COST-722: Background, working areas, plans

W. Jacobs (1), V. Nietosvaara (2), J. Bendix (3), A. Bott (4), S. Michaelides (5), J. Cermak (6)

(1) Deutscher Wetterdienst, (2) Finish Meteorological Institute, (3) (6) University of Marburg, D, (4) University of Bonn, D, (5) Larnaca Airport, Cyprus (wilfried.jacobs@dwd.de)

COST-722 (Short range forecasting methods of visibility and low clouds) started with the first Management meeting on 30^{th} November 2001. After a prolongation the Action will end on 31^{st} May 2007. 14 European countries and Canada are co-operating.

The Action consists of 4 Phases. During the first one (inventory) 2 working groups (WG) were established. The first one dealt with "Existing forecast methods", the second one with "Requirements from the forecasters and from the customers".

The second phase "Research and development" started in autumn 2003. The purpose of this Phase was to perform an intense research regardless the running time of the methods. Now, we are entering the Phase III (development and applications) during that besides some improvements of the methods practial aspects were considered, too. During the last Phase the methods and the results will be distributed to the scientific community. For the Phases II to IV three WGs were built up. The main tasks of the first one "Initial data" are to prepare optimal input for the methods, to improve the understanding of the phenomenon "Fog, visibiliy, low clouds" by investigating both satellite data and test bed data and to find an optimal fog climatology. The second WG "Models" deals with 1-D and 3-D simulations. In addtion to the investigation and improvement of the parameterisations an inter-comparision of different models is being performed in order to see which methods could be applied best during different situations. The 3^{rd} WG "Statistical Methods" consideres deterministic and probabilistic forecasts by using different methods (e.g., Neural Network).

Many meetings of WGs, experts and bilateral meetings took place. Knowledge and methods were exchanged for applying them at different institutes. COST-722 was represented at different conferences and contacts exist to other COST-Actions and to fora outside of COST. Publications as book, on Web and in several scientific journals are available and will be prepared.

Because excellent test bed data are being available since beginning of 2006 and two special issues (sea fog, ice fog) are not yet investigated it seems to be necessary to establish a follow-up Action within the COST-domain that will scope upon these aspects.