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Long term changes of the suspended sediment discharge on the lower Drava river

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The Drava river rises in Italy and flows about 730 km through Austria, Slovenia, Hungary and Croatia. The total catchment area to its confluence with the Danube river is about 41200 km2. Major activities on the whole Drava river regulation started in the beginning of the 19th Century and continued in the 20th Century with the construction of 23 dams and reservoirs. Their operation significantly altered the natural hydrological regime. The lower Drava (about 280 km-s in length) forms mainly the frontier between Croatia and Hungary. This paper analysis the long term suspended sediment measurements made at three gauging stations: Varaddin (1960-1981), Botovo (1968-2003) and Donji Miholjac (1968-2002). These stations are situated along the Drava downstream section. The objective of this paper is to examine the effect of dams and reservoirs on the changes of the suspended sediment discharge. Due to influence of reservoir operation the whole hydrological regime on the lower Drava is definitively, strongly and dangerously changed. The amount of suspended sediment has been greatly reduced which has already caused serious consequences.