

## FACTSHEET RISK REDUCTION MEASURES

### Flood protection and erosion control measures in Krajníčko

#### Where was it implemented?

Krajníčko (South Bohemia Region, Czech Republic)

#### Fields of action

- Farmland, settlement areas, watercourses

#### Related to measure from the catalogue of measures

- Furrows
- Drainage ditches
- Dikes
- Linear protection measures

#### Area characterisation

- **Area type:** Non-Developed area and urban area
- **Landscape type:** meadows, arable area, urban area, non-developed area with single trees



Erosion control wall (WP5)

Source: The Region of South Bohemia, The section of Territory Planning

#### Problem

Although the village is located on the upper course of the stream Bavorovický, there were floods in 2002, in April 2009 (two hours heavy rain event) and in June 2013. The village is threatened by flooding caused by heavy rain events.

#### Description and aim

In 2009, the spatial plan of Krajníčko was approved, which proposes flood protection measures. The spatial plan locates a retention area, a ditch, an erosion control wall and the revitalization of the watercourses. In urban area, the spatial plan proposes a barrage to increase the capacity of the watercourse and culvert, and the partial demolition of one building. On the outskirts of the village, the spatial plan suggests to build an overflow on the existing pond. All the proposed measures are defined as public benefit buildings or public benefit measures. This means, that the rights to property and buildings can be expropriated in order to realise the proposed measures. The spatial plan with the proposed flood protection measures was the basis for planning the land consolidation project. The selected measures were subsequently included in the plan of joint facilities (a part of land consolidation project) in 2012 (approved in 2014). One of the proposed measures - WP5, erosion control wall - began to be realized in 2019. This measure was realized together with one dirt road. The total costs of both constructions were 9,909,220 Kč including VAT. The investor was the State Land Office.

#### Effect of measure

Building of a comprehensive protection of the village against floods caused by heavy rain events; field subdivision, reduction of erosion risk, increasing the capacity of the watercourse in the urban area, water retention downstream of the village.

#### Description of implementation

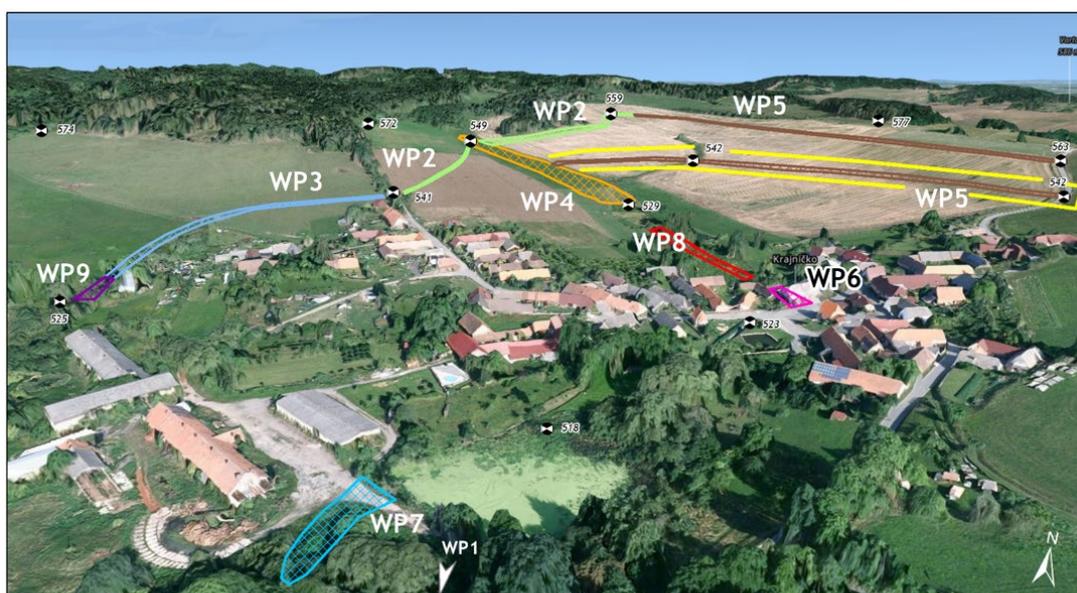
**Effect horizon:**  
long-term

**Involved stakeholders:**  
the authorities involved in spatial planning, landowners, owners of the building, public

**Implementation:**  
spatial plan was solved 2003 - 2009

**Initiator / responsible**  
Municipality Krajníčko

Lessons-learned	
The proposed flood protection measures were respected and partly implemented into the land consolidation plan. One of these measures was set as a priority and then started to be realized.	
<p><b>Main success factor:</b> Selection of a suitable spatial planner who proposed comprehensive flood risk reduction measures. The planner derived the measures from the principles and conditions of quantitative and qualitative protection of agricultural land resources.</p>	<p><b>Main challenge:</b> Development of appropriate flood protection measures which are acceptable by owners of the land and properties in the neighborhood.</p>
<p><b>Synergies / beneficial aspects:</b> The comprehensive risk reduction measures were proposed in the spatial plan of the village at risk of flooding. Thanks to the implementation of selected measures in the land consolidation, the realization could be financed from sources outside the municipality's budget.</p>	<p><b>Conflicts / Constraints:</b> One of the agricultural stakeholder appealed against the proposed land consolidation and then challenged it in court. The reason for the appeal was disagreement with the proposed flood risk reduction measures. The court confirmed the correctness of the land consolidation. The other problem was also the small share of land owned by the municipality.</p>
Key message to others starting with a similar task	
It is more suitable for financing and realization of the construction if the food protection measures are proposed within the complex land consolidation process (in the Czech legal environment).	
Contact	
The Region of South Bohemia, The Section of Territorial Planning <a href="http://www.kraj-jihocesky.cz">www.kraj-jihocesky.cz</a> Contact list: <a href="https://www.kraj-jihocesky.cz/ku_tseznam/os?id_os=94">https://www.kraj-jihocesky.cz/ku_tseznam/os?id_os=94</a>	



