

# ClimaaxInsight: Initiative for Climate-Proof Future of Banská Bystrica Region, Slovakia

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The CLIMAAX project is funded by the European Union under Grant agreement ID 101093864. This publication was funded by the European Union. Its contents are the sole responsibility of the author(s) and do not necessarily reflect the views of the European Union.



## *Adapting to Climate Change in a Diverse but Vulnerable Region*

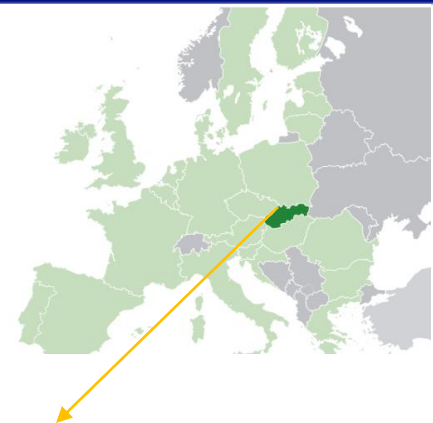


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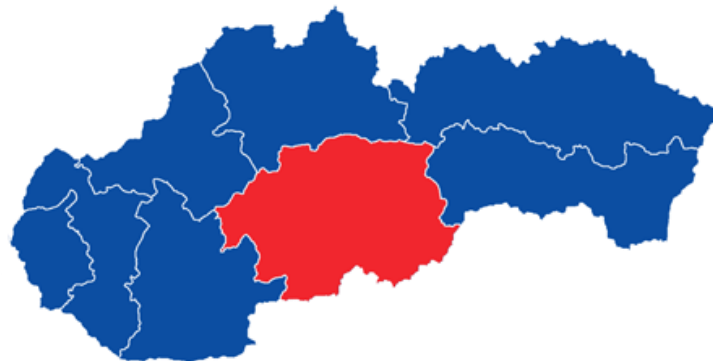
## Banska Bystrica Self-Governing Region

- **Area:** 9,455 km<sup>2</sup>
- **Population:** 625,000
- **Population Density:** 66 inhabitants/km<sup>2</sup>
- **Administrative Division:** 515 municipalities & 13 districts
- **Development Status:** less developed region



## Main Competencies

- Management of regional roads and transport,
- Secondary education (high schools),
- Support of culture, tourism, and sports, social services and healthcare facilities,
- Spatial planning and strategic planning at regional level,
- Implementation of Integrated Territorial Strategies in the current EU funding period



## Motivation

Our region lacks a unified climate assessment, small municipalities have limited capacity, adaptation is mostly ad hoc, and vulnerable groups are growing.

## Objective

Identify, analyse, and evaluate the potential risks and vulnerabilities posed by floods and wildfires to our region, sectors, and vulnerable groups.

## Purpose

Establish a comprehensive knowledge base to support decision-making, guide strategic planning, and motivate stakeholders to take climate action.

## Expected outcome

ClimateHUB – open data and analytical tools available online. Refined strategies and recommendations for risk management and increasing public awareness.







## FLOODS



## WILDFIRES



*\*For assessing climate risks in Banská Bystrica Region, the RCP4.5 and RCP8.5 scenarios are most relevant.*

