

Abstract

This diploma thesis deals with statistical downscaling of extreme temperature values. In first section describes two type of downscaling- dynamical and statistical. All the examples are listed and described variol methods to simulation climate elements, in particular temperatures and precipitation. Then there are the linear and non-linear methods were compared and the results of previous studies deals with this problem. These studies address not only daily or monthly average values, but also extreme. Extreme values are more difficult to simulate. In my thesis, I focus on downscaling of extreme temperature using linear regression. I focused on the area of Europe, where I chose 10 stations, which cover variol climate of Europe. Extreme values to every season, the lowest in winter and the highest in summer. The aim of this thesis was determine whether it is appropriate to use to simulate extreme temperature seasonal average values in the free atmosphere.

Key words: downscaling, statistical downscaling, extreme temperature, climate simulation