



Monitoring vegetation state using polar orbiting imagery

R.Becker

Deutscher Wetterdienst

The German Weather Service (DWD) is tasked to monitor the state of the vegetation in combination to the meteorological conditions. Negative anomalies of precipitation cause water stress inhibiting plant growth and leading to a decrease in agricultural yield and an increase of the forest fire risk. The utilisation of spaceborne measurements of atmospheric and surface parameters is a widely accepted and appreciated way forward to either compensate for the lack of insitu observations or to complement to. In the framework of the environmental and warning management DWD implements a satellite component with a spatial resolution of 1 km^2 based on data of the AVHRR instrument flown on NOAA and MetOp satellites. According to the findings of Kogan (Kogan 1995 & 2001) two subindices - the vegetation condition index, related to the individual NDVI, and the temperature condition index - will be combined to release a drought index. Both subindices require a climatological range. This is calculated by analysing parts of a long-term dataset for the detection and monitoring of desertification risks (Medokads, Koslowsky 2003) over Germany. The paper describes the preprocessing steps done so far including additional cloud screening, the selection of reference ground observation sites and interpretation of first results.