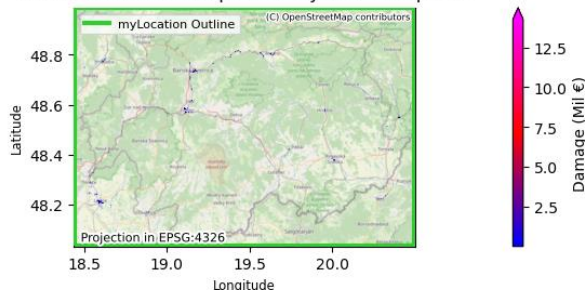
Category	Vulnerable Group	Risk - River Floods	Risk - Wildfires
Residents	Elderly and disabled populations	Limited mobility, higher health risks	Higher vulnerability to smoke inhalation and evacuation challenges
Residents	Low-income households	Limited financial means to recover from flood damage	Limited ability to recover from fire-related losses
Residents	Children	Higher health risks, dependent on caregivers	More susceptible to smoke inhalation and health issues
Visitors	Tourists and hikers	Unfamiliar with local risks and evacuation routes	At risk when visiting fire-prone areas
Local Government	Municipalities in floodplains and near forests	Responsible for risk management and local response planning	Responsible for fire prevention strategies and emergency coordination
Business Sector	Farmers in flood-prone areas	Crops and livestock losses, economic damage	Crops, land, and infrastructure at risk of fire damage
Business Sector	Forestry and agricultural workers near fire-prone regions	Risk of losing resources and work facilities	Increased risk due to proximity to flammable materials
Emergency Services	Firefighters and rescue teams	High exposure during rescue operations	Direct exposure to hazardous conditions
Infrastructure & Critical Services	Critical infrastructure (roads, bridges, water supply)	Damage to transport, utilities, and emergency response	Damage to energy, water, and communication networks



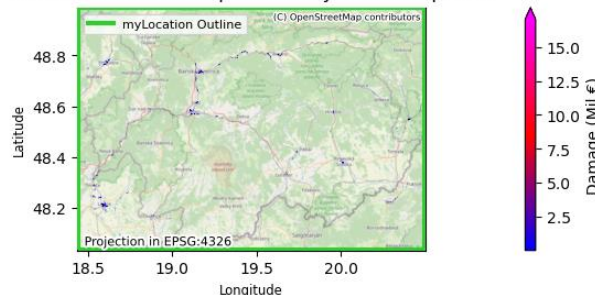


- 1.1. River Floods - River flooding
- 1.2 River floods - Flood building damage and population exposure

Damage to buildings by mean flood depth based on the flood map with 10-year return period



Damage to buildings by mean flood depth based on the flood map with 500-year return period



*Map visualisation of the outcomes for calculating economic damage to buildings*

## Stakeholders:

- Municipalities + voluntary fire
- Slovak water management
- Water Research Institute
- District Offices
- Regional & Security Council
- Public, NGOs
- Ministry of Environment

## Challenges:

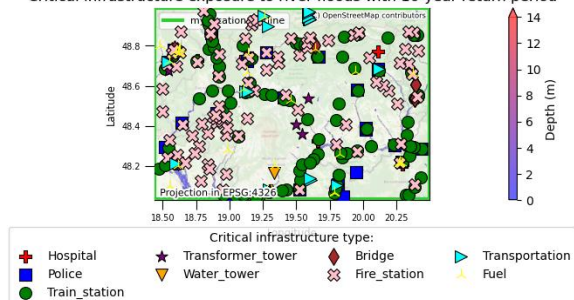
- Limitations of the existing flood risk evaluation
- Compatibility with national flood risk framework?
- Collecting data on flash floods
- Assess the preparedness of municipalities



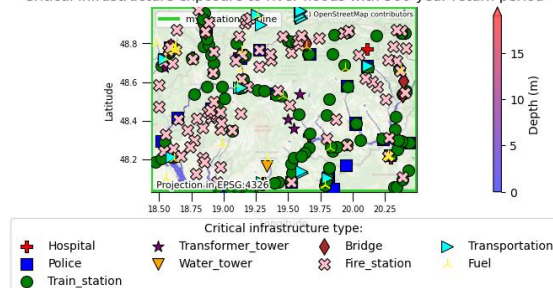


- 1.1. River Floods - River flooding
- 1.2 River floods - Flood building damage and population exposure

Critical infrastructure exposure to river floods with 10-year return period



Critical infrastructure exposure to river floods with 500-year return period



*Exposure of critical infrastructure for the area of interest*

## Stakeholders:

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- Water Research Institute
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## Challenges:

