

Projections and predictions of Local prEcipitation Intensities. Advanced Downscaling using Extreme value Statistics (PLEIADES)

Initiative: Modellierung und Simulation komplexer Systeme (beendet)

Ausschreibung: Extremereignisse: Modellierung, Analyse und Vorhersage

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Laufzeit: 2 Jahre 6 Monate

Projekt-Website: <http://www.geomar.de/forschen/aktuelle-projekte/detailansicht/prj/2178/>

Robust knowledge on regional scales about future changes in precipitation extremes is crucial for planning adaptation to climate change. As global climate models do not provide reliable information below scales of about 200 km, dynamical or statistical postprocessing is required. However, such downscaling approaches are currently limited in their representation of precipitation extremes. The project aims to substantially improve downscaling methodologies by developing a statistical downscaling and correction method for precipitation simulated in regional and global climate models. An estimation of the full precipitation distribution, including extreme events and spatial dependence is sought that is able to correct location biases. An ensemble of scenarios for precipitation and its extremes for Europe for the entire 21st century will be analysed in order to downscale global decadal predictions that are currently in preparation.

Projektbeteiligte

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