AUXILIARY MATERIAL FOR THE PAPER:

Exploring model sensitivity issues across different scales in landslide susceptibility

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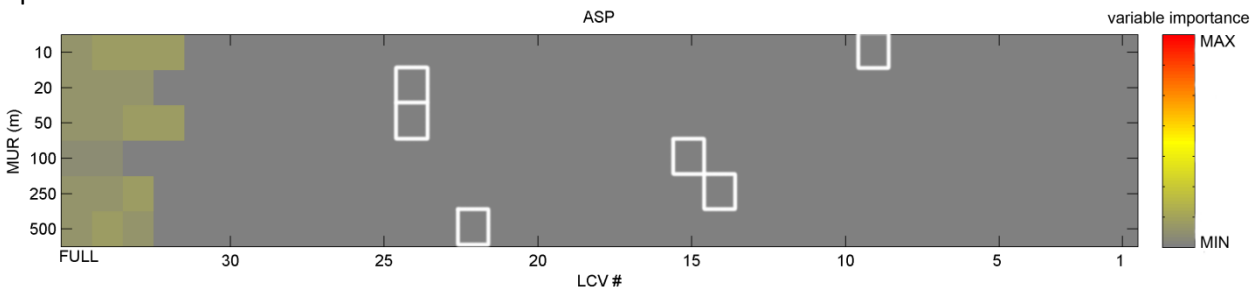
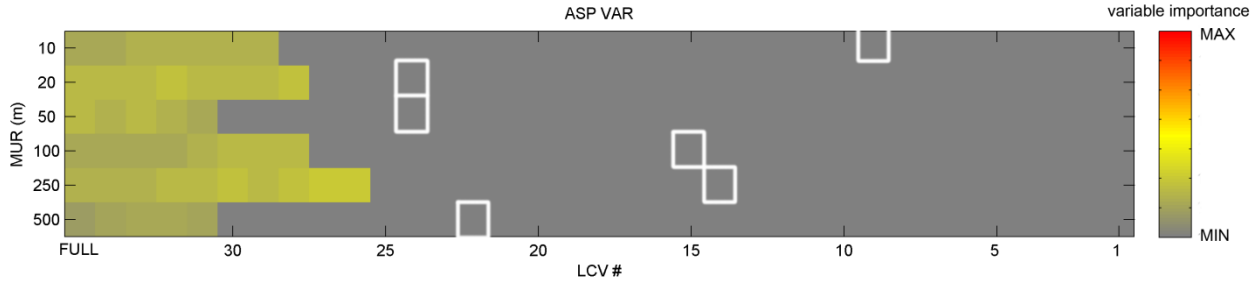
Rank-MUR-LCV# plots illustrating the variation of parameter relative importance (expressed as rank using the color ramp on the right – RED color = maximum importance – GRAY color = minimum importance) with parameter space (n. of parameters used LCV#) and map unit resolution (MUR in m). Grey colors correspond to combinations of MUR and LCV# in which the parameter importance was estimated as poor or where the parameter was discarded. The white boxes indicate the combination of MUR-LCV# leading to the best classification for each resolution (Table 2 in the main text).

