

Introduction

In this Triennial Scientific Report an overview is presented of the research activities carried out by KNMI in the period 2007-2009. KNMI's research is focused on the subjects of weather, climate, and seismology, and on the information and observation technology that is related to these subjects. This report covers a broad range of subjects, covering the chain from observation to modeling, analysis, understanding and advice.

KNMI's research aims to maximize its benefits for society. KNMI provides advanced scientific knowledge, observations and advice on the global climate system, substantiating the efforts of the Dutch government to protect the Netherlands to the impacts of severe weather and climate change. In this capacity, KNMI provided extensive information on climate change and sea level rise to the Delta Committee that was appointed by the government to formulate a vision on the long-term protection of the Dutch coast and its hinterland. KNMI also contributed to the Nationaal Waterplan, in which the Dutch water policy for the period until 2015 is formulated.

KNMI assures the high quality of its activities by participating in the national and international climate research efforts. KNMI's climate activities are carried out for an important part through international cooperation, on an appropriate high-level, to ensure the availability of state-of-the-art, high-quality results and to maintain the international stature and visibility of the Netherlands. Many of KNMI's research results are included or referred to in the reports of the Intergovernmental Panel on Climate Change (IPCC), and several KNMI-researchers are author or reviewer of the IPCC reports. The Nobel Peace Prize 2007 for IPCC is for KNMI a welcome encouragement for its participation in the activities of IPCC.

KNMI aims to be a stimulating working place. The cover of this report shows a photo of a major part of KNMI's research staff. In 2009 the total research staff, including supporting staff, was 200 FTE's. The fraction of the total staff that is formed by temporary positions has increased during the last years, for two reasons. Firstly, KNMI has been quite successful in attracting external project funding, which has lead to an increase of the temporary staff. Secondly, there has been a decrease of the permanent staff as a result of budget cuts by the government. The mentioned 200 FTE's research staff is the sum of about 120 permanent and 80 temporary FTE's.

The organization of KNMI is such (see appendix on page 119) that there are three business areas (weather, climate, and seismology), organized in two departments. Next to those there is a third department which supports the business areas with ICT and observation technology. These departments have a varying number of divisions, fully or partly devoted to research.

In de following 19 chapters we present a representative selection of our research activities in the years 2007, 2008 and 2009, followed by a list of publications per research division. The chapters are ordered with respect to three types of research, starting with observational work, followed by more theoretical and technical studies, and ending with modeling activities on weather and climate prediction. The publications are ordered with respect to peer-reviewed publications and other publications. Several publications appeared in high-impact journals such as Nature Geoscience.

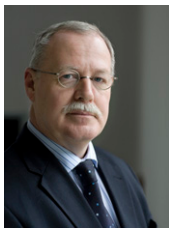
For more information on our research we refer you to our website www.knmi.nl.



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