Numerical modelling of the lahars generated during the 2015 eruption at Volcán Villarrica (Chile)

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Additional Graphics for the Preliminary Simulation results

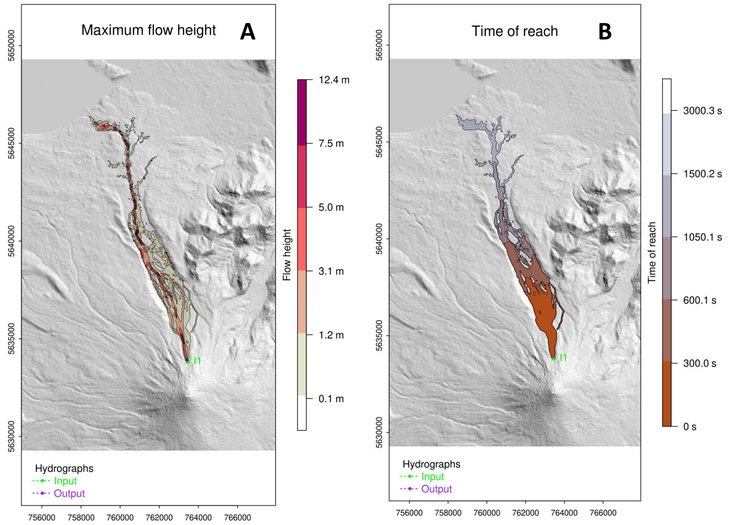

***Figure 1S**: Preliminary simulation results with a mixture model of r.avaflow. Total mass included 240,000 m³. Total simulation time: 3,000 s. **A:** Maximum flow heights in the channel **B:** Time of reach in seconds*

Preliminary Simulation results with a reduced mass by 20%

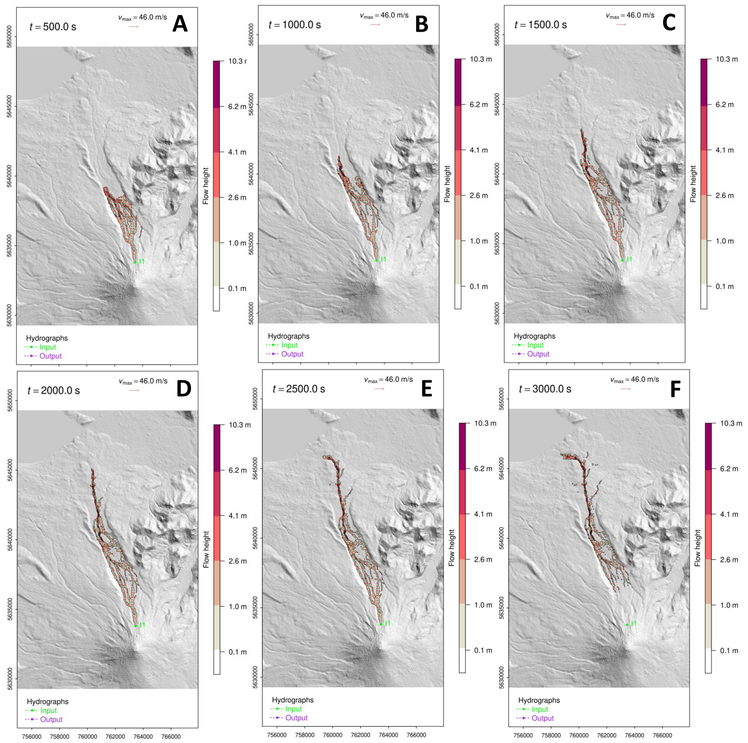

***Figure 2S**: Preliminary simulation results with a mixture model of r.avaflow. Total mass included 192,000 m³. Total simulation time: 3,000 s.*
***A**: Reach after 500 s **B**: Reach after 1,000 s **C**: Reach after 1,500 s **D**: Reach after 2,000 s **E**: Reach after 2,500 s **F**: Reach after 3,000 s*