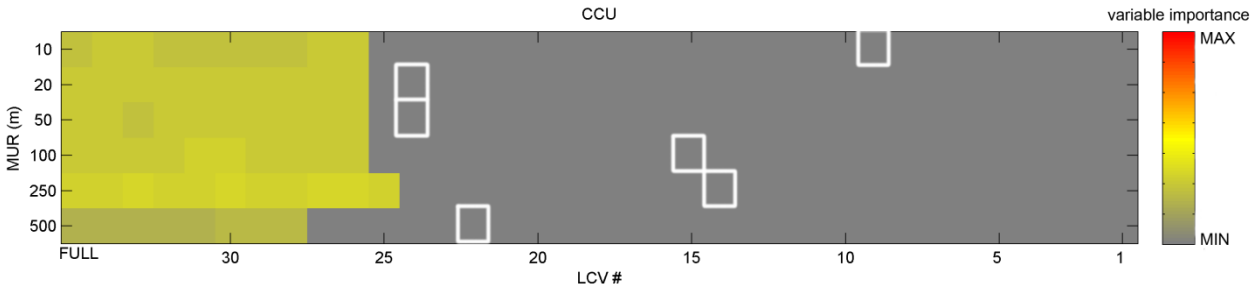
Aspect



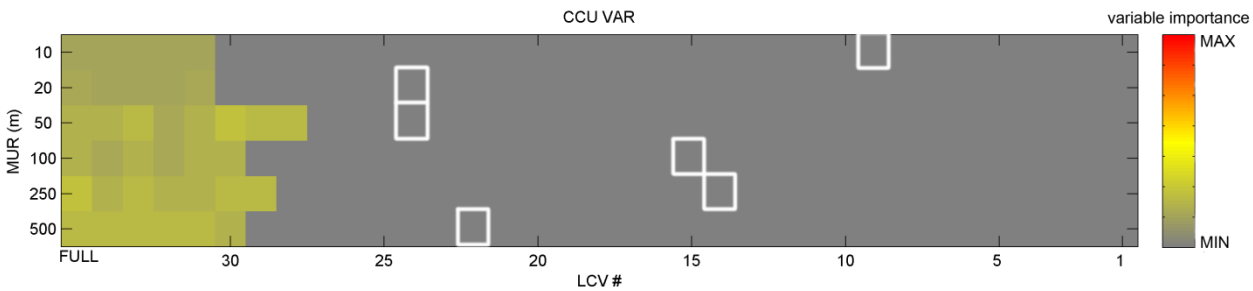
Aspect variety



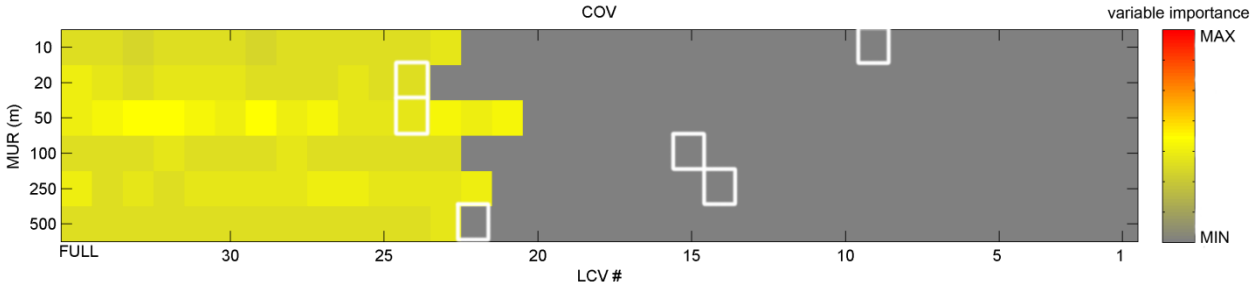
Combo curvature



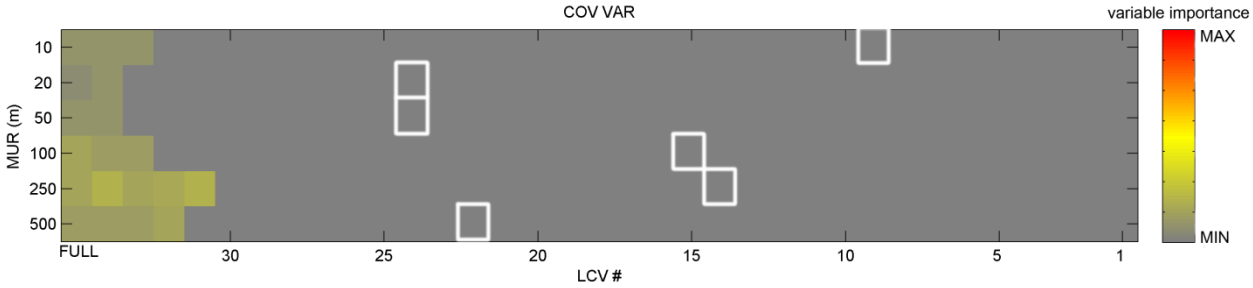
Combo curvature variety



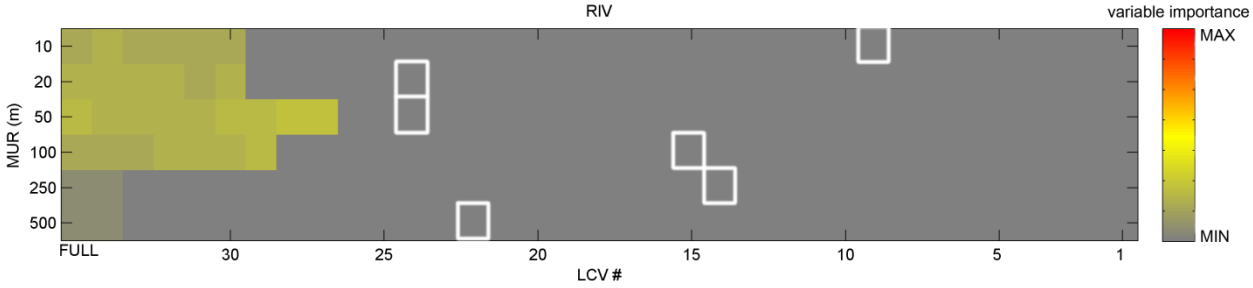
Land cover



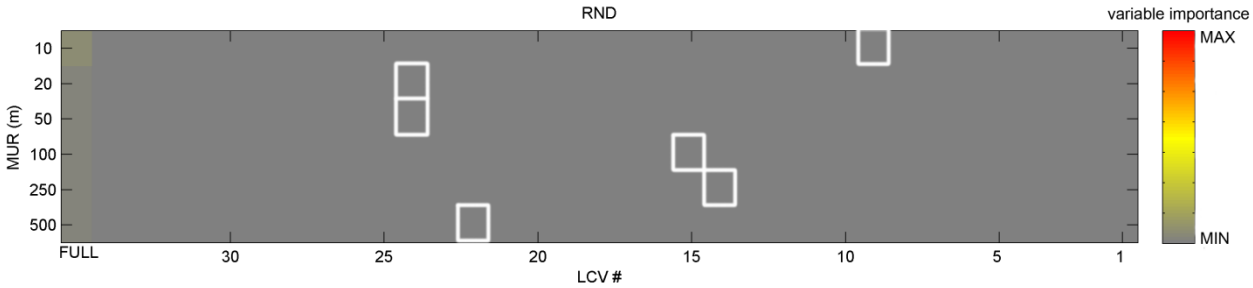
