BFW
Austrian Research Centre for Forests

Wildbach- und
Lawinenverbauung
Forsttechnischer Dienst

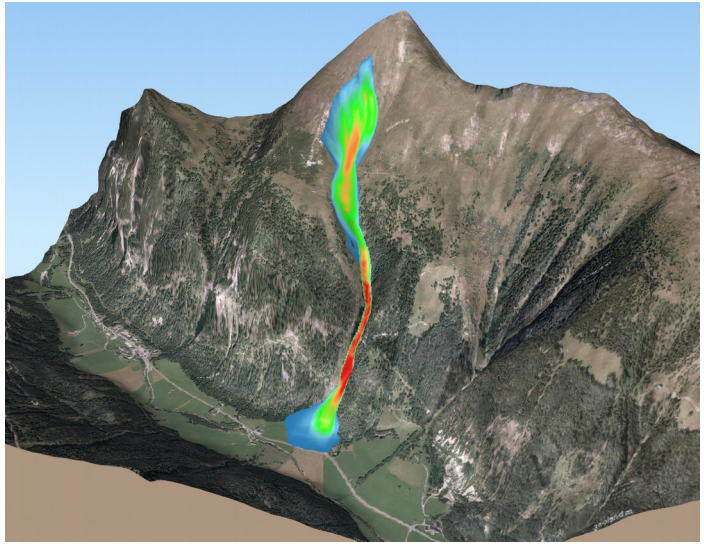
BOKU

Explicit treatment of **uncertainties** in operational **avalanche simulation** scenarios

