

Evacuation in the Netherlands is not pointless

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An evacuation in the event of flooding is not as pointless for the Netherlands as is generally assumed. This is one of the conclusions reached by Olga Huibregtse, who will receive her doctorate for research on this subject at TU Delft on Monday 18 February.

Poorly prepared

"The Netherlands is poorly prepared for a flood disaster. Too many people are unaware, for example, of what to do in case of an emergency", as was recently claimed by Minister Schultz of [Infrastructure](#) and the Environment (only in Dutch). PhD candidate Olga Huibregtse of TU Delft is one of the researchers attempting to change this, together with Prof. Serge Hoogendoorn and Dr Andreas Hegyi. Huibregtse's research focused on a more efficient evacuation by car in the event of flooding. As an example, Huibregtse used in her research, among other things, the evacuation by car of Walcheren, with 112,000 inhabitants. "It is certainly true that we are ill-prepared for an evacuation," states Huibregtse. "But with an effective evacuation plan, this can certainly be changed."

Taking uncertainties into account

Evacuations are characterised by a high level of uncertainty, such as uncertainty in the behaviour of the people (do they adhere to the instructions provided?) or in the capacity of the road network.

Huibregtse: "When uncertainty is not taken into account in the evacuation instructions that are given out, the instructions will probably have little effect. For example, in the event that the behaviour of the people deviates from the behaviour expected." For this reason, Huibregtse is the first person also to include the combination of the factors of uncertainty and adherence behaviour in her research into optimum evacuation instructions.

Useful

"I present optimisation methods that result in instructions for motorists: when to depart, where to go and which route to follow. These optimised instructions prove to be considerably more effective than instructions based on simple rules, such as instructing the evacuees simply to follow the shortest route. This indicates that [evacuation](#) is not as pointless for the [Netherlands](#) as is generally assumed. In order to apply the instructions properly, they will need to be part of a broader plan which also includes communication and operational strategies."

Provided by Delft University of Technology

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