Land cover variety



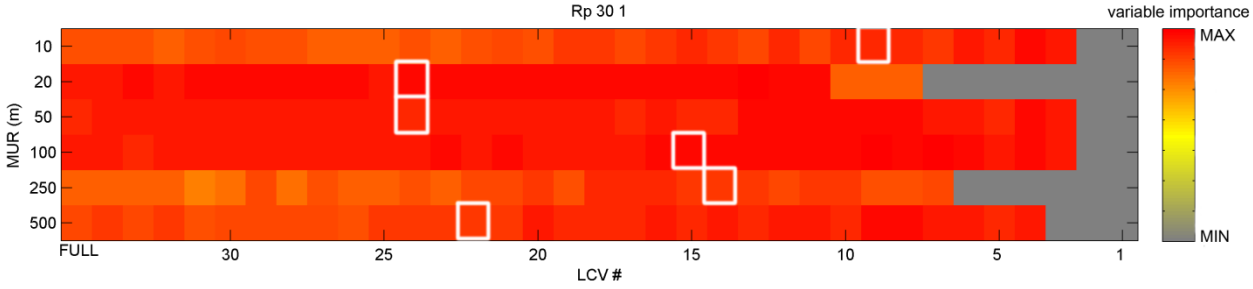
Distance to rivers



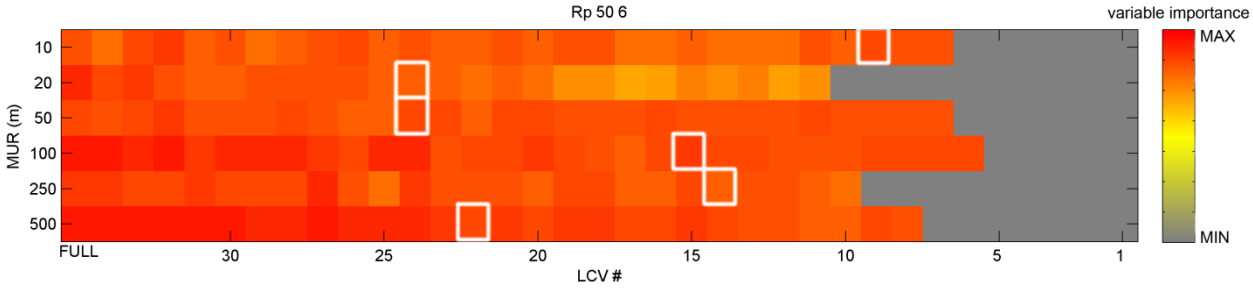
Random test parameter



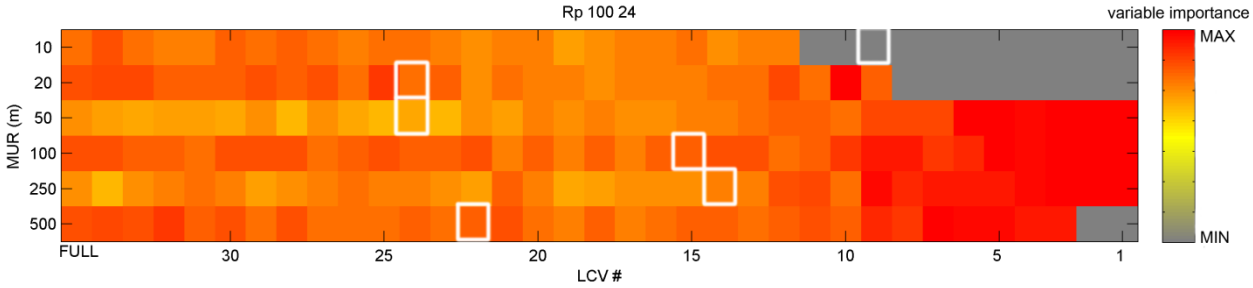
Rainfall r-p 30mm 1h



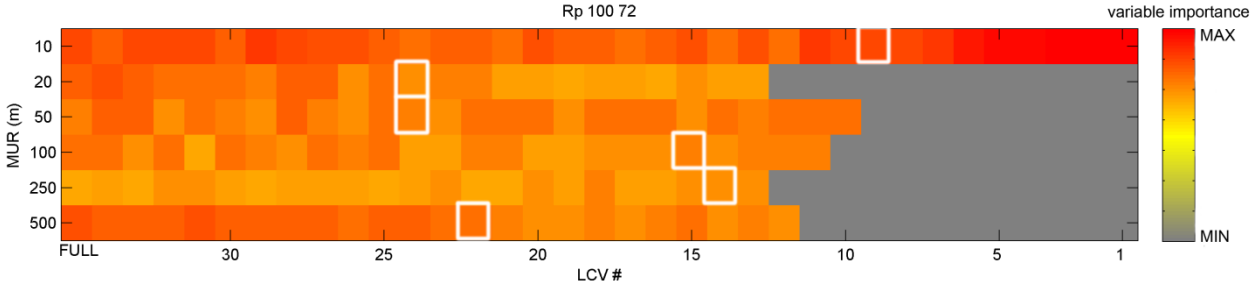
Rainfall r-p 50mm 6h



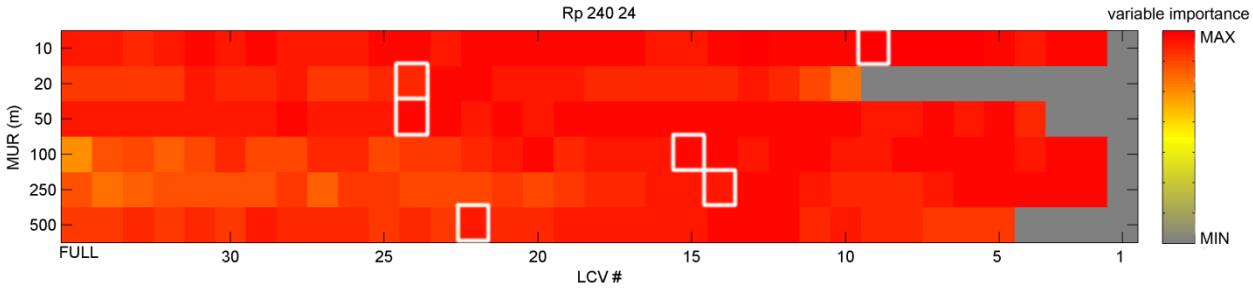
Rainfall r-p 100mm 24h



