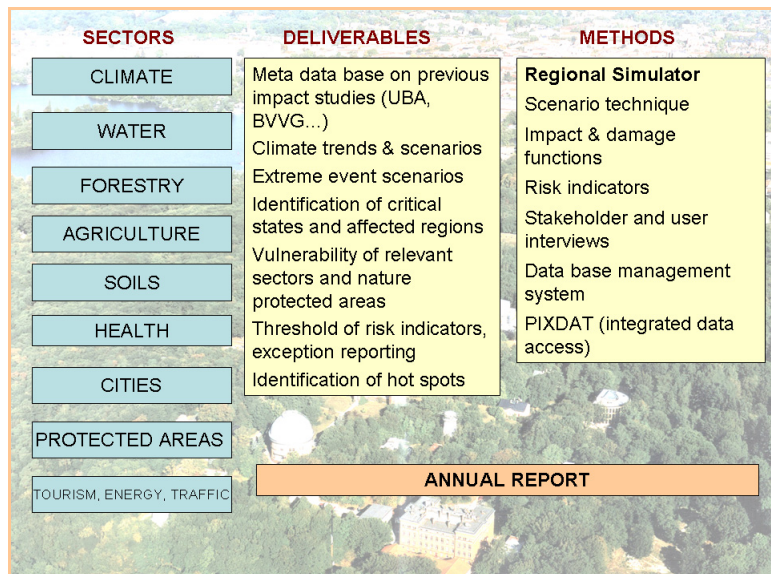


CLIMREG

CLIMATE IMPACT REGISTER FOR GERMANY

Abstract. A dynamically extendable register of climate impacts, as well as a methodologically new presentation of climate change impacts will be the products of this project. The Regional Simulator, a data base, and a tool for integrated data access will allow to generate annual reports on climate change impacts in Germany.

SCHEME OF THE CLIMATE IMPACT REGISTER



CHARACTERISTICS

- Based on experiences with previous and results of recent studies (e.g. UBA, BVVG, GLOWA-Elbe, KLARA, Brandenburg)
- Extendable structure (sectors, methods, deliverables)
- Generic concept of the register
- Embedding of the **Regional Simulator**
- Linking of data base with models of the Regional Simulator
- Exchange with stakeholders and users
- Annual reporting including an atlas
- Presentation on the internet
- Co-funding by projects (e.g. GLOWA-Elbe II, KLIMZUG)

IMPACT STUDY EASTERN GERMANY

In a recent study for the "Bodenverwertungs- und Verwaltungs GmbH" (BVVG) we analysed the climate change impacts on crop yield and on the yield of Aspen short rotation coppices in the East German Federal states. A climate scenario (A1B, IPCC 2007, 2004 - 2055) was generated with STAR for the considered region including 829 stations (Fig. 1).

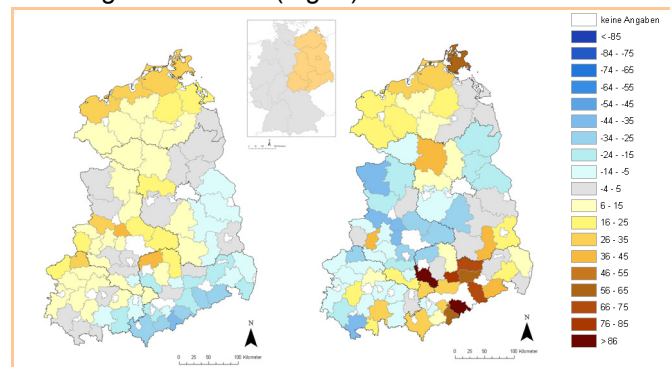


Figure 1 left: Change of precipitation (November-April) right: Change of precipitation (May -July), averaged from 2024-45

A statistical crop model revealed visible changes for winter wheat in the period from 2024-2045 only. The yield increase is related to the potential water supply in early spring and summer. Increasing precipitation and humidity

in the northern parts favours the yield, whereas the water supply during the wheat season limits the potential yield in the eastern parts (Fig. 2).

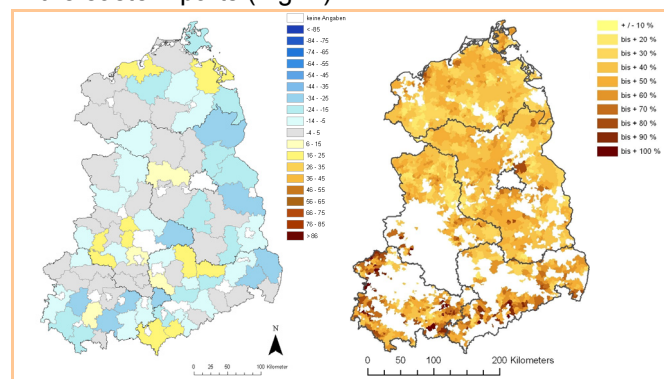


Figure 2 left: Yield changes in winter wheat averaged from 2024-45; right: Change of timber yield (Aspen) averaged from 2024-2045 relative to 1982-2003

The yield potential of short rotation (20 years) coppice of Aspen was simulated with the forest model 4C on poor arable land. Increasing yields were found for all rotation periods from 2004 to 2055, especially on sites in Saxony and Thuringia (Fig. 2). The changing climatic conditions in Eastern Germany are likely to favour the cultivation of Aspen coppices.