

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

G. Macchiavello (1), G. Boni, S. Gabellani (1) , F. Silvestro(1), R. Rudari (1)

(1) CIMA, University of Genoa and University of Basilicata, Savona, Italy

Snow plays an important roles in mountain regions hydrology, such as Alpine and Appennines regions, not only for water supply recharge but for flooding too. Indeed in such regions an incorrect simulation of the dynamic of snow could leads to significative errors in reproducing observed discharge. A correct parametrization of the snow process is fundamental. 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 widely used snow schematizations. MODIS data are used to produce snow cover map for model calibration in a northwesterly Italian Alpine area.