



SMARTRIVER Project-1042

Deliverable D.T 2.1

FLOOD RISK REDUCTION PLAN REPORT

Bosna River Basin, Ilijaš Municipality

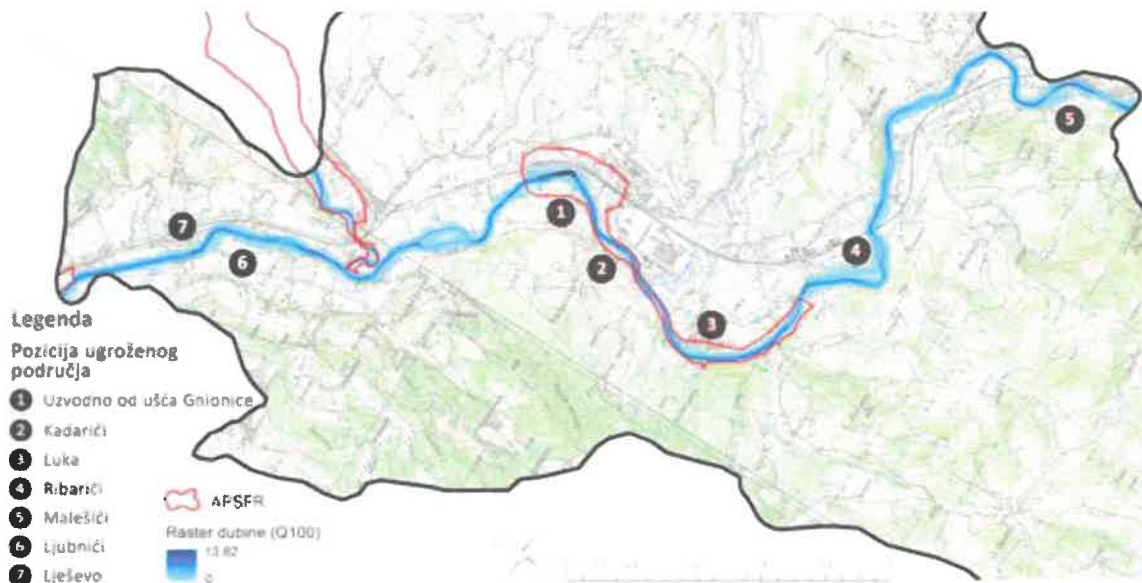
Executive summary



Key words: *Floods, flood hazard, flood risk, Ilijaš municipality, flood risk reduction plan*

Review of vulnerability and risk assessment of floods in Ilijaš municipality

The most common source of flooding in the municipality of Ilijaš is precipitation of short and long duration and melting snow, while the cause of flooding is the unorganized riverbeds, inadequate drainage of rainwater, and the insufficient extent of construction of protective structures that would prevent flooding of populated areas and arable land. Most of the watercourses in the Municipality of Ilijaš are torrential in nature, which partly affects the increase in the risk of flooding due to the transfer of significant amounts of sediment compared to the Bosna River. Flood risk is the potential threat that floods pose to people, property, the environment and cultural heritage. However, flooding is only a risk when people, property, businesses, agricultural land, infrastructure, the environment or cultural heritage can potentially be affected or damaged by flooding.



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Picture 1. Overview of endangered areas along the Bosna River

Local flood vulnerability and risk analysis for the catchment area of the Bosna River in the Municipality of Ilijaš, included:

- Analysis of historical flood events in Ilijaš Municipality;
- Identification of the danger of flooding and the selection of focal, most vulnerable areas;
- Flood risk assessment for identified areas with potentially significant flood risk.

The approach to flood risk management is in accordance with the Flood Assessment and Management Directive is emphasized risks 2007/60/EC (hereinafter: Flood Directive) which requires the preparation of a preliminary risk assessment of flood (FRRP) to identify river basins and coastal areas associated with them that are in flood hazards, then the preparation of flood hazard maps (FHP) and flood risk maps (FRP), and flood risk management plans (FRRP), with a focus on prevention, protection and readiness. The entire area of Ilijaš Municipality belongs to the sub-basin of the river Bosna, i.e. the catchment area of the river Sava. For the water area of the Sava River in FBiH, the first cycle of the implementation of the Flood Directive is in its final phase. This cycle included making:



- Preliminary flood risk assessments for watercourses of categories I and II, 2013 (FRRP)¹;
- Danger map² and risk map³ of floods in Bosnia and Herzegovina, 2020 (MOP and MRP);
- Flood Risk Management Plan for the Sava River Water Area in FBiH (2024-2029), PURP4;

