

Figure 1: Location of the study area (Reprinted from Journal of Hydrology, Vol 591, Tomczyk et al., Geomorphological impacts of a glacier lake outburst flood in the high arctic Zackenberg River, NE Greenland, 125300, Copyright (2020), with permission from Elsevier).

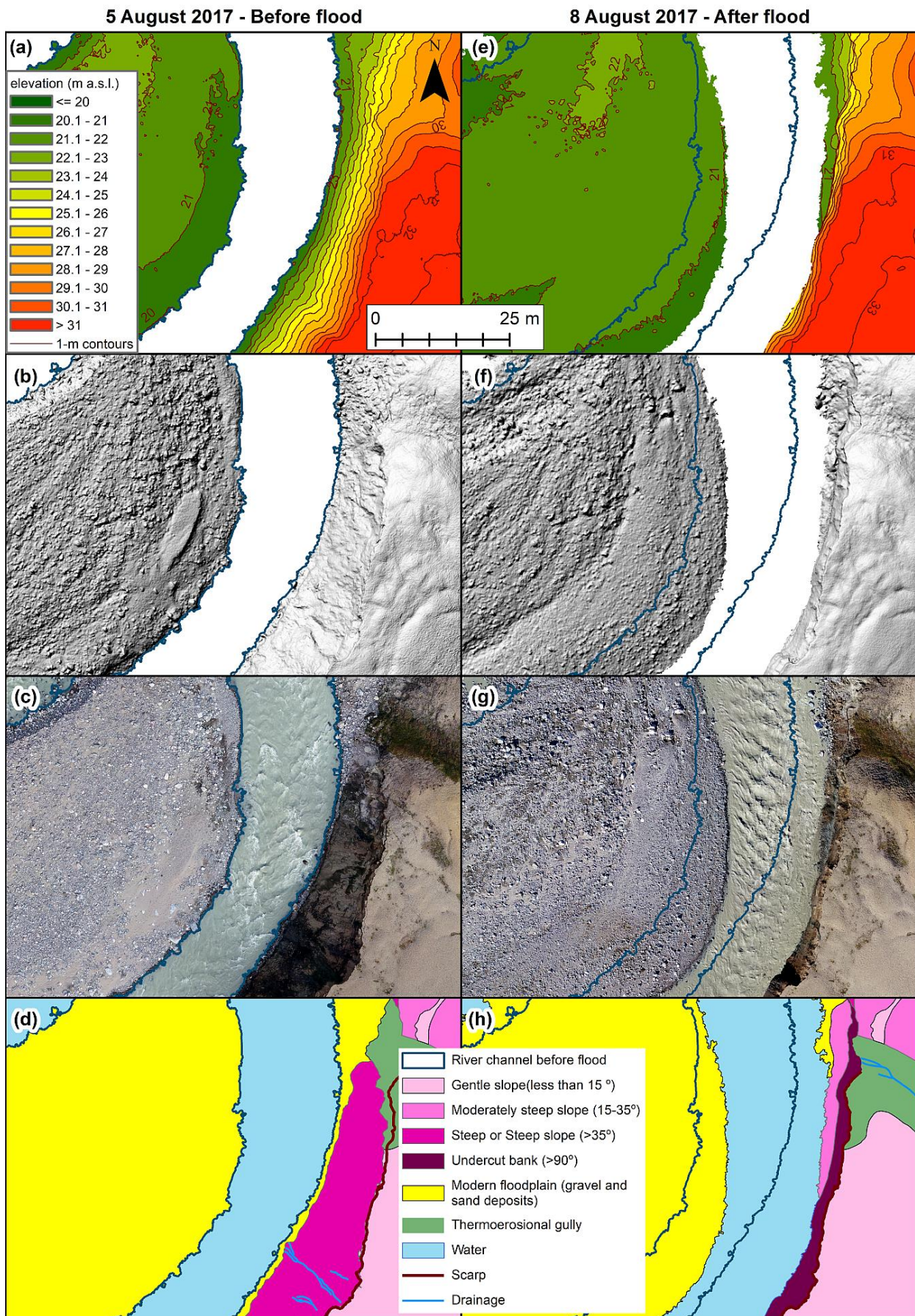


Figure 3: Examples of delivered dataset illustrating before and after the flood situation: (a, e) digital elevation model; (b, f) hillshade model; (c, g) orthomosaics; (d, h) results of geomorphological mapping

