

ABOUT FRISCO 2.3 (ENGLISH SUMMARY)

Cross-Border Harmonized Flood Risk Reduction 2.3 – Structural Measures in the Drava and Kolpa/Kupa River Basins (FRISCO 2.3)

Under the Cooperation Programme INTERREG V-A Slovenia-Croatia, Priority Axis 1 Integrated Flood Risk Management in Transboundary River Basins, Specific Objective 1.1: Flood Risk Reduction in the Transboundary Dragonja, Kolpa/Kupa, Sotla/Sutla, Drava, Mura and Bregana River Basins, the project Cross-Border Harmonized Flood Risk Reduction 2.3 – Structural Measures in the Drava and Kolpa/Kupa River Basins (FRISCO 2.3) was submitted and approved.

This project is the fourth in the series of projects submitted and approved for EU co-financing under the mentioned Priority Axis:

1. Project FRISCO 1: Cross-Border Harmonised Flood Risk reduction 1 - Non-Structural Measures
2. Project FRISCO 2.1: Cross-Border Harmonized Flood Risk Reduction 2.1 - Structural Measure Vonarje dam
3. Project FRISCO 2.2: Cross-Border Harmonized Flood Risk Reduction 2.2 - Structural Measures in the Mura River Basin
4. Project FRISCO 2.3: Cross-Border Harmonized Flood Risk Reduction 2.3 - Structural Measures in the Drava and Kolpa/Kupa River Basins

The project FRISCO 2.3 was approved by the relevant bodies of INTERREG V-A Slovenia-Croatia. The ERDF Co-financing Agreement No. SLO-HR489 was concluded between Government Office for Development and European Cohesion Policy as the Programme's Managing Body and Croatian Water as the Lead Partner, on 15.02.2019, thus securing funds for the project financing. Slovenian Water Agency is the Project Partner in the Project FRISCO 2.3.

The total project value is EUR 3,339,872.78, with funds allocated between the project partners in approximately equal shares. Funds for implementation are provided in 85% from the European Regional Development Fund (which amounts to EUR 2,838,891.86) and in 15% from the national budgets of project partners (which amounts to EUR 500,980.92).

The project FRISCO 2.3 (Cross-Border Harmonized Flood Risk Reduction 2.3 - Structural Measures in the Drava and Kolpa/Kupa River Basins) implemented structural measures in four areas to reduce flood risks, as follows:

- in the Drava River Basin, through construction of the Drava River arm on the right bank near Mala vas, in Slovenian territory, and through reconstruction of the flood protection dike Otok Virje-Brezje, in Croatian territory.
- in the Kolpa/Kupa River Basin, through construction of a protective wall on the left bank of the Kolpa/Kupa River in the village of Kuželj, in Slovenian territory, and through construction of a protective wall on the right bank of the Kolpa/Kupa River in Hrvatsko, in Croatian territory.

Activities under the FRISCO 2.3 project in the Drava and Kolpa/Kupa river basins are a continuation of activities under the Cohesion Policy Operational Program in Slovenia and Croatia as well as the implementation of bilateral cooperation between the two countries. Simultaneously, the project also presents a supplementation of measures resulting from the implementation of the project FRISCO 1 (completed), also financed under the Cooperation Programme INTERREG V-A Slovenia-Croatia.

The aim of activities planned under the project FRISCO 2.3 is the adaptation to challenges posed by the present climate change and will be implemented using previously mentioned structural measures. It will protect the residents of the settlements and surrounding areas from flood risks, thus improving living conditions of the population and protecting the environment.

As part of the project FRISCO 1, a cross-border harmonized study on flood risk reduction in the Drava and Kolpa/Kupa river basins was prepared as a tool to support decision-makers. The first part of the study includes an expert opinion based on analysis of past flood events, field trips and analyses of other available documents, with a series of potential short-term measures to be analysed in the coming phases. Based on the hydraulic models of both rivers improved by these data and the proposed short-term measures, the second phase consisted of a flood analysis of the area using a hydraulic analysis and a hydraulic test of the efficiency of the proposed measures.

FRISCO 2.3 – IMPLEMENTED STRUCTURAL MEASURES

Construction of the Drava River anabranch on the right bank near Mala vas, Slovenia

The construction of an anabranch along the river bar on the right bank of the Drava River with three lagoons and the construction of a rock dump in the area where the Drava riverbed is closest to the road and further lateral erosion of the bank is expected. From a nature conservation point of view, rock protection will provide conditions for the formation of nesting grounds for rare and endangered bird species.

To create shelters for fish that withdraw from the part of the riverbed where the speeds are highest at high water, the installation of 10 sustainable dams and 18 fallen trunks were executed on the banks along the entire length of the anabranch. Live trees were dropped into the anabranch (in the direction of the water flow) so that they do not decay.

Reconstruction of the flood protection dike at Otok Virje-Brezje, Croatia

The embankment is located on the right bank of the Drava River, in the municipality of Cestica. Reconstruction works included increase in height, cross-section and construction of a service road. The flood protection dike is 3.711 m long, trapezoidal in cross section with 1:3 slopes on both sides and a 4 m wide crown.

The construction of the embankment protected 103 residential buildings and 358 residents with permanent residence in the settlements of Cestica, Otok Virje, Virje Križovljansko and Virje Otok, as well as business and agricultural buildings and industry. The area endangered by floods was reduced by approximately 820 ha. The embankment provides protection of the area from flood waters of a 100-year period.

In parallel with the installation of the embankment, the measure from the project DRAVA LIFE - Integral River Management (LIFE14 NAT/HR/000115, <http://www.drava-life.hr/>) was implemented, which consists of the revitalization of tributaries on the right bank of the Drava River in length of 1.300 m, protection against erosion, removal of vegetation in the area of the bridge and branches, removal of the existing 300 m long embankment and widening of the Drava riverbed in this part of the stream. The aim of the project is to improve the ecological and morphological condition of the Drava River, while contributing to mitigating the cross-border impact of the restoration of the Virje-Brezje embankment.

Reconstruction of a protective wall on the left bank of the river Kolpa/Kupa in Kuželj, Slovenia

The purpose of the project is the reconstruction of the existing flood protection of the left bank of the river Kolpa/Kupa and thus the protection of the village of Kuželj against floods with a century-long return period.

The dilapidated riparian insurance was supplemented by a new flood wall made of stone in concrete and a high-water embankment. The bridge and stairs are flood-protected with temporary aluminium slats, which will be placed in case of high water (at the alarm) and then removed and stored.

Construction of a protective wall on the right bank of the river Kolpa/Kupa, near Hrvatsko, Croatia

With the construction of a new 109 meters long flood protection wall, protection of the settlement of Hrvatsko from flood waters of a 100-year period was significantly increased. The construction of the wall consists of a head beam on the beaten planks and a protective wall on the head beam. The head beam measures 40 x 80 cm, while the wall itself is 30 cm thick and variable in height from 50 to 80 cm. The head beam and the wall are made from reinforced concrete.

In addition, the drainage of surface water has been solved through drainage pipes, surface channels and inspection shafts with frog covers through which the surface water after collection enters the channels towards the Kolpa/Kupa river.

The measure is directly intended for 49 inhabitants of this settlement and two hectares of agricultural arable land. The set of these measures contributes to the new security in terms of flood protection, which can be an incentive for further investment in a place that due to its marginal position along the Risnjak National Park has all the predispositions to become one of the main entrances to the protected area. This effectively contributes to regional development (especially in the field of tourism) and strengthening of the local economy.