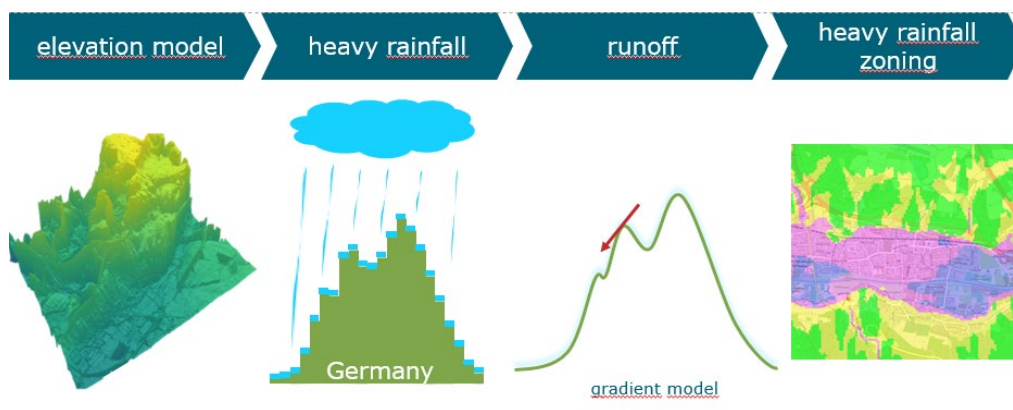


RAIN CHASER

Future proof and accurate heavy rainfall risk assessment

The low-pressure area 'Bernd' in the middle of July 2021 has once again shown the impact that natural hazards have on both people and insurance. The trend towards an increase in heavy rainfall events will continue in the coming decades (according to the IPCC, among others). This is why modelling and assessing the risk of heavy rainfall is crucial. An analytical assessment is highly complex, as heavy rainfall events occur regionally and usually occur for the first time within the affected region. The extent of the risk is heavily dependent on the surrounding topography.



Graphic representation of the geophysical runoff model RAIN CHASER

RAIN CHASER is MSK's actuarial response to these challenges. RAIN CHASER is a purely geophysical runoff model designed to simulate the risk of heavy rainfall and is not based on historical loss or rainfall events. The model answers the question of which buildings are at risk and to what extent if a heavy rainfall event occurs in the respective region.

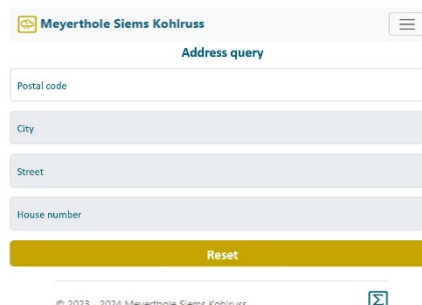
One of the key results is the MSK heavy rain zoning, which is accurate down to individual addresses. All risks in Europe are categorised into four zones, from low to very high risk in the event of heavy rainfall. Tests of the MSK heavy rain zoning using data from private and commercial property insurers show strong differentiations over long periods of time, with heavy rain events such as 'Bernd' being modelled exceptionally well.

Your benefits

- › Highly accurate assessment and evaluation of your portfolio's heavy rainfall risks, even for regions with no history of heavy rainfall events
- › The MSK heavy rain zoning is a novelty on the market and does not change with the occurrence of new events (stable zoning)
- › Assessment and management of the cumulative risk of heavy rainfall in your own portfolio
- › Usability in ORSA under Solvency II and in reinsurance analyses

The MSK heavy rain zoning is operational

- › **Portfolio:** Have the MSK heavy rain zoning applied to your portfolio at the individual risk level in order to evaluate it.
- › **Cumulative analysis:** Assess your portfolio's cumulative risk from heavy rainfall and develop methods to reduce this risk
- › **Pricing:** Through extensive use of the MSK heavy rain zoning in the tariff, favourable selection can be attained.
- › **Web service and API interface:** The MSK heavy rain zoning can be provided in various ways, among others via a performant and reliable direct interface or a web service



Meyerthole Siems Kohlruss

Meyerthole Siems Kohlruss was founded in Cologne in 1998 as the first German actuarial consultancy firm and supports insurance companies in their strategic decision-making and operational processes. Our main areas of expertise are data pools, pricing, telematics, cyber, sustainability, natural hazard modelling, balance sheet valuations, reinsurance, Solvency II and EbAV II.

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