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WHAT HAS DANUBESEDIMENT BEEN WORKING ON?

Since the beginning of 2018, DanubeSediment has been very busy preparing the first technical reports, whilst actively engaging stakeholders in the work process. Draft results of the Report on Sediment Monitoring were presented to an international group of experts at the [Sediment Monitoring Workshop](#) in Budapest in April.

To find out where the sediment continuity of the Danube River is being disrupted, our project partners are currently calculating the sediment balance. They have gathered a large amount of data on both suspended sediment and bed load and collected information on the historical and present morphology of the river. For more information, see [Sediment Balance](#).

Not only are we looking at changes in the sediment balance but we want to understand the reasons for these changes. To achieve this, we have collected information on key drivers and pressures causing sediment discontinuity in the Danube and its tributaries. After analysing how sediment discontinuity may impact the river, project partners will also assess good practice measures for mitigation. For more information, see [Impacts and Measures](#).

One of the key goals of DanubeSediment is to make our project results, such as the sediment balance of the Danube and recommendations for good practice measures, both understandable and usable for decision-makers and practitioners. Find out more [here](#).

NEWS FROM OUR LATEST EVENTS

- [“New monitoring stations and better cooperation are key issues at stakeholder workshops”](#)
- [“Raising awareness for sediment - Danube Day 2018”](#)
- [“Data puzzle developing into a picture” \(Project meeting, Vienna, 05-06/06/2018\)](#)
- [“Iron Gate – Hotspot for three DTP Projects” \(Cross-Sectoral Conference, Kladovo, 29-30/05/2018\)](#)



- [“Good practice and recommendations for sediment monitoring” \(Sediment Monitoring Workshop, Budapest, 18/04/2018\)](#)
- [“Project contribution to a sediment management concept” \(Project Meeting, Sofia, 01/03/2018\)](#)

Find further up-to-date information, news and photos on our DanubeSediment [website](#).

RECOMMENDATIONS FOR SEDIMENT MONITORING

DanubeSediment has been finalizing the report on “Sediment Monitoring”. First results of this report were presented by BME and discussed with stakeholders at a workshop on Sediment Monitoring in Budapest in April 2018. Further topics at the workshop were recommendations for new sediment monitoring stations and the need for a Danube-wide sediment monitoring network. Participants discussed best practices for sediment monitoring methods for both suspended sediment and bed load. More information, pictures and presentations can be found [here](#).



Sediment Monitoring Workshop in Budapest (Barbara Keri, BME)

After collecting a significant amount of sediment data and evaluating the dataset, BME presented first results of a mean annual suspended sediment load, covering a 30-year period. The results showed some data discrepancies at certain locations in the Danube. These issues still need to be analyzed and harmonized within the project consortium. Results can be expected within the next few months.

FIRST RESULTS OF A DANUBE-WIDE SEDIMENT BALANCE

In order to calculate the sediment balance of the Danube River, the suspended sediment load must be complemented with data on morphological characteristics of the river channel. For example, information on the minimum navigational water levels, on the amount of sediment that is dredged and fed into the river as well as information on river bed material and composition is very relevant.

In order to see how the Danube changed over time, sediment data was gathered for three different time periods: 1920-1970, 1971-1990 and 1991-2016. This helps us understand in which time periods erosion and deposition of sediment occurred. Within the scope of the sediment balance, DanubeSediment will analyse in which way different degrees of river channel modification, for example the building of large dams in the Danube, can be retraced in the collected sediment data. The sediment balance will look at three morphologically different river sections: the Upper, Middle and Lower Danube as well as their major tributaries. For those river reaches with sufficient data available, a small scale analysis will be undertaken.

Changes, such as river channel straightening, cutting off of side-arms, narrowing and shortening of the river channel and changes in the river bed slope, can have drastic effects on the sediment regime. As many of these changes have been undertaken more than a century ago and in order to get an idea about these changes, wherever available the morphological development of the river is compared with data from the end of the 19th century, which is found in historic maps.

To date, preliminary results showing the collected data have been discussed amongst project partners. First results of a Danube-wide sediment balance are expected towards the end of the year.

DISCUSSION ON KEY DRIVERS AND PRESSURES THAT IMPACT SEDIMENT

During the past half-year, DanubeSediment has collected data on the distribution of key drivers that impact sediment transport. The data collection took place in all national sectors of the Danube and in 19 main tributaries, which were selected in the frame of the project. More information on the collection process can be found in our [previous newsletter](#).

DanubeSediment has analyzed the data and is currently finalizing the report on key drivers, which will be published in the near future. In summary, the report shows that key drivers with the potential to cause alterations of the sediment regime are present at the basin-wide scale. Project partners named following key drivers as having a significant influence on the sediment regime in the Danube: navigation, flood protection and hydropower. In the 19 main tributaries, water supply was named in addition to the three drivers listed above.

In addition to the key drivers, the project partners collected information on the pressures arising from these drivers. Common pressures are for example longitudinal interruptions such as dams, weirs and sluices and lateral interruptions such as dikes. These pressures are visualized via GIS maps showing their distribution within the Danube and its tributaries.

Knowing how sediment discontinuity may impact the river, project partners will also assess good practice measures for mitigation. To support the recommendations that will be part of the project outputs, they will evaluate the impact of these measures on the river ecosystem through a thorough risk assessment for selected pilot regions. This risk assessment is currently being planned and will begin shortly.

In order to give stakeholders the opportunity to take part in evaluating the results related to drivers, pressures and impacts, a “Sediment Management Workshop” will be organized in Bucharest in December 2018. The exact date and venue will be communicated in the near future.

STAKEHOLDER INVOLVEMENT

An important project goal is to involve stakeholders into the preparation and dissemination of the major project outputs – the Danube Sediment Management Guidance (DSMG) and the Sediment Manual for Stakeholders (SMS). As an important step towards this goal, DanubeSediment held national stakeholder workshops in each partner country during the past year: Croatia, Germany, Hungary and Serbia held their workshops in 2017 and Austria, Bulgaria, Romania, Slovenia and Slovakia organized their national stakeholder workshops in the first half of 2018.

Over 350 stakeholder from a wide range of target groups participated in these workshops, for example representatives from water administration, research, hydropower production, waterway management, flood protection, and nature protection. Stakeholders had the opportunity to give input from their field of expertise, to discuss their experiences in sediment management, exchange opinions on sediment management priorities and articulate their expectancies towards the major project outputs. You can find the highlights of the workshops on our [website](#) and pictures in the [gallery](#).

In addition to communicating with experts, DanubeSediment worked on raising public awareness about the need for sediment management in the Danube. All project partners joined this year's Danube Day activities, which took place in each partner country throughout the month of June. Our partners organized a multitude of different events for old and young, for example activity booths with information on sediment for children, workshops for experts and excursions along the Danube. Highlights and pictures of DanubeSediment activities can be found [here](#). All Danube Day activities from each partner country are available [here](#).



*Danube floodplain excursion in Neuburg, Germany
(Hanna Skiba, LfU)*



*"Sediment messages for the Danube" in Belgrade, Serbia
(Ljiljana Marjanovic, Jaroslav Cemi Water Institute)*

INTERESTING LINKS

- Facebook: Vote for your favorite project photos in this year's [DTP Photo Competition!](#)
- [Project flyer](#) in English, German, Romanian and Serbian
- ["Danube News" Article](#) on DanubeSediment (pg. 8-13)
- Read the [National Editions](#) of our DanubeSediment newsletters

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