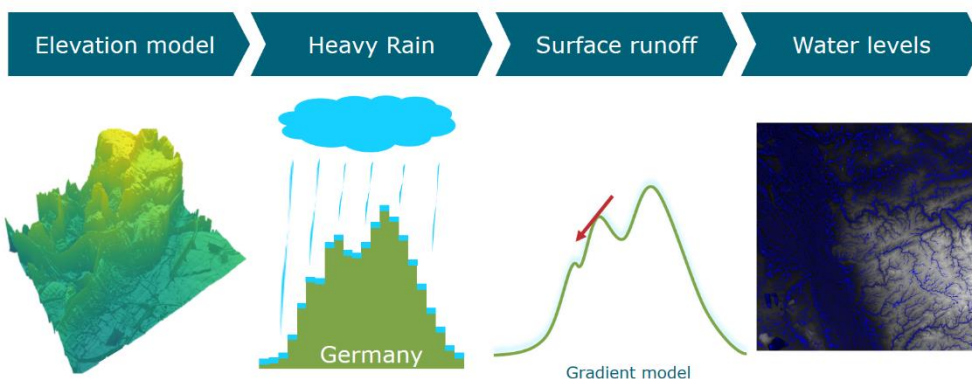


## RAIN CHASER

### Sustainable and address specific assessment of heavy rain risks

The low pressure area "Bernd" in mid-July 2021 once again demonstrated the impact of natural hazards on people and insurance companies. The trend towards an increase in heavy rainfall events will continue in the coming decades (according to the IPCC and other sources). Modelling and assessing the risks associated with heavy rainfall are therefore becoming increasingly important. An analytical assessment is highly complex, as heavy rainfall events occur regionally and usually occur for the first time in the affected region. The extent to which a risk is affected depends heavily on the surrounding topography.



*Graphical depiction of the geophysical runoff model RAIN CHASER*

RAIN CHASER is MSK's actuarial answer to these challenges. RAIN CHASER is a purely geophysical runoff model designed to simulate heavy rain risks and is not based on historical claims or rain events. The model answers the question of which buildings are at risk and the severity of said risk if a heavy rainfall event were to occur in the respective region.

A key achievement is the address-specific MSK heavy rainfall zoning. All risks in Europe are categorised into one of four zones, ranging from low to very high risk in the event of heavy rainfall events. Trials of the MSK heavy rainfall zoning using data provided by private and commercial property insurers show strong differentiations over long time periods; especially heavy rainfall events such as "Bernd" can be depicted particularly well.

## Your benefits

- › Highly precise evaluation and assessment of heavy rain risks for your portfolio, even for areas without historical heavy rain events
- › The MSK heavy rain zoning is a novelty on the market and does not change due to new events (stability of zoning)
- › Assessment and controlling of heavy rain cumulative risks in your own portfolio
- › Utilisation in the ORSA under Solvency II and in reinsurance analyses

## The MSK heavy rain zoning system is fully operational

- › **Portfolio:** Apply the MSK heavy rain zoning to your portfolio at individual risk level in order to evaluate it
- › **Cumulative risk analysis:** Have the heavy rain cumulative risk of your portfolio assessed and develop methods to reduce it
- › **Pricing:** By making extensive use of the MSK heavy rain zoning in the tariff, you can achieve an advantageous selection
- › **Web service and API-Interface:** The MSK heavy rain zoning can be supplied in various ways, for example via a highly performant and reliable direct interface or via a web service



## Meyerthole Siems Kohlruss

Meyerthole Siems Kohlruss was established in Cologne/Germany in 1998 as the first German actuarial consulting company. We support insurers in strategic decisions and operative processes. Our main areas of expertise are data pooling, pricing, telematics, cyber, sustainability, natural hazard modelling, balance sheet evaluations, reinsurance, Solvency II and IORP II.

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