



Karlsruhe Institute of Technology

Institute for Applied Materials Hermann-von-Helmholtz-Platz 1 D- 76344 Eggenstein-Leopoldshafen Germany www.kit.edu

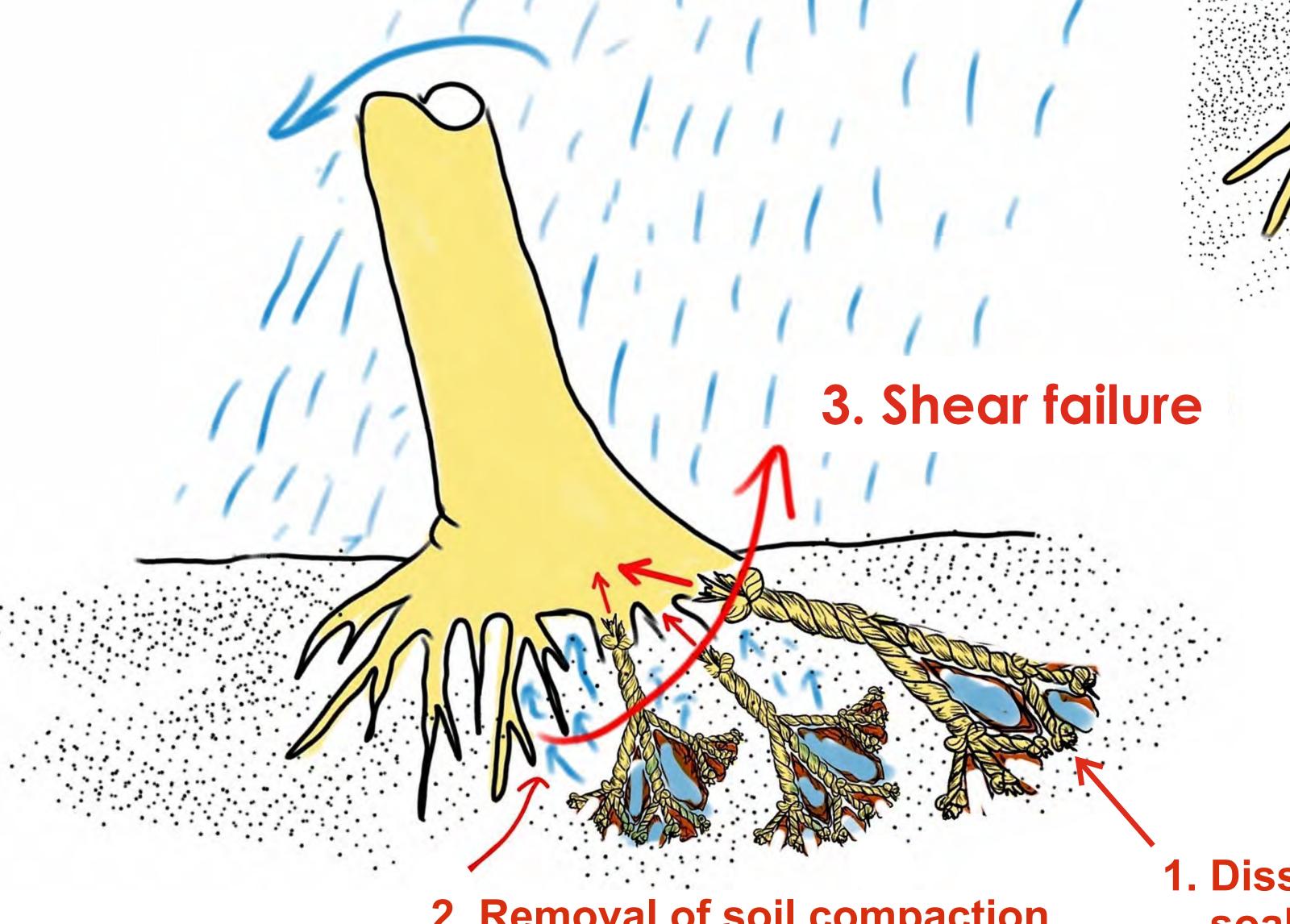
## The failure of even healthy trees in storm-rain combination

C. Mattheck, K. Bethge, K. Weber, I. Tesari



 Washout and milking of the soil from between the root branches.

Therefore reduction of soil compaction and finally breakout or breakage of the root.



## Pumping action contributes to further removal of soil compaction.

2. Removal of soil compaction and shear strength in root ball 1. Dissolution of soaked soil

knots

**Summary:** For both types of anchors, the failure starts with resolution and milking the soil from the root branches. This will decrease soil compaction and result in a pull out of the horizontal root or shear failure of the root ball.

15.08.2018



KIT – The Research University in the Helmholtz Association