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### More than fast flowing water – a landscape perspective on the July 2021 Eifel flood disaster

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Rapidly evolving floods are rare but powerful drivers of landscape reorganisation that have severe and long lasting impacts on both the functions of a landscape's subsystems and the affected society. The July 2021 flood that particularly hit several river catchments of the Eifel region in West Germany and Belgium was a drastic example. While media and scientists highlighted the meteorological and hydrological aspects of this flood, it was not just the rising water levels in the main valleys that posed a hazard, caused damage, and drove environmental reorganisation. Instead, the concurrent coupling of landscape elements and the wood, sediment and debris carried by the fast-flowing water made this flood so devastating and difficult to predict. Because more intense floods are able to interact with more landscape components, they at times reveal rare non-linear feedbacks, which may be hidden during smaller events due to their high thresholds of initiation. Here, we briefly review the boundary conditions of the 14–15 July 2021 flood and discuss the emerging features that made this event different from previous floods. We identify hillslope processes, aspects of debris mobilisation, the legacy of sustained human land use, and emerging process connections and feedbacks as critical non-hydrological dimensions of the flood. With this landscape scale perspective, we develop requirements for improved future event anticipation, mitigation and fundamental system understanding.

