Flood damage assessment to economic activities: implementation and transferability of French methodology

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Since 2010, a national method is available in France for multi-criteria analysis of flood prevention projects. The method uses national damage functions to estimate losses to the different exposed items, including economic activities. Despite the business sector suffers significant losses in case of flood, flood damage modelling to businesses is less advanced than for other exposed sectors, as e.g. residential buildings. Reasons are many and include: the high variability of activities types composing this sector and then the difficulty of standardisation (above all when contents are considered), and the lack of data to understand and quantify damage and validate existing modelling tools. The collection of damage data in two case studies, in France and in Italy, and the collaboration between two research groups in the two countries allowed to study the applicability, the validity, and the transferability of the French damage functions for economic activities to Italy. Firstly, the functions were tested and validated in a French case study, i.e. the flood that affected the Île-de-France Region in 2016. This validation exercise faced the problem of working with few information about the identity of the activities, and propose a solution; moreover, it allowed to verify the actual availability of input data to implement the functions in France and pointed out the paucity of information to validate the methodology. Testing the functions in a foreign case study, i.e. the flood occurred in 2002 in Italy in the city of Lodi, allowed instead to verify the transferability of the method.