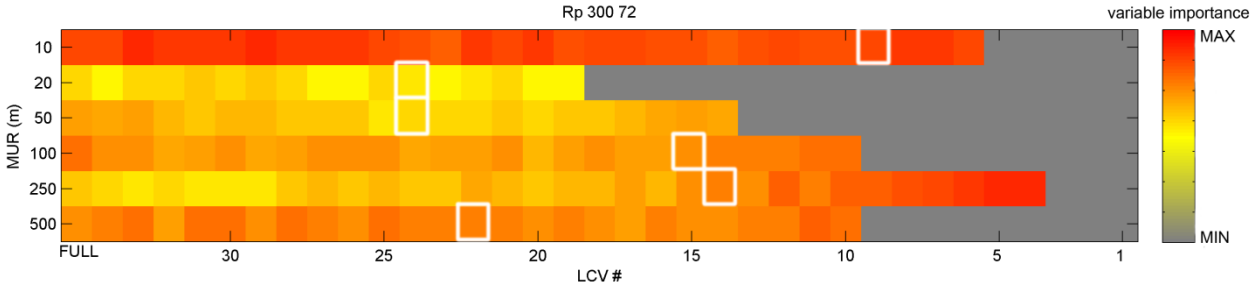
Rainfall r-p 100mm 72h



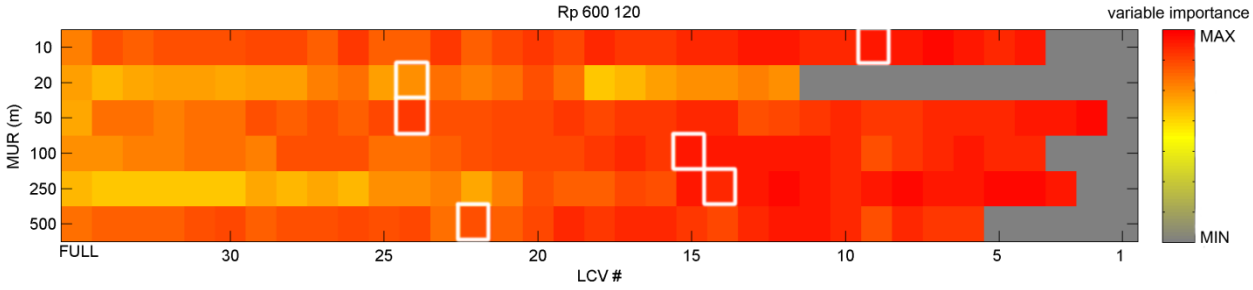
Rainfall r-p 240mm 24h



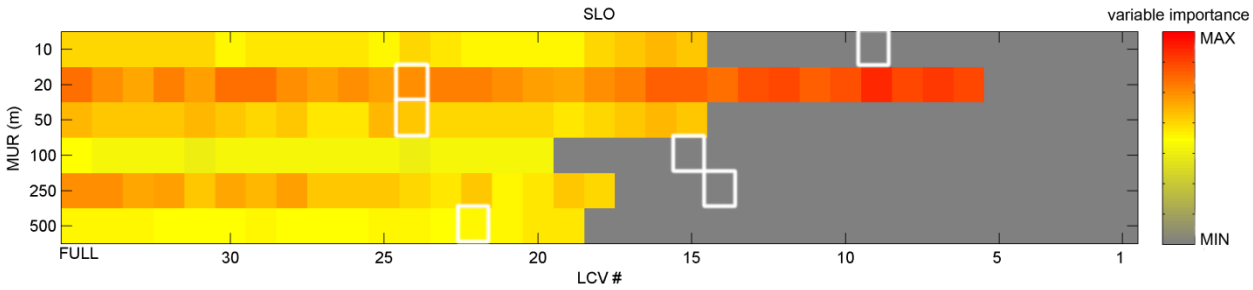
Rainfall r-p 300mm 72h



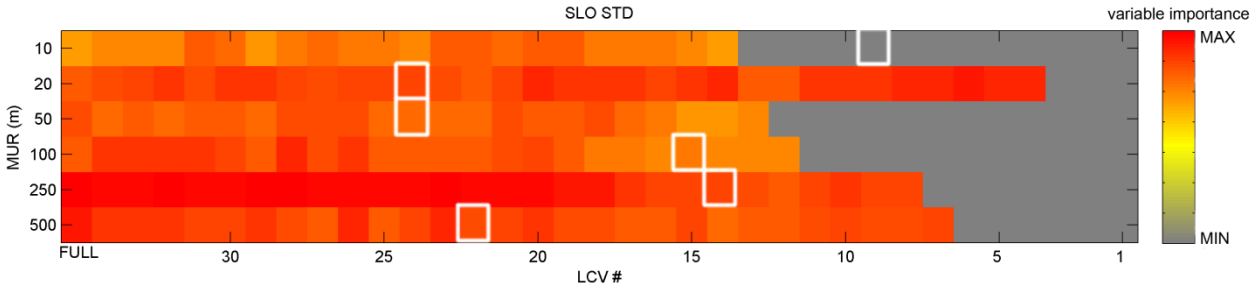
Rainfall r-p 600mm 120h



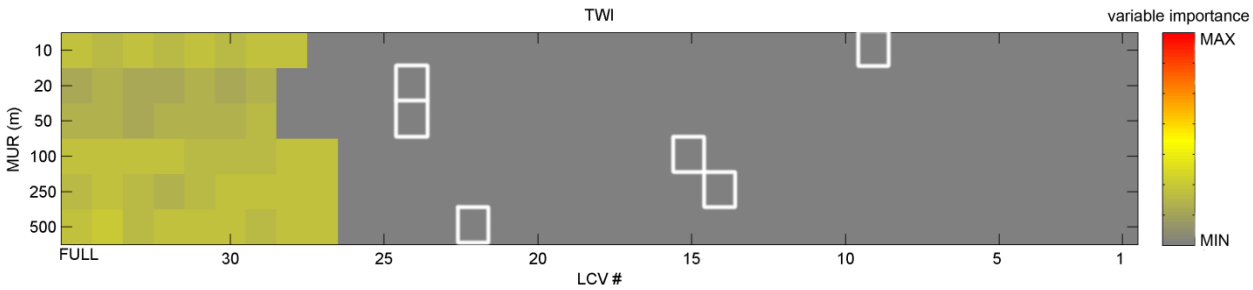
Slope angle



