## Partnership

INCA-CE is a collaboration of 16 partners from 8 Central European countries. The partnership includes 7 national and regional weather services, one research institute, and 8 regional authorities in the fields of hydrology, civil protection, and road management. Lead partner is the Central Institute for Meteorology and Geodynamics (ZAMG) in Austria.

## INCA-CE project partners

This project is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF.

CENTRAL EUROPE is a European Union program that encourages cooperation among the countries of Central Europe to improve innovation, accessibility and the environment and to enhance the competitiveness and attractiveness of their cities and regions.

**www.central2013.eu**



## Project partners

- Central Institute for Meteorology and Geodynamics
- Security Center Burgenland
- Provincial Government of Lower Austria - Fire Brigade and Civil Protection
- National Crisis and Disaster Management and Civil Protection
- Provincial Government of Lower Austria - Road Maintenance
- Czech Hydrometeorological Institute
- Fraunhofer-Institute of Optronics, System Technologies and Image Exploitation
- Hungarian Meteorological Service
- Disaster Management Directorate of Somogy County
- Regional Agency for Environmental Protection
- Slovak Hydrometeorological Institute
- Ministry of Interior of the Slovak Republic
- Environmental Agency of the Republic of Slovenia
- CGS plus d.o.o. Innovative IT and Environmental Technologies
- Institute of Meteorology and Water Management
- Department for Crisis Management Poland

## Coordinator

Dr. Yong Wang
Central Institute for Meteorology and Geodynamics
Hohe Warte 38, 1190 Vienna, Austria
yong.wang@zamg.ac.at
Phone +43 1 36026 2323

ZAMG

www.inca-ce.eu

EUROPEAN UNION
EUROPEAN REGIONAL DEVELOPMENT FUND

CENTRAL EUROPE
COOPERATING FOR SUCCESS.

# INCA

# CENTRAL EUROPE

INCA-CE
Nowcasting for Central Europe

A Central European initiative in nowcasting applications

**www.inca-ce.eu**

## Area of Intervention

'Reducing Risks and Impacts of Natural and Man-made Hazards'

## Objectives

The INCA-CE project aims at reducing adverse effects of weather-related natural disasters (e.g. wind-storms, flooding, icing, drought, mudflows) by establishing a state-of-the-art, high-resolution, real-time analysis and forecast system on atmospheric, hydrological and surface conditions. Main goal is the improvement of risk management standards and methodology to enable management institutions and authorities to issue more detailed assessments and warnings. INCA-CE will also allow a more precise estimation of weather-related risks and potential hazards in the private sector. The project will implement a transnational information system as well as applications for different socio-economic sectors to reduce risks of major economic damage and loss of life. Not only civil protection but also stakeholders from economic sectors are in a growing need of accurate and reliable short-term forecasts.



## Method

The INCA-CE project will set up a web-based, trans-national weather information system using state-of-the-art nowcasting methods jointly developed by the partner countries. Three trans-national working groups will be established, covering the application areas 'Operational Hydrology', 'Civil Protection' and 'Road Safety'. INCA-CE aims at a harmonization and exchange of data, standards and methodologies in the field of weather-related crisis management and risk prevention. Work on the nowcasting tool will include algorithmic refinements, improvements in data flow, data quality control and computational efficiency.

## Relevance

Improved prediction of heavy rainfall and associated flooding risks will help to set up efficient procedures in the management of mitigating actions for the protection of buildings, roads, and other infrastructure. Civil protection will benefit from a more comprehensive assessment of meteorological threats, and a more detailed and timely forecast, leading to more efficient warning protocols and dissemination strategies. Road safety will be enhanced by a more detailed road weather forecast made available both to the road management authorities as well as to the general public. While the frequency and strength of critical weather events and natural disasters cannot be reduced, a state-of-the-art information and warning system will be developed to better support public and private institutions in case of severe events.



Communication and Dissemination

Management and Coordination

### Overall Transnational Strategy- Road Safety, Civil Protection, Operational Hydrology

- Compilation and evaluation of regional methods currently used
- Provide solution strategies for optimal use of nowcasting and weather warnings in the respective field of application

### Optimization of the nowcasting tool

- Algorithmic extension
- Improvement in data flow, quality control, computational efficiency
- Standardized Input and Output Interfaces

### Pilot-Implementation

- Regional-scale application and testing of the nowcasting and warning system at user level
- Establishment of structured feedback channels for final evaluation

### Evaluation and Overall Transnational Strategy

- Elaboration and compilation of transnational results, guidelines and recommendations