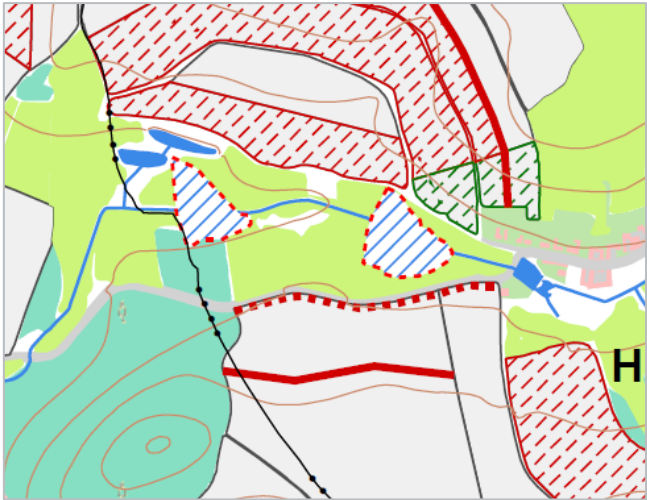


## FACTSHEET RISK REDUCTION MEASURES

### Design of water reservoirs in Horní Olešná (Pilot area Popelín)

<b>Where was it implemented?</b>	
Village Popelín, District Jindřichův Hradec (South Bohemia, Czech Republic)	
<b>Fields of action</b>	
<ul style="list-style-type: none"> <li>Watercourse, farmland, settlement area</li> </ul>	
<b>Related to measure from the catalogue of measures</b>	
<ul style="list-style-type: none"> <li>Small retention reservoirs (no 31 / R02)</li> </ul>	
<b>Area characterisation</b>	
<ul style="list-style-type: none"> <li><b>Area type:</b> Undeveloped area</li> <li><b>Landscape type:</b> Farmland</li> </ul>	
<b>Problem</b>	
In case of torrential rains, the flow in the brook is increased and thus the lower-lying plots are endangered by soil runoff and landslides.	Study of runoff conditions including design of possible conservation measures in pilot areas (Source: The Research Institute of Water Management T. G. Masaryk, v.v.i. (VÚV))

#### Description and aim

The locality consists of a grassy land through which the Olešná stream flows. The proposed measure aims to increase the retention capacity of the area in order to slow down runoff during torrential rains and increase the ecological stability of the landscape.

The Research Institute of Water Management T. G. Masaryk, v.v.i. (VÚV) assessed the original spatial plan that includes the location of water reservoirs and confirmed the suitability of this proposal. The current spatial plan of the municipality of Popelín (Horní Olešná is part of this administrative territory), proposes a revitalization of the Olešná watercourse in this locality, where these water reservoirs are also planned to be built. Also a study of the applicability of flood control measures into land use plans evaluated the planned location of the water reservoirs. The study showed for one of the reservoirs a conflict (collision point) with a conceptual solution in the spatial plan (see the collision point HO-1, figure on page 2). The study recommends examining this collision in the spatial plan so that the reservoir can be subsequently realized.

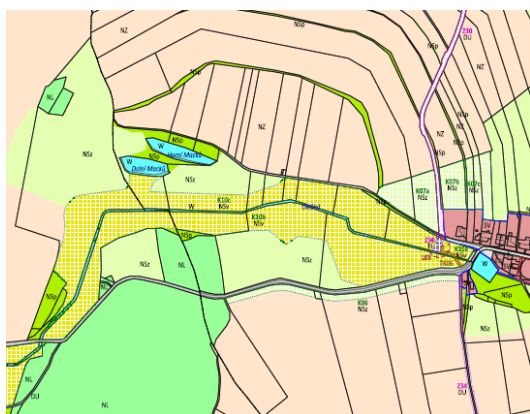
#### Effect of measure

The implementation of water reservoirs will lead to a reduction of water flow during heavy rain events and will contribute to greater ecological stability of the landscape.

#### Description of implementation

<b>Effect horizon:</b> long-term	<b>Involved stakeholders:</b> land owner, neighbouring owners
<b>Implementation:</b> proposal - not implemented	<b>Initiator / responsible:</b> private investor/municipality

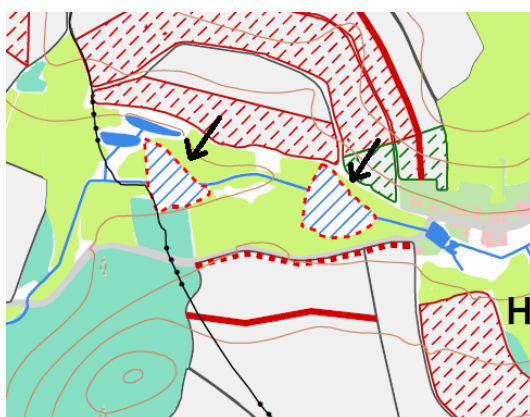
Lessons-learned	
<b>Main success factor:</b> Ensuring flood protection of a large area.	<b>Main challenge:</b> Suitable design of reservoir, retention capacity, planting.
<b>Synergies / beneficial aspects:</b> Increase of landscape stability during heavy rain event and its diversity.	<b>Conflicts / Constraints:</b> Range of landscaping (terrain work), financial costs.
Key message to others starting with a similar task	
Rainfalls often have an impact on increasing water volumes in adjacent watercourses. This should be taken into account when revitalising watercourses. In the event of heavy rain, watercourses should be able to take up, retain or slow down the volume of water. For this purpose, small water reservoirs along the stream are proposed.	
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>	



Spatial plan Popelin with the revitalization of the Olešná watercourse (source: The Region of South Bohemia, The Section of Territorial Planning)



Orthophoto location (source: Mapy.cz)



Proposal of water management measure - small water reservoirs (source: The Research Institute of Water Management T. G. Masaryk, v.v.i.)



Evaluated collision site HO-1 with zoning plan (source: Architectural Studio Štěpán)



West view to the planned location of both water reservoirs in Horní Olešná (source: Mapy.cz)