Michael Neuhauser, Andreas Tegethoff, Oesterle Felix, Jan-Thomas Fischer

Division Snow and Avalanches

Department of Natural Hazards

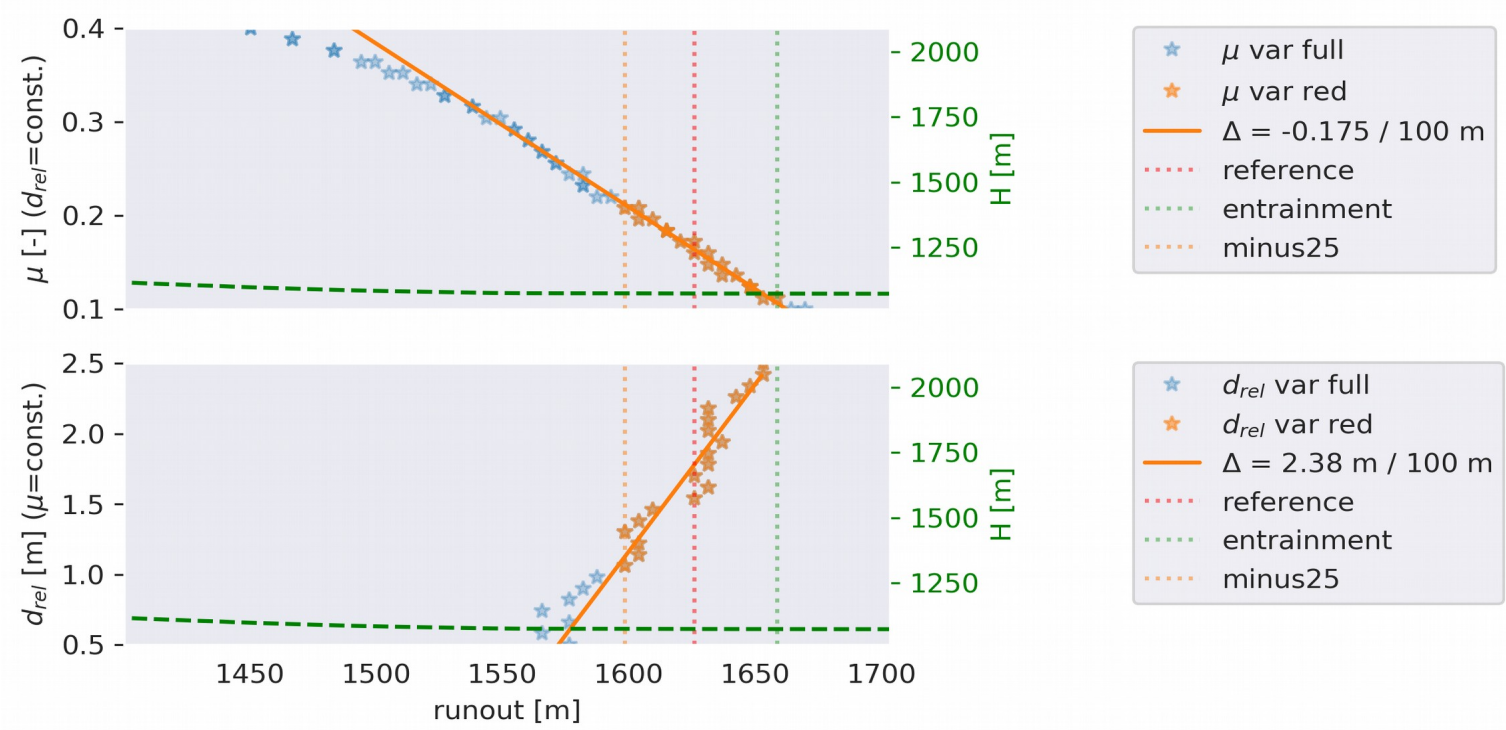


Innsbruck

11.09.2019

Identification & Mapping of uncertainties

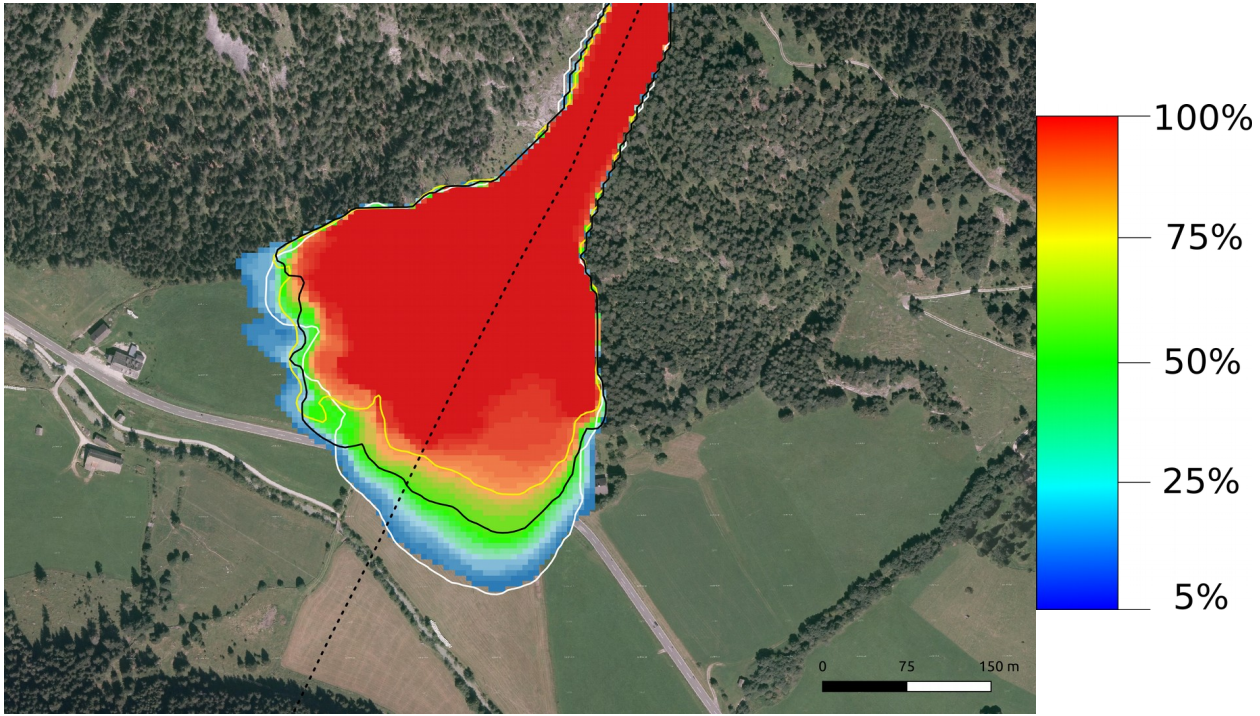
Backcalculation: run out ranges to parameter ranges



Displaying uncertainties

Backcalculation: run out ranges to run out probability

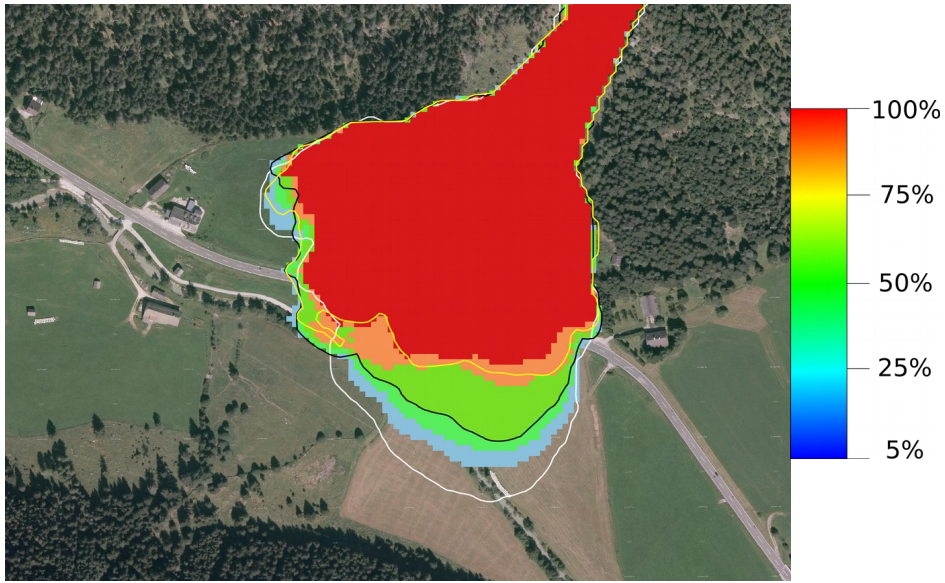
37 simulations: [-11 m, 66 m] → μ [0.1 – 0.196]
d_{rel} [0.58 m – 2.18 m]



Displaying uncertainties

Forward Simulation:
parameter ranges to run out ranges/probability

$d_{rel} = d_{ref} \pm 0.5$ m $\rightarrow$ [-71 m, 44 m]



Variation of d_{rel}

Federal Research and Training Centre
for Forests, Natural Hazards and
Landscape

Austria, 1131 Wien
Seckendorff-Gudent-Weg 8
Tel.: +43 1 878 38-0
direktion@bfw.gv.at
http://www.bfw.ac.at

https://www.facebook.com/BundesforschungszentrumWald

https://twitter.com/bfwald

https://www.youtube.com/user/Waldforschung