

DanubeSediment Workshop at Central Celebration of Danube Day 2018 in Serbia

Do you know what river sediment is? Where does it come from and how does the river carry it? How are river islands formed? What gives color to river water?

These were some of the questions to which youngsters and other visitors got answers at the **DanubeSediment** workshop held on Saturday, June 9, 2018, on the riverside promenade in Zemun. The workshop was organized by **Jaroslav Černi Water Institute**, as part of the international project **DanubeSediment** under the Interreg Danube Transnational Programme.

Children, but adults as well, wrote messages on pebbles and sent them downstream by “water mail”. They learned that **sediment** comes from erosion in the river basin (crumbling and washing away of material). Rainwater and wind transport the eroded material to rivers. Each river has its natural sediment budget that is largely disturbed by human activity (deforestation, damming, building of dykes, and the like). The river carries this material downstream, along the bottom as **bedload** or as **suspended sediment** (a mixture of water and fine particles). In the upper parts of a river basin, where the ground is steeper, the river carries larger pieces. In lowlands, however, where rivers are more sluggish and lazy, there are more fine particles in suspension, which are often the reason for the **color** of river water. In places where river flow calms, these particles are deposited on the riverbed and build **river islands**. When the power of the flow decreases because the river channel suddenly widens, or a bend or other obstruction needs to be surmounted, or the river is joined by another river (confluence), its ability to carry sediment decreases and the particles slowly sink to the bottom. At times of high flows due to rainfall or snow melt, the river is re-energized and able to transport both bedload and suspended sediment.

The simplest demonstration of suspended sediment was a glass of water mixed with a teaspoon of sand, which initially lent color to the water but after mixing slowly settled on the bottom.

By writing and drawing on pebbles, then throwing them into the river, messages were sent to downstream cities and this complicated process of sediment transport explained in a way that even the youngest children could understand.

The ultimate goal of the DanubeSediment project is future joint monitoring of sediment across the river basin by the Danube countries, as well as a proposal of measures aimed at restoring a balanced sediment budget.

The workshop was part of the central celebration of Danube Day 2018, organized in Serbia by the Ministry of Agriculture, Forestry and Water Management – Water Directorate.

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