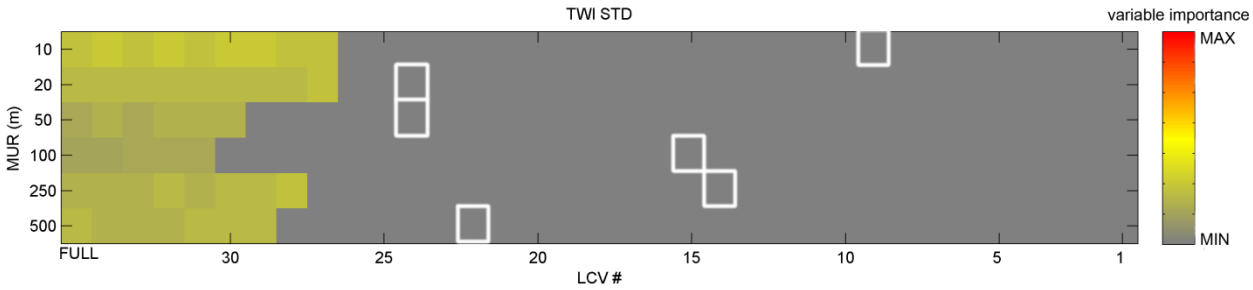
Slope std dev



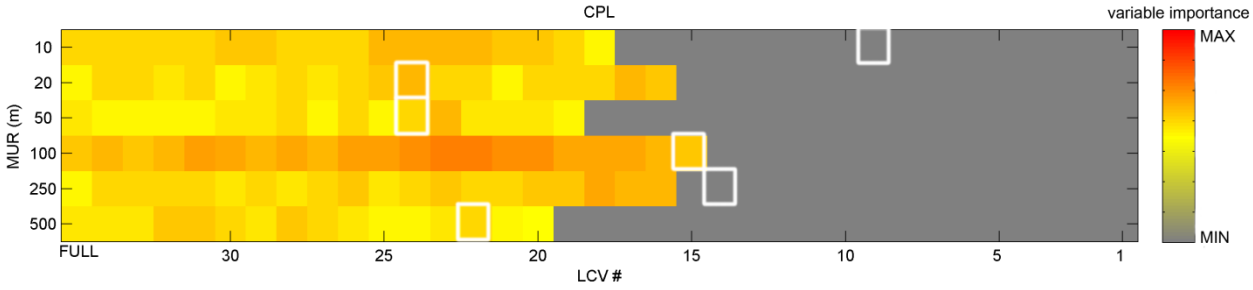
Topographic Wetness Index



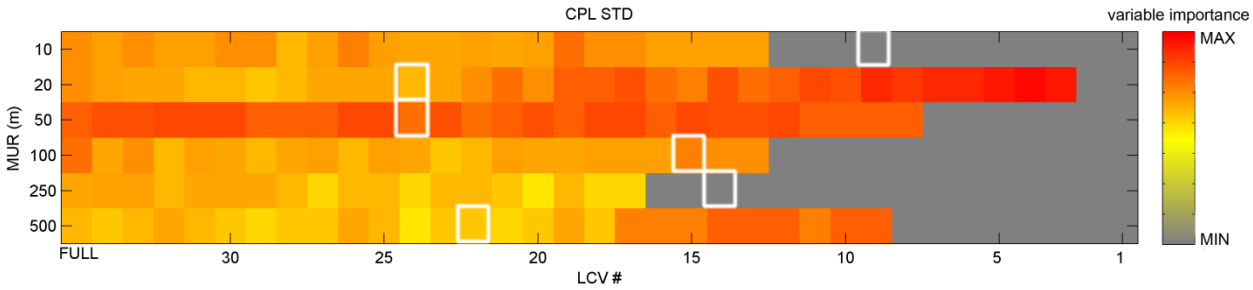
Topographic Wetness Index Std Dev



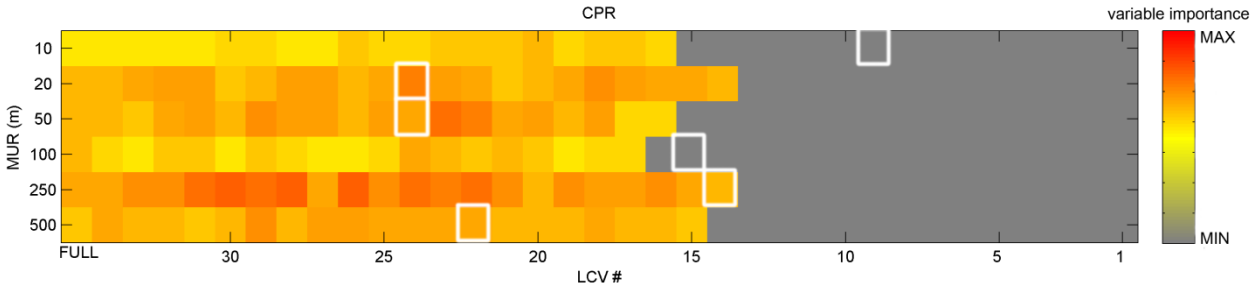
Planar Curvature



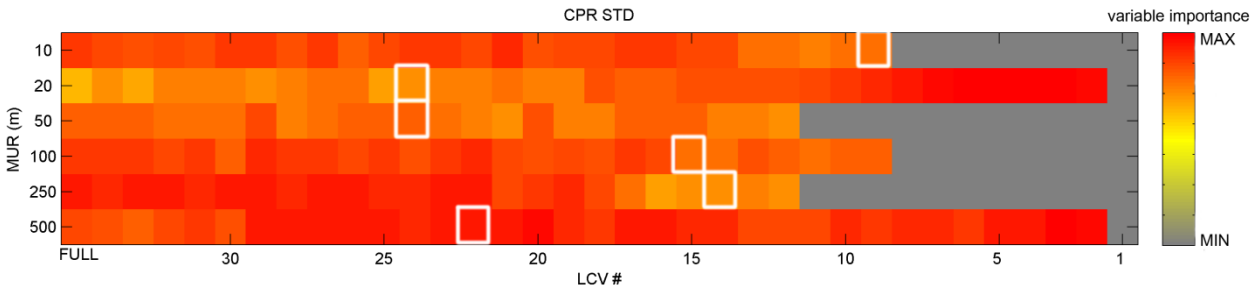
Planar Curvature Std Dev



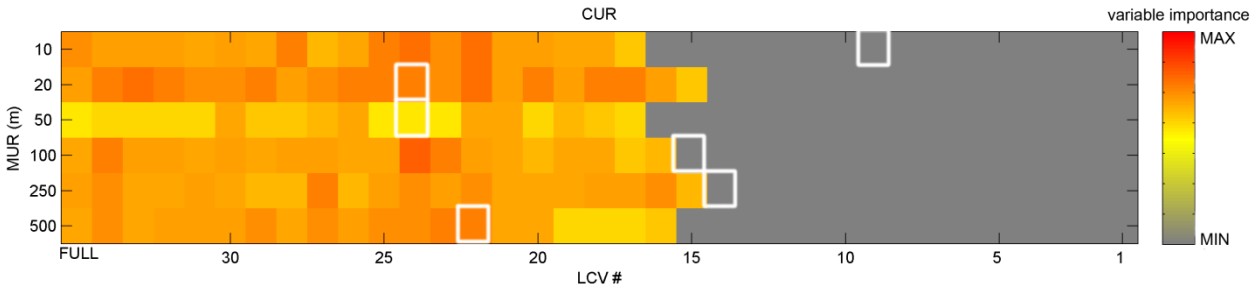
