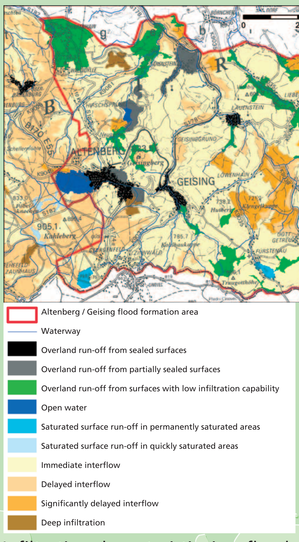
Flood control at the source

Overland run-off due to heavy rain and poor infiltration capacity

The mountain ranges are often affected by heavy rainfall and short-term extreme water flow. Defining flood generation areas and the associated regulations for their use can help improve infiltration capability. Infiltration of the rainwater on site, along with the associated delay in run-off into the body of water (retention), reduces the risk of flooding.



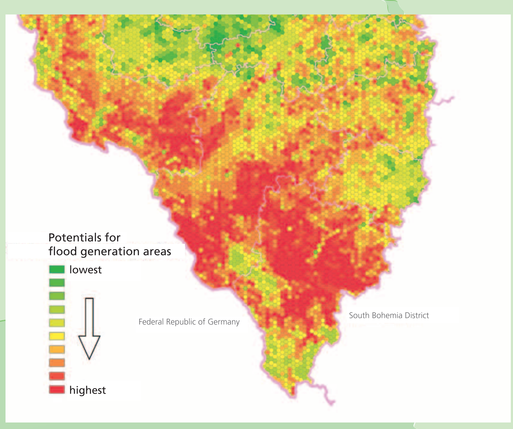
Infiltration characteristics in a flood generation area in Saxony

Defining suitable areas

Various methods can be used to determine which areas contribute to flood generation and which areas are suitable for retention. Fundamentally, the soil characteristics, the type of usage, the lay of the land and the expected rainfall play a decisive role. In order to increase infiltration capability, soil characteristics must be improved by adapting usage.

Improve infiltration capability through conservative soil cultivation / tillage

In the ELLA project, which preceeded LABEL, a newly developed method was used to define flood generation areas in Saxony on a small scale. In the LABEL project, this procedure is applied to two districts in the Czech Republic – Usti and Pilsen – and adapted for Czech conditions.



In the Pilsen district, large regions have been identified as flood generation areas. The map shows the southern part of the district, while the red sections indicate areas where flood generation may potentially take place.

The results provide the basis for spatial planning in the district and in the municipalities of the region.

Sources:
- Saxony State Office of Environment and Geology, State Flood Center / Hydrology Department
- IRI, Institute for Regional Information
- Pilsen District

Editor:
- Saxony State Office of Environment and Geology, State Flood Center / Hydrology Department

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