

# Explanatory campaigns to raise pupils' awareness in schools on the territory of the Bobov Dol municipality on the possibilities of flood risk prevention

Action 6 "Joint strategy and information materials for flood prevention" under the project "Joint actions for flood prevention in the cross-border region", co-financed by the European Union through Cross-border Cooperation

Program INTERREG - IPA Bulgaria-Macedonia 2014-2020

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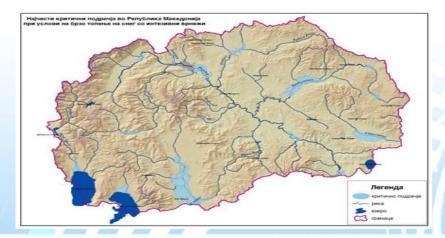


The joint strategy and methodology for environmental protection and flood prevention is a product created under the project CB006.1.12.042 "Common actions to prevent floods in the cross-border region" financed through the ITERREG-IPA Cross-Border Program "Bulgaria - The former Yugoslav Republic of Macedonia" 2014-2020. Project's partners are the Municipality of Bobov dol and the Municipality of Rankovce.

**The duration of the strategy** is six years (2017 - 2022).

The document aims to create a model for cross-border cooperation between the two municipalities, which will, in case of successful implementation, achieve improvement of the environmental conditions of the surrounding environment, in particular, water. It will reduce the negative consequences of possible floods. The model might be used as good practice in other cross-border areas.















## COMMON STRATEGIC OBJECTIVE OF THE JOINT STRATEGY

Ensure environmental protection and adequate flood risk management on the territory of the Bobov Dol municipality and Rankovce municipality by reducing the likelihood of floods, providing protection for residential and commercial establishments and reducing the adverse effects of such floods.











### PRIORITIES OF THE JOINT STRATEGY AND METHODOLOGY FOR ENVIRONMENTAL PROTECTION AND FLOOD PREVENTION

Priorities have been developed in line with best practices for flood risk management at European level.

For each of the priorities identified in the Joint Strategy, specific objectives for the cross-border area are defined.

The objectives are determined by their importance as well as the specificities of the floods in the two municipalities.











#### Priority 1: Protection of human life and public health

Specific objectives for the implementation of Priority 1:

- Minimizing the number of affected and injured people in floods;
- Ensuring rapid drainage of water from intensive rainfall and floods from urban areas;
- Restoration of normal living conditions;
- Minimizing the number of sites affected by social infrastructure.











#### Priority 2: Greater protection for critical infrastructure and businesses

Specific objectives for the implementation of Priority 2::

- Improve the protection of objects from the technical infrastructure;
- Improving the protection of significant economic sites...











#### **Priority 3: Enhance environmental protection**

Specific objectives for the implementation of Priority 3:

- Improving the protection of sewerage systems;
- Minimization of affected areas for protection of waters, protected areas and protected areas;
- Improving the water-holding capacity of agricultural, forestry and riparian areas.











### Priority 4: Improving the preparedness and responses of the population

Specific objectives for the implementation of Priority 4:

- Improving the preparedness of the population for floods;
- Improving the population's response to floods











#### Priority 5: Improving administrative capacity for flood risk management

Specific objectives for the implementation of Priority 5:

- Implementation of modern legislation for spatial planning of the areas related to flood risk management;
- Providing Operational Information for Flood Risk Management;
- Increasing the qualifications of personnel involved in flood risk management;
- Minimizing the flood risk in the water flow for the water body concerned;
- Ensuring adequate response of public institutions to floods.











Measures under Priority 1 and Specific strategic objective Minimize the number of affected and injured people in floods:

- Permanent monitoring of the construction near the floodplains;
- Annual Survey of the Status of River Corrections;
- Reconstruction and maintenance of corrections;
- Building new corrections;
- Cleaning and management of River beds within the boundaries of urbanized territory;
- Cleaning of river sections and gullies to ensure the passage of a high wave;
- Effective management of water levels of dams and retention reservoirs. Failure to overflow through the crown of the dykes in torrential rainfall in relatively small catchment areas;
- Building an early warning system specifically addressing flood floods due to intense rainfall with a small spatial and temporal range.











Measures under Priority 1 and Specific strategic objective Ensuring fast water drainage for intensive rainfall and floods from urban areas::

- Assessment of drainage and drainage of rainwater and in particular of sewerage networks of the settlement;
- Construction of engineering and technical equipment security, drainage channels within the boundaries of settlements, incl. water-pumping equipment;
- Reconstruction or construction of drainage facilities.