Profile Curvature



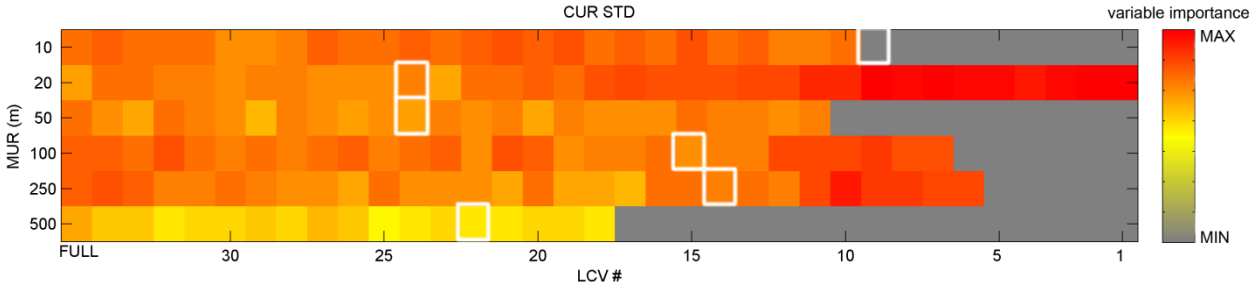
Profile Curvature Std Dev



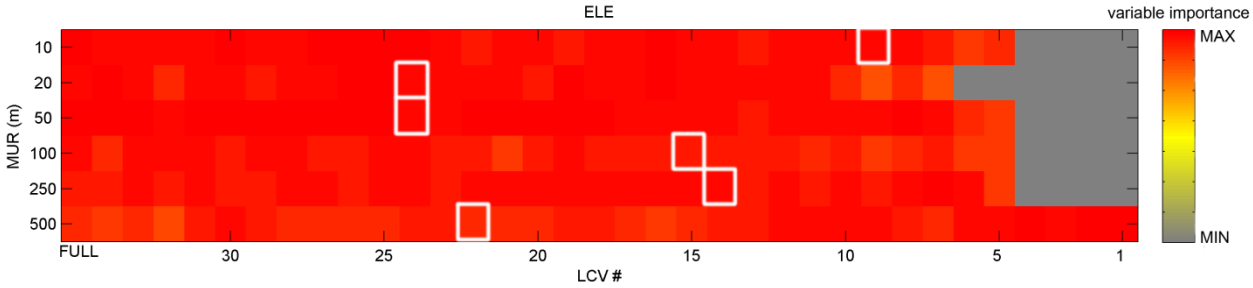
Overall curvature



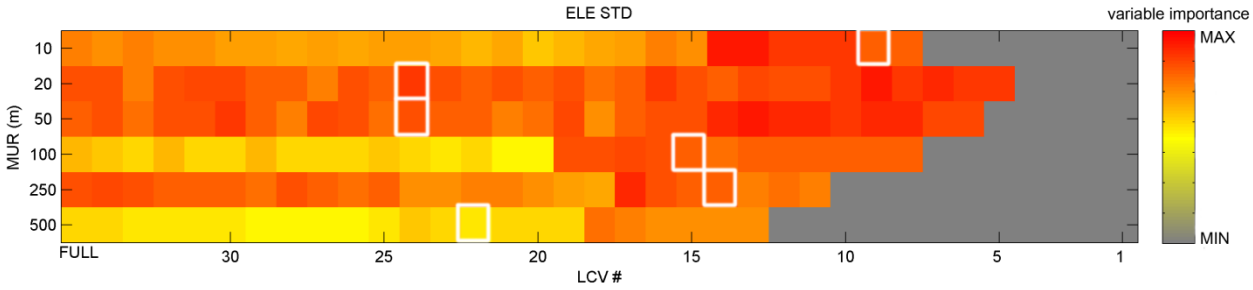
Overall curvature Std Dev



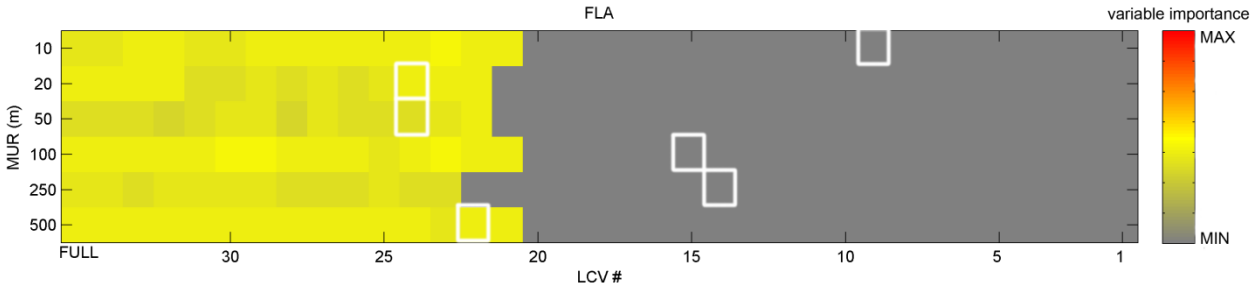
Elevation



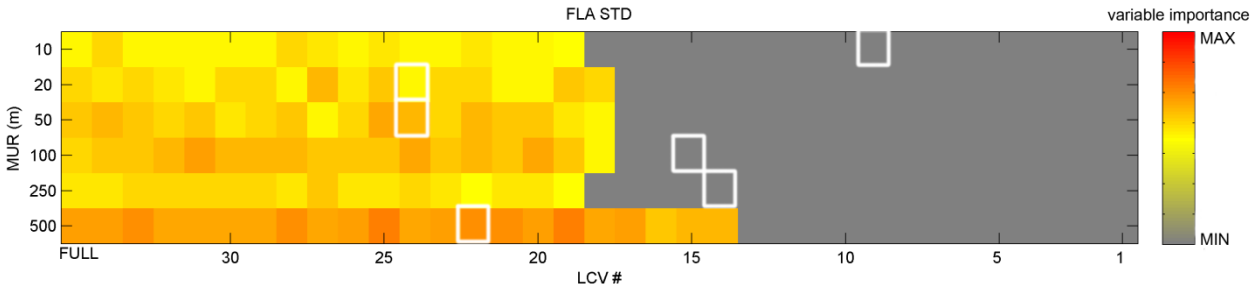