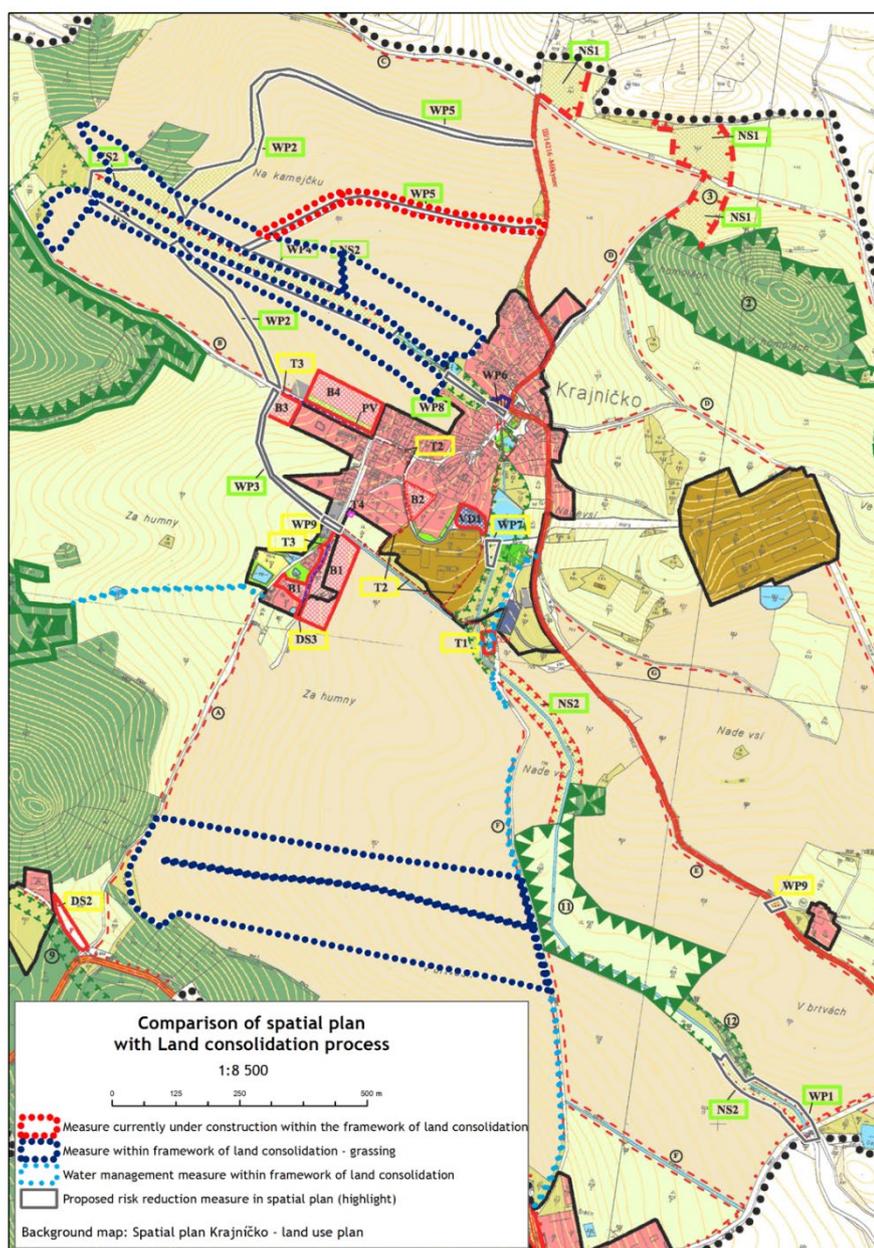
OVERVIEW OF THE RISK REDUCTION MEASURES PROPOSED IN SPATIAL PLAN KRAJNÍČKO

<p>● altitude (m.a.s.l.)</p> <p><b>Proposed measure in spatial plan</b></p> <p>measure out of map WP1 - retention area</p> <p>WP2 - ditch + grassing</p> <p>WP3 - water course + grassing</p>	<p>WP4 - revitalization of the watercourse</p> <p>WP5 - erosion control wall</p> <p>WP6 - increasing the capacity of the watercourse</p>	<p>WP7 - overflow</p> <p>WP8 - barrage</p> <p>WP9 - increasing the capacity of the culvert</p>
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Source: The Region of South Bohemia, The section of Territory Planning  
Source of background 3D model: mapy.cz



Figures: Terrain works (WP5), November 2019 (left), after realization (WP5), May 2020 (right)  
Source: The Region of South Bohemia, The section of Territory Planning



Source: The Region of South Bohemia, The section of Territory Planning