Flood risk management objectives

The goals of flood risk management is based on the principles set out in strategic documents and legal framework in FBiH. The goals of water protection and management are defined by the FBiH Water Law and the FBiH Water Management Strategy, which requires flood risk management to be part of it of integral water management at the level of the water area, and that the solutions correspond to the use, arrangement and protect the water area. During the identification of the strategic approach, the key valid strategic documents in the FBiH were considered :

- Water Management Strategy of the FBiH (2010-2022),
- Water management plan for the water area of the Sava River in the FBiH (2022-2027),
- Draft flood risk management plan for the water area of the Sava River in FBiH,
- Ilijaš municipality development strategy (2021-2027).

By reviewing the requirements of all relevant strategic documents as well as the legal framework of the FBiH, and at the same time having focus on effective flood risk management, 4 flood risk management objectives were adopted:

- Goal 1: Avoiding new flood risks,
- Goal 2: Reduction of existing flood risks and flood control,
- Goal 3: Strengthening of resilience,
- Goal 4: Strengthen flood risk awareness.

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To achieve the set goals, a set of structural and non-structural measures must be implemented. That would contributed to the strengthening of flood resistance, maintenance of vital resources and potential of Ilijaš Municipality, and strengthening of the operational part of flood protection.

Summary of proposed measures

When establishing an approach for the selection of measures for the area of the municipality of Ilijaš, the specific needs and requirements of key strategic documents, the three-year work planning of the municipality of Ilijaš, the principles of the Flood Directive, as well as examples of good practice of the European Union countries when selecting a set of measures for flood risk management were considered.

The methodology for the selection of measures is adapted to the actual situation faced by competent institutions in the field, in terms of the possibilities and selection of adequate measures. Based on the analysis of flood vulnerability and risk and the review of key strategic documents from the field of flood risk management, a total of 25 measures were selected. All measures are grouped through four (4) aspects of flood risk management: prevention, protection, readiness and recovery and revision. Most of the proposed measures fall under the aspect of prevention and preparedness. A total of 6 readiness measures have been

¹ https://www.voda.ba/uploads/docs/Knjiga_3_PFRA_vodotoci_II_kategorije.pdf

² <https://www.voda.ba/uploads/docs/Izviestaj20za20Mape20opasnosti20od20poplava.zip>

³ <https://www.voda.ba/uploads/docs/Izviestaj20za20Mape20rizika20od20poplava.zip>



proposed that contribute to the achievement of Goal 4: Strengthening awareness of flood risks. Achieving Goal 1: Avoiding new flood risks contributes to the 14 prescribed prevention measures considered non-structural measures.

Aspect of flood risk management	Structural measures	Non structural measures	Goals	Degree of adaptation on climate changes		
				Midly	Gray	Green
Prevention	/	14	Goal 1	12	/	2
Protection	4	/	Goal 2	/	4	/
Readiness	/	6	Goal 3 & 4	6	/	/
Recovery and revision	/	1	Goal 4	1	/	/
<i>Total</i>	4	21	/	19	4	2

Table 1: Number of proposed measures and degree of adaptation to climate change

All proposed measures are described and listed in document D.T2.3.1 - Local action plan for flood risk reduction for Municipality Ilijaš available on municipality web page.

The Action plan

The action plan for flood risk reduction represents a quality basis for the implementation of measures which future flood risks in Ilijaš Municipality will be controlled (prevented or mitigated), through prevention, protection, increasing readiness and recovery from damage caused by flooding. The development direction and priorities of the area of water protection in the Municipality of Ilijaš are aligned with the three-year plan planning of the work of the municipality (2024-2026), as well as with key documents of a higher order.

The plan included/proposed 4 structural and 21 non-structural measures. However, it was necessary to separate measures that have a real chance of implementation and are an expression of the political will of the local self-government unit, and in accordance with the adopted strategic framework, included in the three-year work plan of the municipality of Ilijaš (2024-2026). In accordance with the above, the analysis of the budget of the municipality of Ilijaš for 2023 and the three-year planning of the municipality's work (2024-2026), priority measures that have already been incorporated into the municipal work program and which have a certain possibility of financing and whose implementation is expected to end in 2026 at the latest. All other measures were selected as a result of the vulnerability and flood risk analysis for the area of Ilijaš municipality, and FRRP for the water area of the Sava River in FBiH. These measures should be considered for implementation by 2029.