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Improvements for flood damage assessments in companies

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The economic damage due to floods has dramatically increased during the last decades, which emphasizes the need to improve the flood risk management. One of its important components are flood risk analyses, including damage assessments. But research about flood damage is still an area which does not receive much attention and most available studies were concentrated on residential flood damage.

To improve the knowledge about flood damage of companies and damage-influencing factors, 415 companies affected by the severe flood event of the river Elbe and its tributaries in August 2002 were questioned. The mean total damage amounted to 1.1 mill. EUR, the median to 0.2 mill. EUR, i.e. the mean was dominated by a few companies with very high damage. Flood characteristics, mainly the water level, were causing significant differences of the total flood damage. However, the extreme values of very high damage were mainly influenced by company characteristics. Especially large enterprises with high assets suffered from very high flood damage of more than 2 million EUR. Since it seems impossible to estimate these extreme values by statistical estimation approaches, due to unavoidable shortcomings of aggregation and average values, individual assessments of the few "high-damage-companies" is suggested. Resulting implications for flood damage estimation models will be discussed.