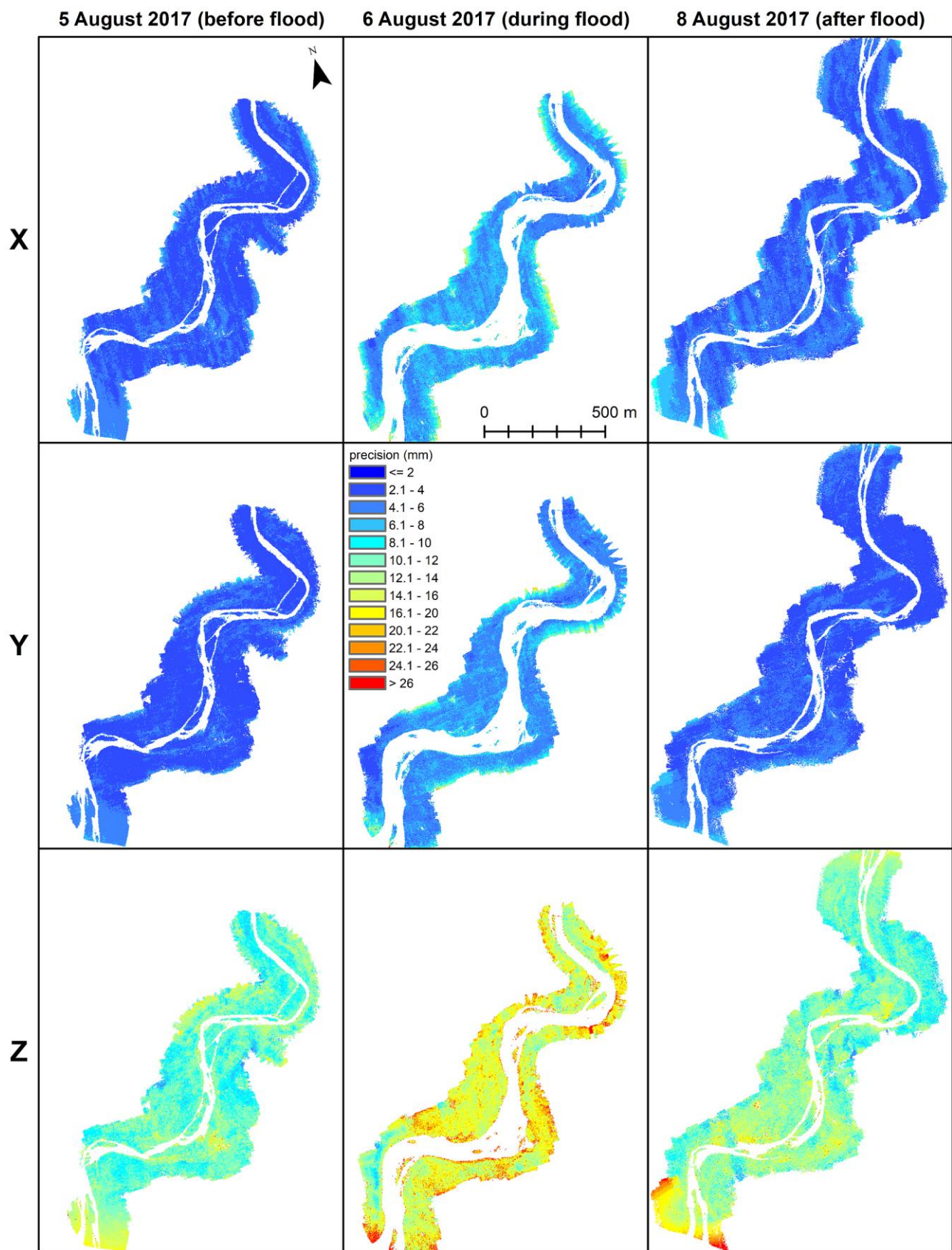


Figure 4: Precision estimates for X, Y, Z coordinates of tie points. Location of the studied river section is presented in Fig. 1D.