Elevation Std Dev



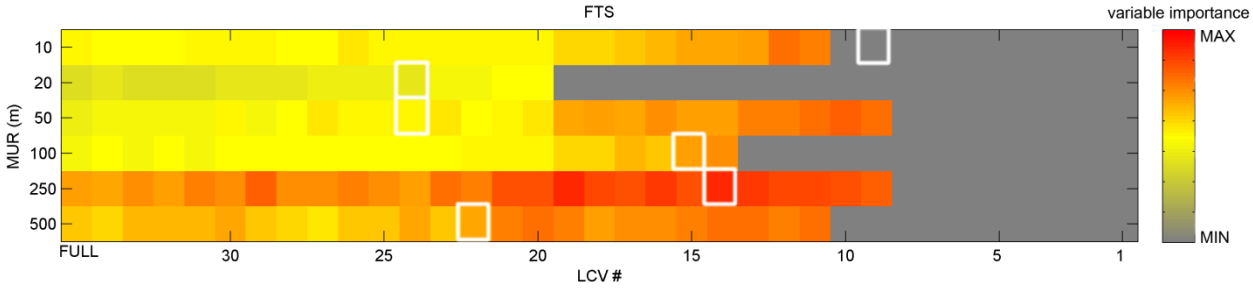
Flow Accumulation



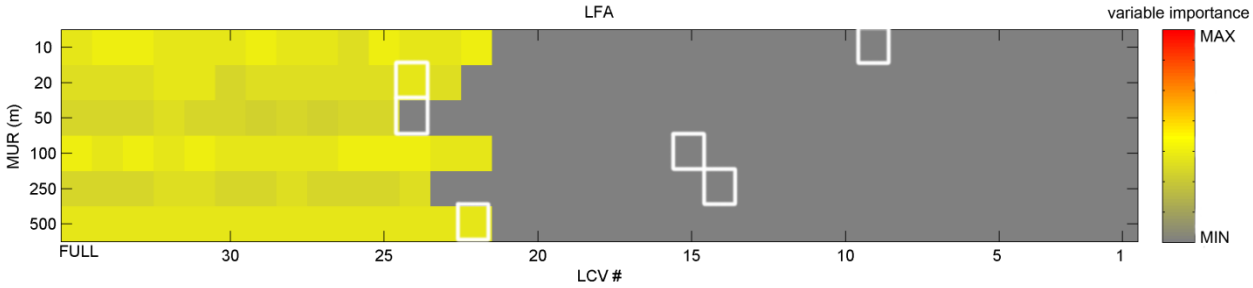
Flow Accumulation Std Dev



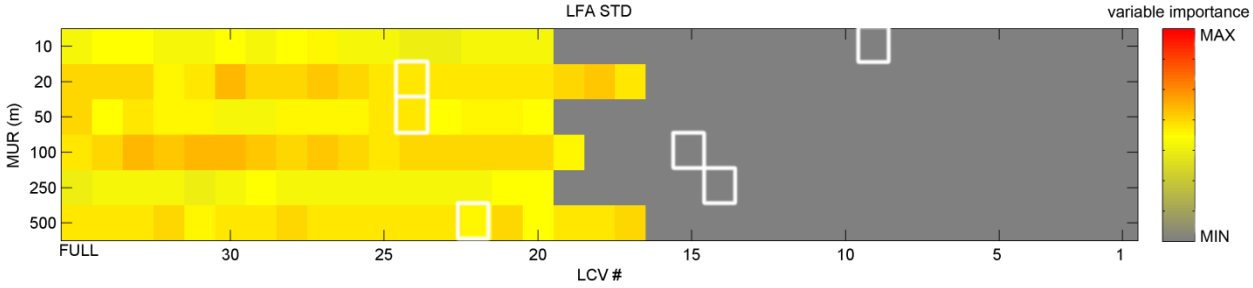
Distance to faults



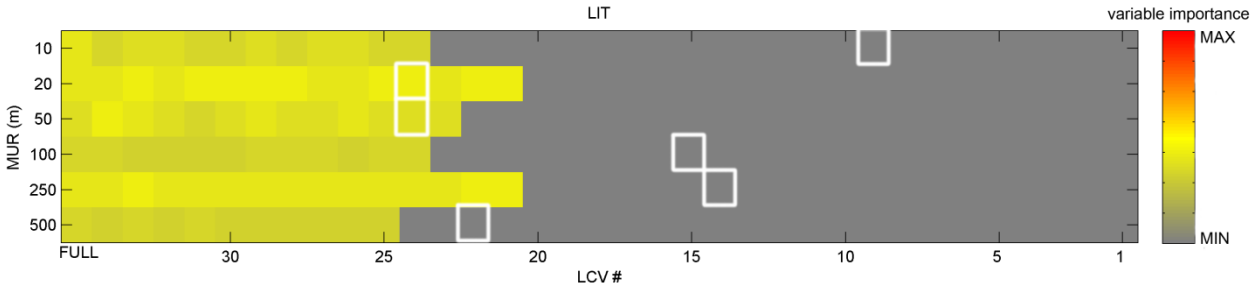
Log of Flow Accumulation



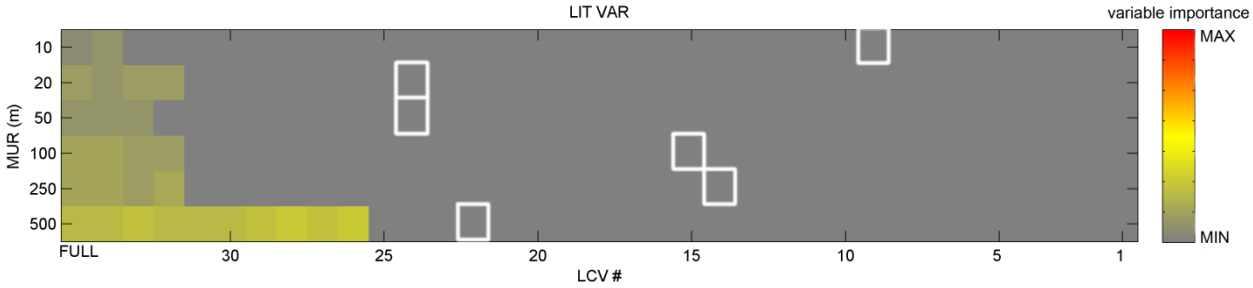
Std Dev of Log of Flow Accumulation



