



Calibration of a snow model with MODIS data for flood simulation.

S. Gabellani, R. Rudari, G. Boni, F. Silvestro , G. Macchiavello
CIMA, University of Genoa and University of Basilicata, Savona, Italy

Snow plays an important role in mountain regions hydrology, such as Alpine and Apennines regions, not only for water supply recharge but for floods too. Indeed in such regions an incorrect simulation of the snow dynamic could lead to significant errors in reproducing observed discharge. Satellite snow cover products have been usefully employed in snow models especially for validation. In this work their potential use for calibration is explored and discussed with reference to a simplified snow schematisation. MODIS snow maps derived using an original unsupervised approach (EGU2007-A-06955) are used for model calibration in the north-westerly Italian Alpine area. Comparison with calibration obtained using standard MODIS products (MOD10A1) is shown and results discussed.