

237. Building an event database for flood fatalities

De Bruijn, K.M. , Jonkman, S.N.** , Kolen, B.** ,*** , Riedstra, D. †*

** Deltares, Boussinesqweg 1, Delft*

*** Delft, University of Technology, Delft*

**** HKV*

† RWS

¹ Boussinesqweg 1, 2600 MH Delft, tel: ++31-6-53844782, email: karin.debruijn@deltares.nl)

KEYWORDS: Flood fatalities, flood risk to people, event database

ABSTRACT

Floods still cause significant disruption in many countries and result in high damages and fatalities. Due to population growth and increasing exposure in flood-prone areas the number of flood fatalities may increase in future, unless we are able to learn from past events .

Reliable knowledge on potential flood fatality numbers has become more important in the last decade, because they now are a more important criterion in flood risk management decisions in countries such as the Netherlands, UK, France and USA (De Bruijn et al., 2014), and the effectiveness of flood emergency management can be improved if we know more on the circumstances and factors which contribute to the loss of life of people. Research on these factors is in progress.

The knowledge on factors which contribute to fatality risks is captured in fatality functions and evacuation models (Di Mauro et al., 2012; Jonkman (2007), Kolen et al., 2014). However, the model outcomes are still highly uncertain. Lack of data is one of the causes of that uncertainty. Besides, the functions often consider only a few factors explicitly, and all others implicitly. The Dutch mortality functions for example, relate flood parameters to mortality. Factors such as house type, warning and human are not considered explicitly. This makes the functions difficult to use in other settings.

In order to advance research on flood fatalities we are developing a flood event database that will help to identify relevant factors and the way they relate to the occurrence of flood fatalities. By trying to capture as many factors as feasible, data of events may be used outside the area where they occurred. Differences in flood types, area characteristics and society need to be considered when doing so.

We aim to make an open and publicly available database which allow scientists to share knowledge. We plan to link to existing initiatives of for example CRED, Safelevee and the Floods Directive. We invite everyone to collaborate in this initiative.

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