



# ADAPTATION

## FEASIBILITY STUDY OF THE LANDSLIDE

### SMOLYAN, BULGARIA

The landslide named Smolyan lake is the largest in the Balkan region, occupying 7.4 km<sup>2</sup>. Due to the heavy rains as a result of climate change, the landslide is moving and endangering the city and the urbanised surrounding areas. Two neighbourhoods of Smolyan, two regional roads, several vacation sites and a lift station are directly concerned. The feasibility study brought important results about the structure, direction and speed of the landslide that should be explored in more detail in the future and a monitoring system should be established.



### HAZARDS ADDRESSED

- Landslide



### SOLUTIONS

- 2 drilling points using modern methodologies



### FUNDING

- National grants
- Private sector loan

### STATUS OF MEASURE





## DIRECT BENEFITS

- Securing safety for the whole Smolyan area.



## CO-BENEFITS

- The measure has very positive impact on tourism, because 2 regional roads linking Smolyan with Pamporovo ski resort and the lift station to Snezanka Mountain top are belonging to the observed landslide area.



## STAKEHOLDERS ENGAGED

- The private owners of the touristic facilities (TerraTrans consult, EOMI Mineral Company) and local experts in relevant fields, e.g. geology and geodesy (Eng.Christo Stajkov, Eng. Andrej Tachčiskyj, Sabi Kichukov) were engaged with the research, investing their own time and financial resources



## NEXT STEPS TO PROGRESS AND/OR UPSCALE THE MEASURE:

The feasibility study has shown the importance of a more detailed research of this significant landslide. As a first step within the feasibility study, a control and measurement system (CMS) was established with a network of 197 geodesic points. It will be used to take measurements twice per year. As subsequent research requires significant funding, discussions about applications through the National and EU funds in the future were conducted and all possible sources were considered. The consultants suggested to enlarge the climate change adaptation vision with additional measures, such as introduction of a Sustainable Urban Mobility Plan, Nature-based Solutions such as developing green corridors between the three Smolyan neighbourhoods, planting new vegetation in landslide areas and water management.