Impact of LST-Based Soil Mositure Index on an Operational Flood Forecasting System

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This paper assesses the impact of soil moisture indexes that can be retrieved via different techniques from thermal IR satellite observations on the re-initialization of flood prediction models. The work considers 2 types of index, one based on thermal inertia, and the second that puts together satellite derived LST and a simplified energy balance model using a variational data assimilation schemes. Results are discussed with reference to an operational flood forecasting system in Tuscany, Central Italy.