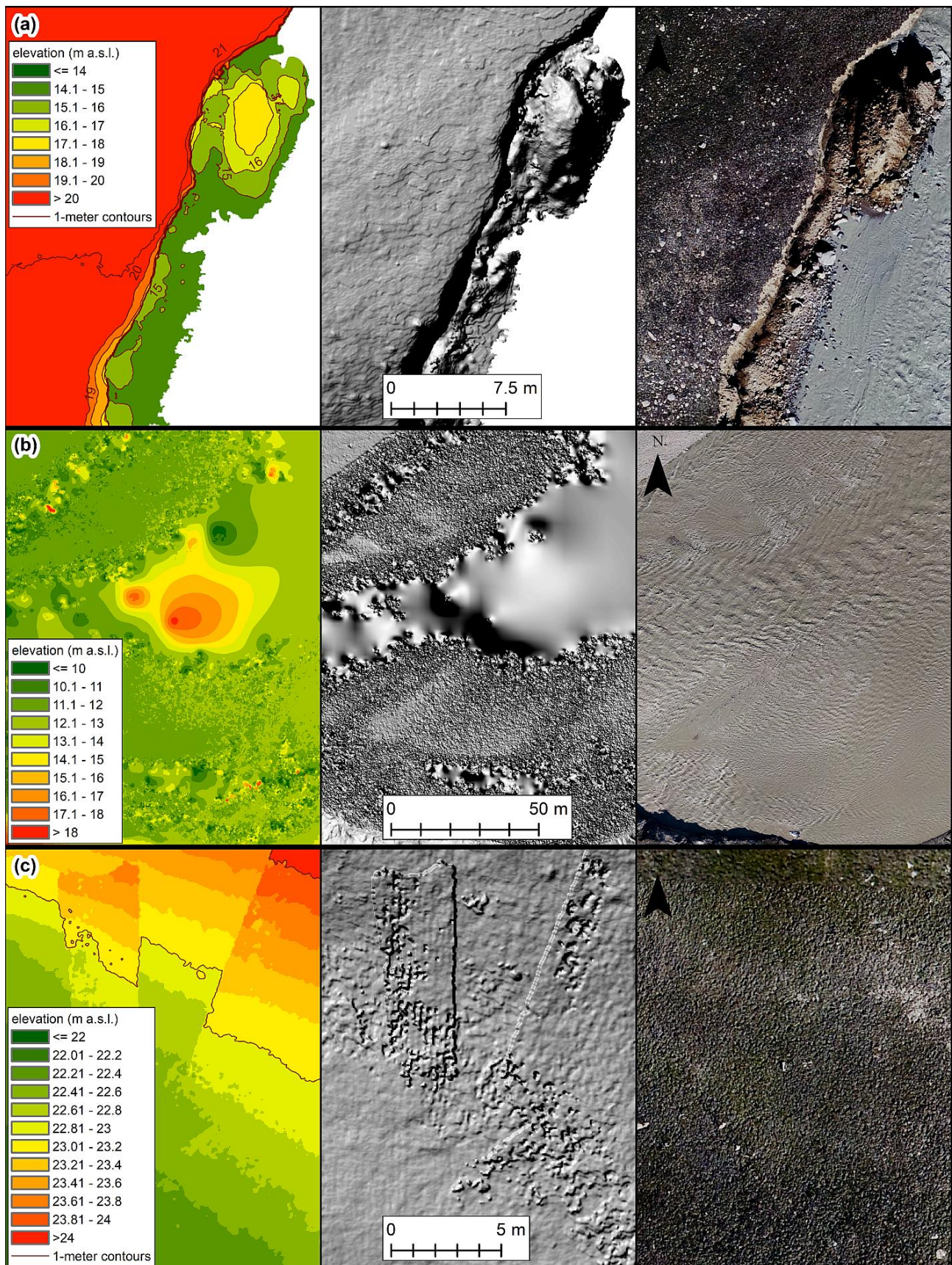


Figure 6: Examples of encountered problems: (a) undercut/overhanging river sections; (b) rapidly moving water; (c) artefacts related to errors in surface reconstruction.

