



Setup and testing of European Early Flood Alert System (EFAS) in the Danube River Basin

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The aim of the European Early Flood Alert System (EFAS) activity is to develop a prototype of an early flood forecasting system capable of simulating medium-range flood risk between 3-10 days for the whole of Europe. The Danube has been selected as one of the pilot catchments. It is a very challenging river basin in the sense that it is one of the biggest catchments in Europe.

This poster shows the present progress of testing the EFAS-LISFLOOD Model and gives an overview about the first results of calibration and validation in the Danube river basin. Depending of the already available data we made first simulation runs in the following sub catchments: Upper Danube, Slovenian Sava, Morava, Hron and Tisza River.

This poster shows also the present status of data gathering of historical discharge data, climate data and cross sections (in percentages) in 14 Danube countries. In absolute numbers are at the present available data of 2915 meteorological stations, 195 gauging/discharge stations and 349 cross sections.

Last but not least are on the poster also some statistical data of the Danube basin for give an impression of these great river catchments.

The Danube catchments, with an area of about 800,000 km², are shared with 18 countries. The length of the Danube River is 2850 km and is the second longest river in Europe and the 19th longest of the world. The spring is in Germany/Schwarzwald.

The Danube basin is divided into 3 hydrological areas: the “Upper Danube” upstream Bratislava/Slovakia with a basin of about 130,000 km², the “Central Danube Basin” upstream the Iron Gate until Bratislava with a basin of about 450,000 km² and the “Lower Danube” downstream the Iron Gate with a basin of about 220,000 km². The main tributaries are Inn River, Drava River, Tisza River, Save River and Siret River.

In the Danube basin are many hydropower plants (HP), especially some 1000 in the tributaries. On the main river are total 60 HPs, the greatest one is Iron Gate I at Danube-km 949 with a fall of 32m and a reservoir volume of 2,900 millions of m³.

The mean discharge near the Danube mouth at Galaț is 5600 m³/s and the 100-year flood peak is about 16,000 m³/s. The delta mouth at Sulina/Romania has 3 branches into the Black Sea.