

Abstract

Nature-oriented flood damage prevention in the Mümling catchment

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The river Mümling is located in the Odenwald, a low mountain range in the south of Hesse / Germany. It is a tributary to the river Main which flows into the river Rhine. In 1999 the Waterboard Mümling started to implement a new strategy which aims at increasing water storage by means of a decentralised network of small to medium scale measures within the catchment. Typically these catchment areas are densely populated; several villages are located close to the river. The consequences thereof are high restrictions for water storage and considerable flood damage potential located within the natural floodplains at the same time.

Special attention was paid to the GIS-based retention cadastre in which locations of natural and potential retention areas in the Federal State of Hesse (Retentionskataster Hessen – RKH) and along the river Mümling are stored. This innovative system covers about 350 different rivers with a total length of 4000 km. In addition to existing retention areas the RKH particularly shows areas with potential retention capacity which need to be activated by means of small to medium scale measures. One of these locations is the “Retention area Zell” which is one of the nofdp pilot projects. This measure is part of a catchment-wide decentralised network of possibilities for reducing the danger of flooding and for avoiding further growth of damage potential.