

Introduction

Land surface processes have a dramatic effect on near surface variables such as temperature and specific humidity, affect continental-scale temperatures through a considerable part of the troposphere and interact strongly with precipitation. These effects can be seen in numerical weather prediction models and in climate models. Numerical weather prediction also needs initial conditions for soil moisture, soil temperature and snow depth, emphasizing the need for data assimilation of land surface variables. Operational centres and re-analyses projects that analyse soil variables may in the long term even provide validation sets for climate models.

This workshop was held to consider progress in the parametrization of land surface processes and the assimilation of soil variables. The workshop was organized and sponsored jointly by ECMWF and WCRP/GEWEX. The workshop had the usual format with a series of invited talks, one day of working groups discussions and a concluding plenary session. The three working groups discussed modelling aspects, data sources for validation and parameter settings and data assimilation respectively. A summary of the discussions and recommendations can be found in the working groups reports. The recommendations will provide guidance for future work at ECMWF and in the more general research community of GEWEX. ECMWF thanks all the participants for their contribution to a very successful workshop.