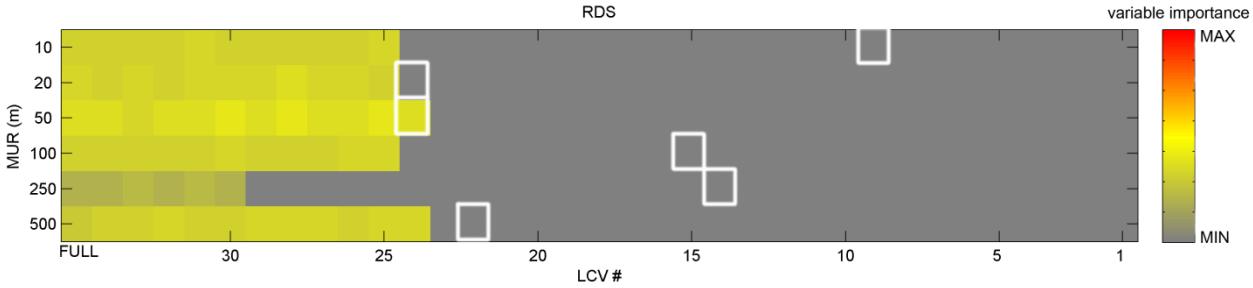
Lithology



Lithology Variety



Distance to roads



Mental map depicting the main lines of LSM model sensitivity for Random Forest methods. Green light: topics discussed in the paper; Yellow light: topics partially discussed; Red light: topics not included in the experimentation.