Measures under Priority 1 and Specific strategic objective Restoring normal living conditions:

- Documentation of Events and Assessment of Flood Damage;
- Assessment of damage to buildings and infrastructure;
- Assessment of sustainability and fitness for use of flood-affected buildings and infrastructure;
- Pumping water from the most affected areas of settlements.











Measures under Priority 1 and Specific strategic objective Minimizing the number of sites affected by social infrastructure:

- Assessment of damage to buildings and infrastructure;
- Construction of engineering and technical equipment security, drainage channels within the boundaries of settlements, incl. water-pumping equipment.











Measures under Priority 2 and Specific strategic objective Improving the protection of objects from the technical infrastructure:

- Expansion of the" bottlenecks "such as bridges, etc., which lead to the under flowing of the river flow;
- Investigation of the technical and operational condition of the bridges;
- Annual survey of the technical and operational condition of the dam walls and their facilities;
- Elimination of dangerous, obstructive and / or inefficient dams;
- Reconstruction and repair of dams











Measures under Priority 2 and Specific strategic objective Improving the protection of major business entities::

- Building a dump and combination;
- ☐ Restoration of compromised dykes.

Measures under Priority 3 and Specific strategic objective Improving the protection of sewerage systems:

☐ Ensuring Collection, Discharge and Treatment of Urban Wastewater.











Measures under Priority 3 and Specific strategic objective Minimize affected areas for water protection, protected areas and protected areas:

- Assessment of damage to buildings and infrastructure;
- Dredging of dykes.

Measures under Priority 3 and Specific strategic objective Improving the water-holding capacity of agricultural, forest and riparian territories:

- ☐ Providing the ramps for retention;
- ☐ Building a Gabion Protected Wall in Combination with Afforestation (Biological Strengthening).











Measures under Priority 4 and Specific strategic objective Enhancing the preparedness of the population for floods:

- Conducting a training and information campaign on flood-related problems;
- Informing and ensuring broad access to information of the population through the use of modern methods and technologies.

Measures under Priority 4 and Specific strategic objective Improving the population's response to floods:

- Raising the population's preparedness to respond to floods;
- Promoting the use of insurance products in flood-prone areas.











Measures under Priority 5 and Specific strategic objective Implementation of a modern regulatory framework for spatial planning of flood risk management:

- Preparation of guidelines for the development and preparedness for the implementation of disaster protection plans, including floods;
- Establishment of a crisis municipal headquarters that is in constant contact with NIMH, MoEW / WABD, regional headquarters (district administration) and MoI / DFSPP. Preparation of municipal flood action plan;
- Introduction of restrictive and / or prohibitive regime for certain activities within the boundaries of the flooded territories.











Measures under Priority 5 and Specific strategic objective Provision of operational information for flood risk management:

• Construction of sites for meteorological and hydrometric monitoring on the territory of the two municipalities.

Measures under Priority 5 and Specific strategic objective Enhancement of the personnel involved in flood risk management:

• Capacity Building of the Competent Authorities" (Municipalities, WABD, MoEW, Institutions of the Former Yugoslav Republic of Macedonia).











Measures under Priority 5 and Specific strategic objective Minimize flood risk in the watercourse for the relevant water body:

- Removal of illegal buildings, substrates, fences, storages and others located within river beds or gullies;
- Organizing and informing stakeholders downstream;
- To step up efforts to achieve further (and subsequently full) compliance with the requirements of the Water Framework Directive and the EU Floods Directive











Measures under Priority 5 and Specific strategic objective Ensuring adequate response of public institutions to floods:

- Development and updating of disaster protection plans (part of floods);
- Development and implementation of regional and municipal disaster risk reduction programs incl. floods;
- Cooperation with the competent authorities for river basin management and flood risk management of other countries;
- Evacuation of people and equipment when passing larger quantities of water from the dimensioning.











## FINANCIAL FRAMEWORK FOR THE IMPLEMENTATION OF FLOOD PREVENTION AND PROTECTION MEASURES, DEPENDING ON THE TERRITORY OF EACH OF THE MUNICIPALITIES

#### For Bobov Dol Municipality:

- BGN 3,995,198 million for 6 years
- An average of BGN 0.666 million.

#### For Rankovce Municipality:

- BGN 1 703 560 million for 6 years
- An average of BGN 0.284 million.

#### The general measures for the two municipalities:

- BGN 0.710 million for 6 years
- On average per year BGN 0,118 million











#### Lead partner: Municipality of Rankovce

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#### **THANK YOU!**











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