

## FOREST21

The aim of FOREST21, within the frame of the BMBF-funded joint research project ClimXtreme<sup>2</sup> is the development of an indicator-based tool reflecting the sensitivity of forests to climate extremes of storm and drought. Wind throw/windbreak and drought affect many existing mono-specific, not well-fitted stands (in particular Norway spruce) under specific soil water conditions and lack of proper forest management.



Wind-throw; medium-aged spruce stand, Northern Black Forest; W-exposed slope with soils affected by stagnant water (Pseudogley) © K.H. Feger

Those risks depend on different factors, i.e. relief position, soil physical properties, soil moisture regime and related root distribution. This complex interaction between site and stand characteristics was widely ignored in the past. Thus, a combination of climatological and forest ecological research is necessary to identify proper indicators for damages due to extreme events in the 21st century. In this project, robust and validated models (e.g. the mechanistic site water model LWF-BROOK90) will be applied to close-to-present and future data. Based on the modelling results an indicator system will allow site-specific conclusions of future risks for forested areas.

Forest21 (2020 – 2023) is a collaboration project between the Chair of Site Ecology and the Chair of Meteorology<sup>2</sup> at TU Dresden.