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Analysis of road traffic obstructions caused by the central European flood in June 2013 in Germany

Tina Bessel (1,2)

(1) Karlsruhe Institute of Technology (KIT), Germany, (2) Center for Disaster Management and Risk Reduction Technology (CEDIM)

The flood in June 2013 caused in Germany severe damage to infrastructure and has had a great impact on transportation. Traffic was disrupted in the interregional transportation network including federal highways and long distance railways. Researchers from the Center for Disaster Management and Risk Reduction Technology (CEDIM) aim to develop rapid assessment tools which allow a science based estimation of disaster impacts. This is part of a larger project called Forensic Disaster Analysis (FDA).

During the flood event, the CEDIM FDA group on transportation disruptions monitored and recorded traffic reports in Germany to obtain accurate information on road traffic obstructions due to the flood. A rapid initial evaluation of the data was carried out for federal and interstate highways on a district level for the period of May 31 till June 4 2013. In this evaluation, the causes and types of traffic obstruction, as well as the number and duration of flood-caused disruptions are considered. In the evaluated time period of five days, an amount of more than 4,800 hours of flood-related traffic obstructions could be observed in a total of 89 districts. Major traffic disruptions were located in the districts along the Mulde and in the foothills of the Alps.

This first initial evaluation will be followed by a detailed statistical analysis including all data collected during the flood event. To assess the impacts of the flood on traffic, a simple traffic simulation considering the disruptions will be carried out using a gravity model.