Geophysical Research Abstracts
Vol. 14, EGU2012-14318, 2012
EGU General Assembly 2012

Towards new Climate Scenarios for The Netherlands; connecting science and society

A Feijt
KNMI - Royal Netherlands Meteorological Institute

KNMI is working on a new set of Climate Scenarios for Dutch society based on the results of IPCCs AR5. These so called KNMI-next scenarios will replace the current KNMI-06 scenarios (based on AR4) published in 2006. KNMI-06 was adopted by the government as basis for the Dutch adaptation policy. As a result there are many users of these scenarios and KNMI is well aware of the large impact the new scenarios will have in the Netherlands.

For this reason stakeholders are involved in the process from the start in 2009. Based on analysis of CMIP-5 runs, parameters are selected that discriminate different scenarios representing most of the uncertainty range. Various methods are used for downscaling to obtain better estimates of extremes and additional spatial detail. The concept of “future weather” is used to get more detailed insight in important meteorological phenomena such as periods of drought and long periods of precipitation and provide data for downstream impact studies. For the Dutch situation in particular, the combination of a North westerly flow on the coast (higher waves) and persistent rain in the catchment area of the river Rhine (high river water levels) is important.

The KNMI development of updated climate scenarios is supported by the national programme Knowledge for Climate, in particular the subprogramme "High quality climate projections for adaptation in the Netherlands”. This is a cooperation of 12 institutes, each with a different focus: meteorology, water management, ecology, agriculture, spatial planning and air quality. The project covers a whole range of activities: from improving our basic understanding of relevant meteorological processes, to utilisation, and to assessments and communications about the impact of climate change in various sectors of society.

The project has work packages dealing with
•Regional climate studies and projections of critical meteorological processes (WP1)
•Assessment and propagation of uncertainty at various scales (WP2)
•Application of climate projections to various sectors (WP3)
•Communication of climate and climate change impact to users (WP4)