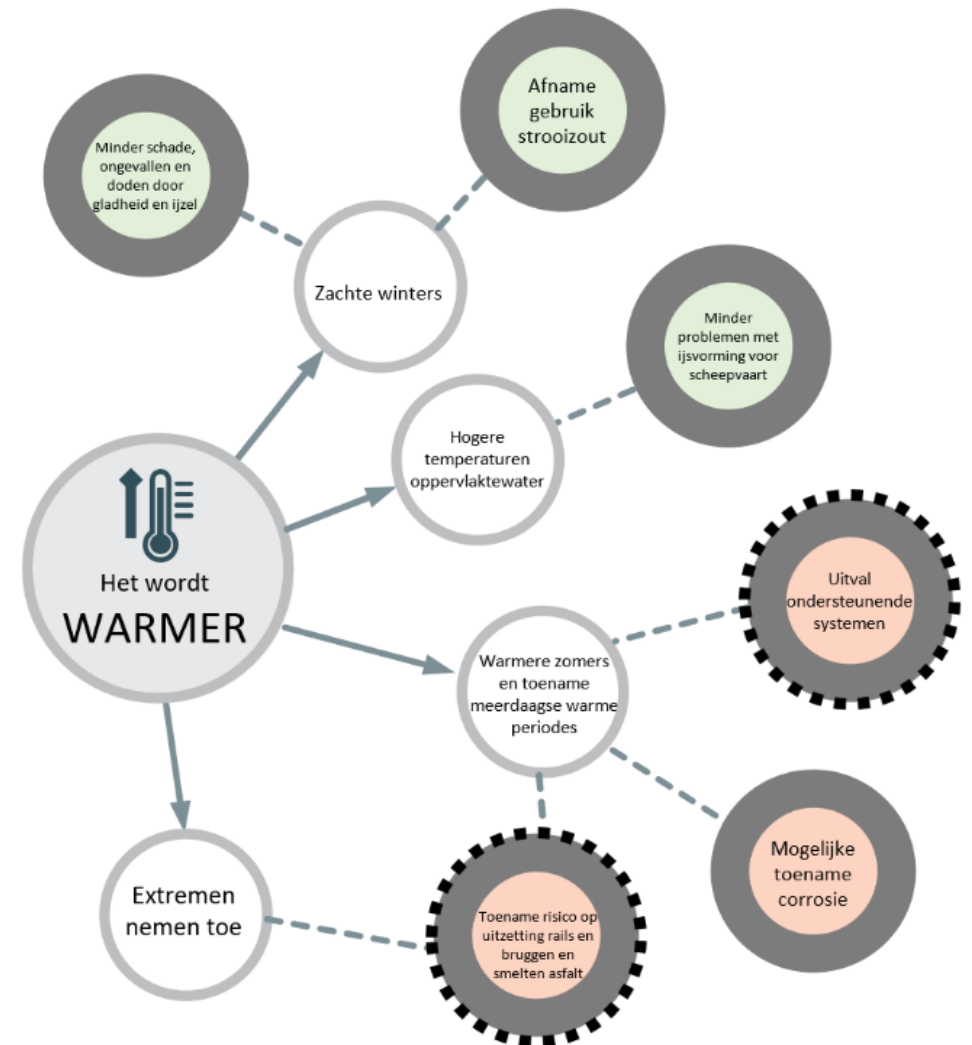
Effecten klimaatverandering:  
de grote lijnen



Waar en hoe treden de  
impacts op?



Kaartviewer impacts







## Added value

- Provides basic but much needed information.
- Holistic view of the effects and impacts.
- Easy access to region specific information

## Challenges for development

- Getting the right people involved.
- The modelling size.
- Keeping it compact.



# Drents AdaptatieBeeld

Dutch AdaptationPicture

[Drents AdaptatieBeeld \(drenthe.nl\)](https://drenthe.nl)



A final note for the Dutch partners:

# February 29th National day for Dutch Mission Partners



# Q&A session

Martina Alvarez

MIP4Adapt



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# Breakout session: Sharing experiences

Martina Alvarez

MIP4Adapt



# Sharing experiences

**Action:** In each breakout room, start by introducing yourselves. Then a poll will be launched to spark discussions:

**What is your experience (if any) so far with doing a vulnerability and risk assessment?**

What challenges and/or lesson learnt have you encountered?

**Closing Exercise:** We will return to plenary to close the workshop with one last exercise.



35 minutes



**What are your main takeaways from today's discussion?**







# Closing remarks

Martina Alvarez

MIP4Adapt



**To what extent does this event give you the opportunity to discuss key adaptation topics with other members of the Community of Practice?**





## Closing remarks

- Recording, presentation and a summary report of the event will be shared on the online community site.
- Next events:
  - 13.03 Adapting now: from planning to action
  - Training Programme: How to carry out stakeholder and citizen engagement in practice.

More information to come at the beginning of March. Stay tune on the online site.

Satisfaction survey





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# Thank you !

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