

Title: Study of Scenarios for the Discharge Regime of the Rhine

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Abstract:

Since modifications of climate values impact the hydrological processes as well as the water regime, the Conference of Rhine Ministers charged the International Commission for the Protection of the Rhine (ICPR) in 2007 to draft a study of scenarios for the discharge regime of the Rhine.

The ICPR set up an expert group EG KLIMA to combine all available studies on this issue and to condense relevant information for the international catchment of the Rhine River. The group decided to combine results which (a) reflect the current status of knowledge including the existing uncertainties, and (b) are based on methods that are uniform and comparable over the whole catchment. The results (see report No 188 www.iksr.org) encompass air temperature and precipitation change for sub-catchments of the Rhine River and changes in high, mean and low flow for selected gauges. Changes are given for the 20th and 21st centuries. For future time horizons so called scenario corridors are presented, which encompass the majority of projections available in 2011 (including data from the EU-FP6 project ENSEMBLES and the RheinBlick2050 project of the International Commission for the Hydrology of the Rhine basin CHR). The ICPR published the “Study of Scenarios for the Discharge Regime of the Rhine” in July 2011.

According to this study, by the middle of the century, up to 20 % higher discharges are to be expected during winters in the Rhine catchment and up to 10 % lower discharges are expected during summers, while regional variations may occur.

The results serve as a basis for developing an adaptation strategy in a subsequent political process which also includes reinforcement of the Rhine River with respect to flood control, water supply, environmental functions, and economical issues.

More information: www.iksr.org (subsection „Climate change in the Rhine catchment”)

Document download:

“Study of scenarios for the discharge regime of the Rhine” (ICPR - Report No. 188)

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