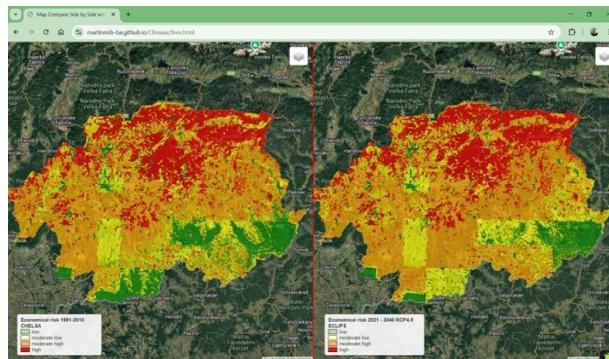
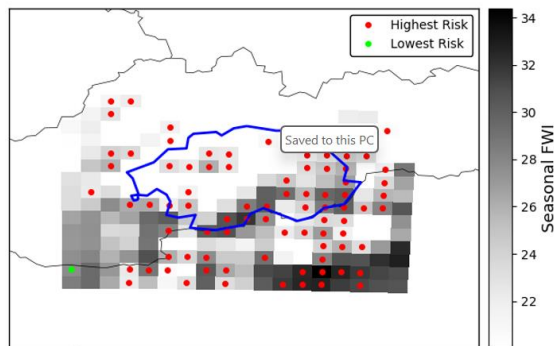
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- Compatibility with national flood risk framework?
- Collecting data on flash floods
- Assess the preparedness of municipalities





- 2.1. Wildfire (ML approach)
- 2.2 Wildfire FWI

Fire Risk Banskobystrický kraj



## Stakeholders:

- Municipalities + Volunteer Fire Brigades
- National Forest Centre
- Forest Managers
- District Offices
- Security Council
- Public, NGOs
- Ministry of Environment

## Challenges:

- Historical data missing
- Data management
- Interpretation of population/economic/ecological risk
- Assess the preparedness of municipalities/firefighters





## Next steps



# Stakeholders engagement for 2nd and 3rd phase



Slovakia: Catching-up Regions Initiative 5

## CONFERENCE

**Strengthening Disaster Risk Resilience  
of Communities and Regions in Slovakia**

December 4, 2024

Venue: Námestie SNP 1, Ciklerova sieň, Banská Bystrica, Slovakia



Building Resilient Communities at the Local and Regional Levels:  
Current Initiatives and Challenges in Disaster Risk Management  
and Climate Change Adaptation in Banská Bystrica Region

Andrea Riháková

Project Coordinator

Ivan Chramček

Project Manager



**June/July 25**

Meetings to  
Foster  
Cooperation with  
Data Providers

**Dec 25**

Consultation on  
Preliminary  
Results with  
Stakeholders

**Mar 26**

Presentation of  
Policy Brief to the  
Regional Council  
& Security Council

**Sep 25**

Workshop with  
Municipalities –  
Mapping Local  
Needs

**Jan 26**

Workshop with  
Fire and Rescue  
Services

**May 26**

**Results Forum  
Conference**



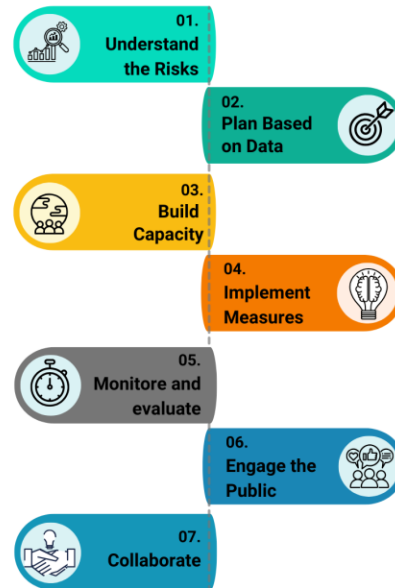
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# From Insight to Impact

- **Regional governance as a *transition point*** – *How to transform project outputs into real action?* (as a part of climate-smart governance and long-term strategy)
- **Where and what actions?** *Which actions will help improve the situation and how to measure their impact in time?*
- **Impactfull communication** *ensuring the tangible impact on relevant stakeholders*

## 7 Steps Towards a Climate-Responsible Region





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