## Public awareness about floods - High water marks

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In the year 2014 Slovenian Environment Agency (ARSO) and Ministry of the Environment and Spatial Planning (MOP) together with Association of Slovenian Geographers (ZGS) initiated the placement of high water marks on rivers, lakes and sea. The aim of the action is to inform the inhabitants of the natural phenomenon of high waters, improve their knowledge of the regular impoundments of karstic poljes, flood prone areas near rivers and raise awareness that, more or less frequently, the water needs its natural extended space (ie. floodplains). Besides the official institutions, local stakeholders are crucial (local population, schools, local government, real estate owners of buildings with the installed high water marks), and are also included in the action.

The main purpose of the action is to encourage critical judgment of one's own and others' actions, while raising the individual's sense of responsibility in case of floods.

Inmorming, education and raising public awareness about water, are of great importance for preparation of long-term and sustainable River basin management plans and also for Spatial plans on a regional level.

## **HOW WE DO IT**

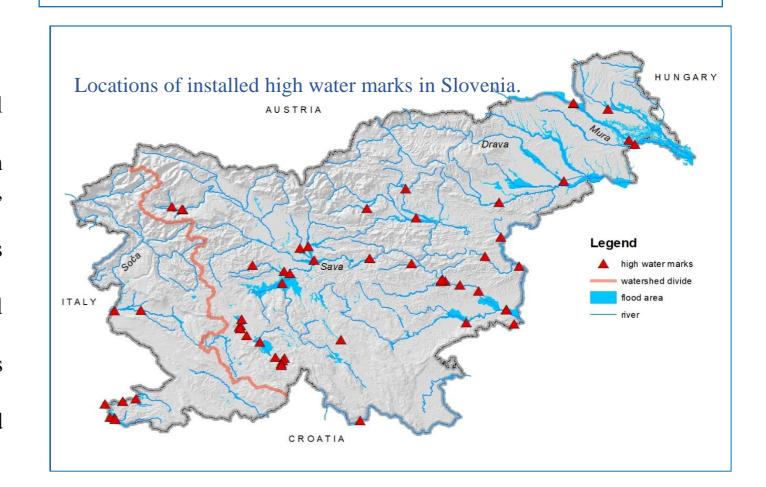
For placement of each high water marking it is necessary to follow general points:

- 1. To determine when and to what height the floodwater reached at a certain high water event; discuss this with the local population, schools, associations, municipalities...
- 2. To find the right building or physical object to place the mark that is exposed and publically accessible, visible and frequently visited.
- 3. To get permission from the real estate owner of the building or physical object to place the mark.
- 4. To coordinate the installation of the marking with the local stakeholders and prepare the public event with media coverage.

All installed high water marks are entered in the database and displayed online <a href="http://gis.arso.gov.si/atlasokolja/profile.aspx?id=Atlas\_Okolja\_AXL@Arso">http://gis.arso.gov.si/atlasokolja/profile.aspx?id=Atlas\_Okolja\_AXL@Arso</a>

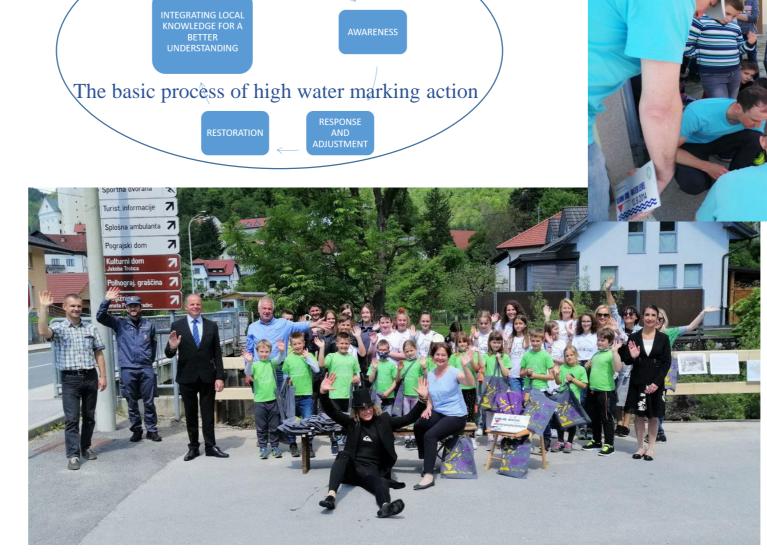


Visible and uniform high water markings in the field should raise awareness of the locals, visitors, and land use planners and remind them of the phenomenon of high waters, which must be taken into account when planning the use of space. Physical markings are a lasting reminder in space are only a part of the process of raising awareness and educating about high waters.



## **COOPERATIN WITH SCHOOLS**

In the preparation process for the event, pupils and students perform various activities, e.g. they collect and analyze data on the flood event, perform field measurements and compare the situation with the highest, attach the findings to the cause-and-effect framework and present them at the event. The presentation is an important part, as students acquire the skills of public speaking in front of a non-school audience and in the public. At the same time, they are not only inactive attendants of the event, but they take an active part in its creation, and carefully prepare for it in terms of content. This is very important in developing active citizenship competencies. The high water mark can be later included in achieving the educational goals of various school topics.



## INTERNATIONAL COOPERATION



The action has international recognition by International Commission for the Protection of the Danube River (ICPDR), the International Sava River Commission (ISRBC) and by the European Union Strategy for the Adriatic-Ionian Regional Strategy EUSAIR. Due to good practice and excellent experience in last we extended the action also in other countries. In cooperation with ISRBC and Institutions of countries in Sava River basin, we prepared common celebration of Sava Day, 1. June 2021. The event was jointly made by Slovenia along with Croatia, Bosnia and Hercegovina, and Serbia. On Sava Day all involved countries prepared an event at locations and marked the high water level. As for Sava River basin is part of Danube basin, the event was intended also for celebrating of Danube Day (29. June).

