The near real time Forensic Disaster Analysis of the central European flood in June 2013 - A graphical representation of the main results

Kai Schröter (1), Florian Elmer (1), Werner Trieselmann (1), Heidi Kreibich (1), Michael Kunz (2), Bijan Khazai (2), Doris Dransch (1), Friedemann Wenzel (2), Jochen Zschau (1), Bruno Merz (1), Bernhard Mühr (2), Tina Kunz-Plapp (2), Stella Möhrle (2), Tina Bessel (2), and Joachim Fohringer (1)

(1) GFZ German Research Centre for Geosciences, (2) Karlsruhe Institute of Technology (KIT)

The Central European flood of June 2013 is one of the most severe flood events that have occurred in Central Europe in the past decades. All major German river basins were affected (Rhine, Danube, and Elbe as well as the smaller Weser catchment).In terms of spatial extent and event magnitude, it was the most severe event at least since 1950.

Within the current research focus on near real time forensic disaster analysis, the Center for Disaster Management and Risk Reduction Technology (CEDIM) assessed and analysed the multiple facets of the flood event from the beginning. The aim is to describe the on-going event, analyse the event sources, link the physical characteristics to the impact and consequences of the event and to understand the root causes that turn the physical event into a disaster (or prevent it from becoming disastrous). For the near real time component of this research, tools for rapid assessment and concise presentation of analysis results are essential.

This contribution provides a graphical summary of the results of the CEDIM-FDA analyses on the June 2013 flood. It demonstrates the potential of visual representations for improving the communication and hence usability of findings in a rapid, intelligible and expressive way as a valuable supplement to usual event reporting.

It is based on analyses of the hydrometeorological sources, the flood pathways (from satellite imagery, data extraction from social media), the resilience of the affected regions, and causal loss analysis.

The prototypical representation of the FDA-results for the June 2013 flood provides an important step in the development of graphical event templates for the visualisation of forensic disaster analyses. These are intended to become a standard component of future CEDIM-FDA event activities.