



MONITOR II: Serbian test bed

Test bed Topčiderska River

Location of the test bed

The Topčiderska River is the right tributary of the river Sava in the centre of Belgrade. The catchment area is 147 km² and has an elongated shape. Highest altitudes are on the nearby Rodop Mountains. The highest peak is 512 m and the mouth is at 78m. Slopes are variable, from very steep to very mild.

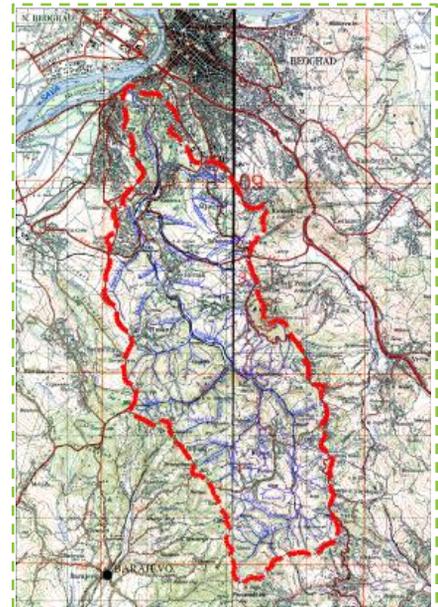
Geographic description of the test bed

The climate is continental moderate with mean annual sum of rainfall of 700 mm and mean annual temperature of 10°C.

The lower part of the catchment represents the urban zone of Belgrade, while other parts are designated for agriculture, fruit growing, forestry, rural areas and mining.

Belgrade and urban areas occupy 19% of the catchment.

International corridor 10 stretches along the Topčiderska River and connects Northern Europe with Greece, Bulgaria, Turkey and other corridors in Asia.



Topčiderska River watershed



3D view of Topčiderska River
(by Google Earth)



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Historical information of natural hazards in test bed

During the past decades, the Topčiderska River and its tributaries have flooded several times, greatly damaging rural as well as urban areas. Residential and rural buildings were affected by the floods as well as industrial facilities and infrastructure corridors 10 and 8.

Since the start of measurements and observations in 1957, numerous floods were registered, the extremes being in 1985, 1999, 2005 and 2006.

Monitoring system project

The newly installed monitoring system is designed for the application of modern monitoring devices with the ability to directly send measured data to a central computer and to those who are responsible for flood protection.

All measured data from the monitoring sites are transmitted using wireless technology to the central computer, and using SMS messages to staff in charge. This all takes place in real time, in order to protect against torrential floods.



Flooded Industrial zone in 1999
(by PWO Belgradewater)



One of the measurement sites in test bed (by J. Čerņi)