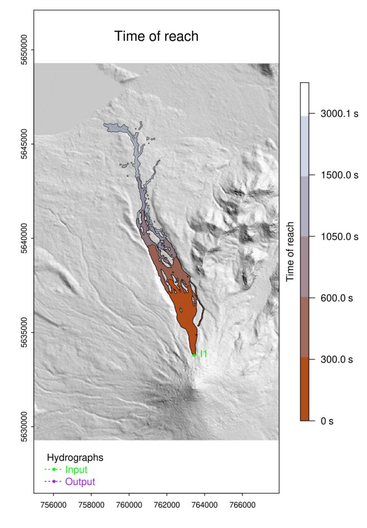

***Figure 3S**: Preliminary simulation results with a mixture model of r.avaflow. Total mass included 192,000 m³. Total simulation time: 3,000 s. Time of reach in seconds*

Preliminary Simulation results with a high-resolution DEM

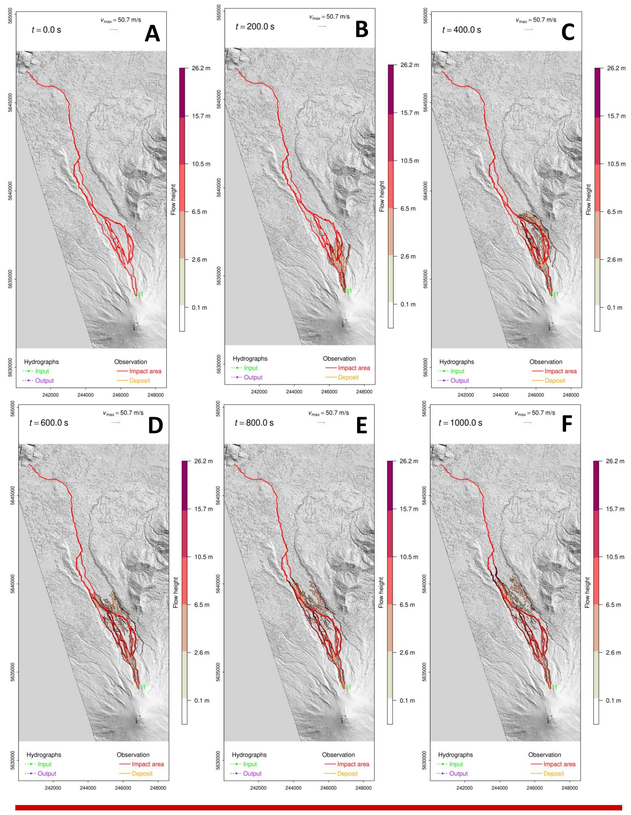

***Figure 4S**: Preliminary simulation result with a high-resolution DEM and a mixture model. Total mass included 240,000 m³. Total simulation time: 1,000 s. The red area illustrates the observed impact area.*
***A**: Observed impact area, simulation time: 0 s **B**: Reach after 200 s **C**: Reach after 400 s **D**: Reach after 600 s **E**: Reach after 800 s **F**: Reach after 1,000 s*

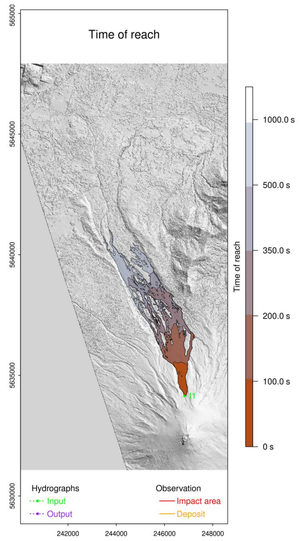

***Figure 5S**: Preliminary simulation results with a high-resolution DEM and a mixture model of r.avaflow. Total mass included 240,000 m³. Total simulation time: 1,000 s. Time of reach in seconds*

Acknowledgment

This work was supported by the Austrian Research Association on Geomorphology and Environmental change.
Thank you for making this possible!