

R&D Project: Effects of the climate change on groundwater dependent ecosystems – investigations on bogs in lowlands

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Objective: For Saxony is prognosticated a relevant climate change. Aim of the project was to investigate the effects of climate change on groundwater dependent ecosystems. For bogs of Presseler Moorland in the northern lowlands of Saxony have been evaluated the water balance for a future period from 2040 to 2060.

Location: Saxony

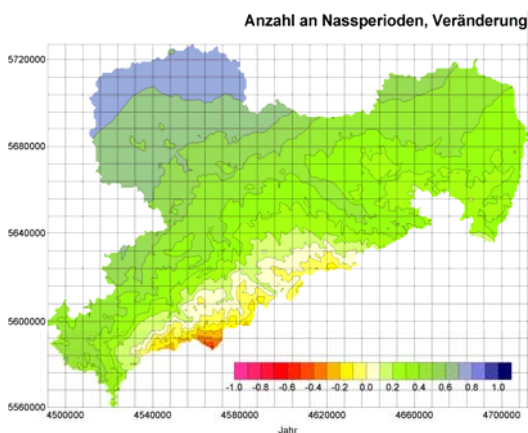
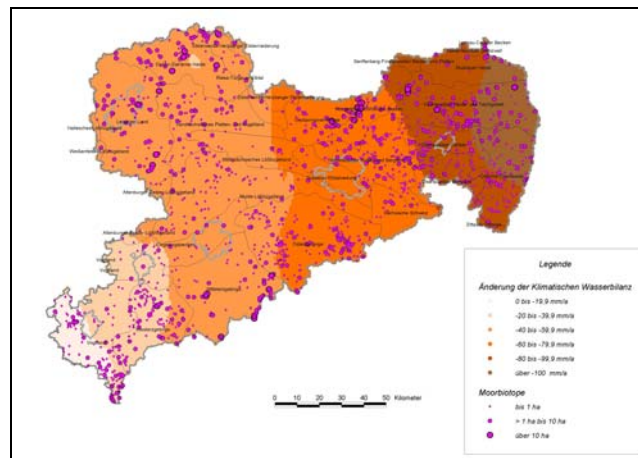
Client: State Office for Environment and Geology

Cooperation partner: Office for ecological studies

Duration: 2005-2006

Initial situation:

Regional climate prognoses forecast essential changes of the weather conditions and considerable climatological characteristics in the concerned region Saxony. The changes cause an impact on groundwater dependent ecosystems (rivers, bogs, marshes, meadows) with their habitat and species. Currently the Saxon environment and nature conservation administration has not sufficient information about the possible effects of the climate changes particularly with regard on groundwater dependent ecosystems. On the basis of climate prognoses up to 2100 the effects of the climate change on groundwater dependent ecosystems have been deduced and identified as shown in the project bogs of the Presseler Moorland. Future water balance was calculated using Wasim-ETH model.



Scope of services:

- Ascertainment of the area differentiated bogs structure (surface area, profile construction) and banishment of hydrological "homogeneous" reactive partial areas
- Evaluation of the current water balance and prognosis of the changes of hydrological conditions using Wasim-ETH model
- Conduction of the effects on the selected water addicted ecosystems, biotope types and species