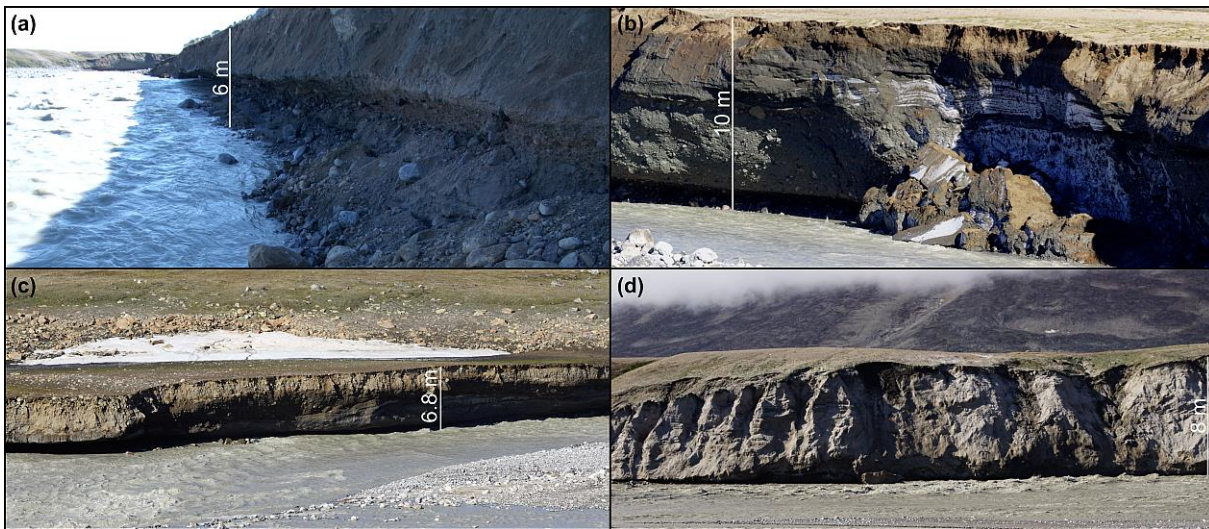


Figure 7: Examples of steep and undercut river banks.

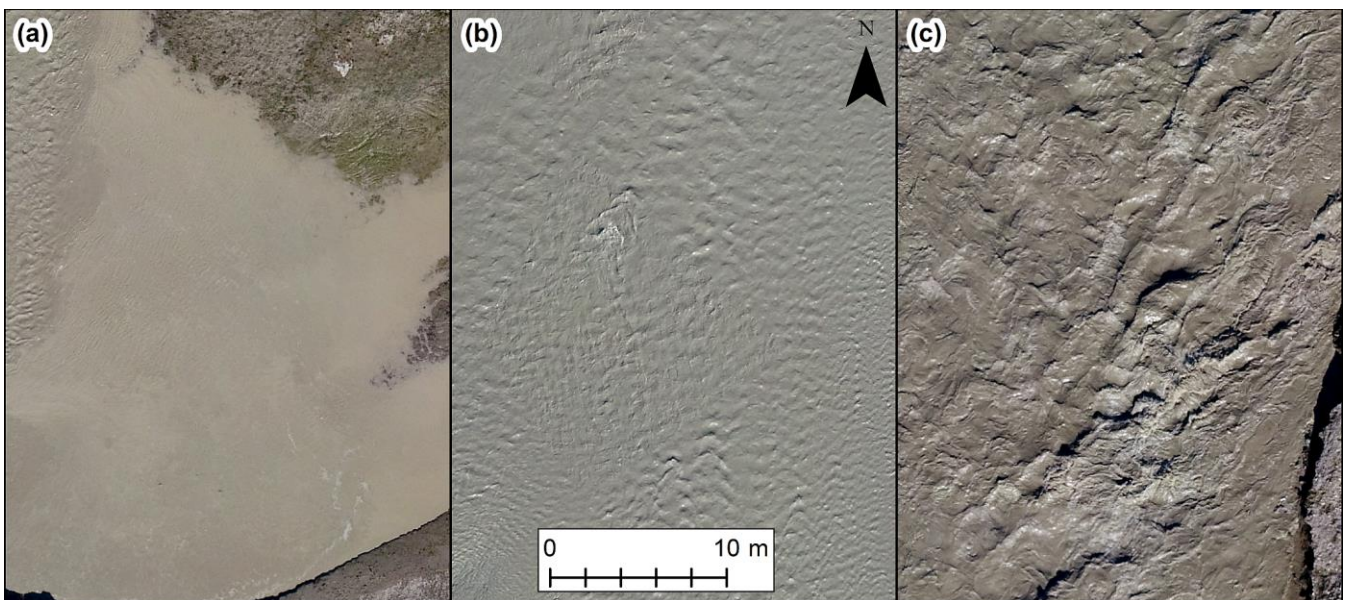


Figure 8: Different character of water surfaces: (a) stagnant and slow flowing water; (b) moderate flow rate; (c) rapid, turbulent water flow.

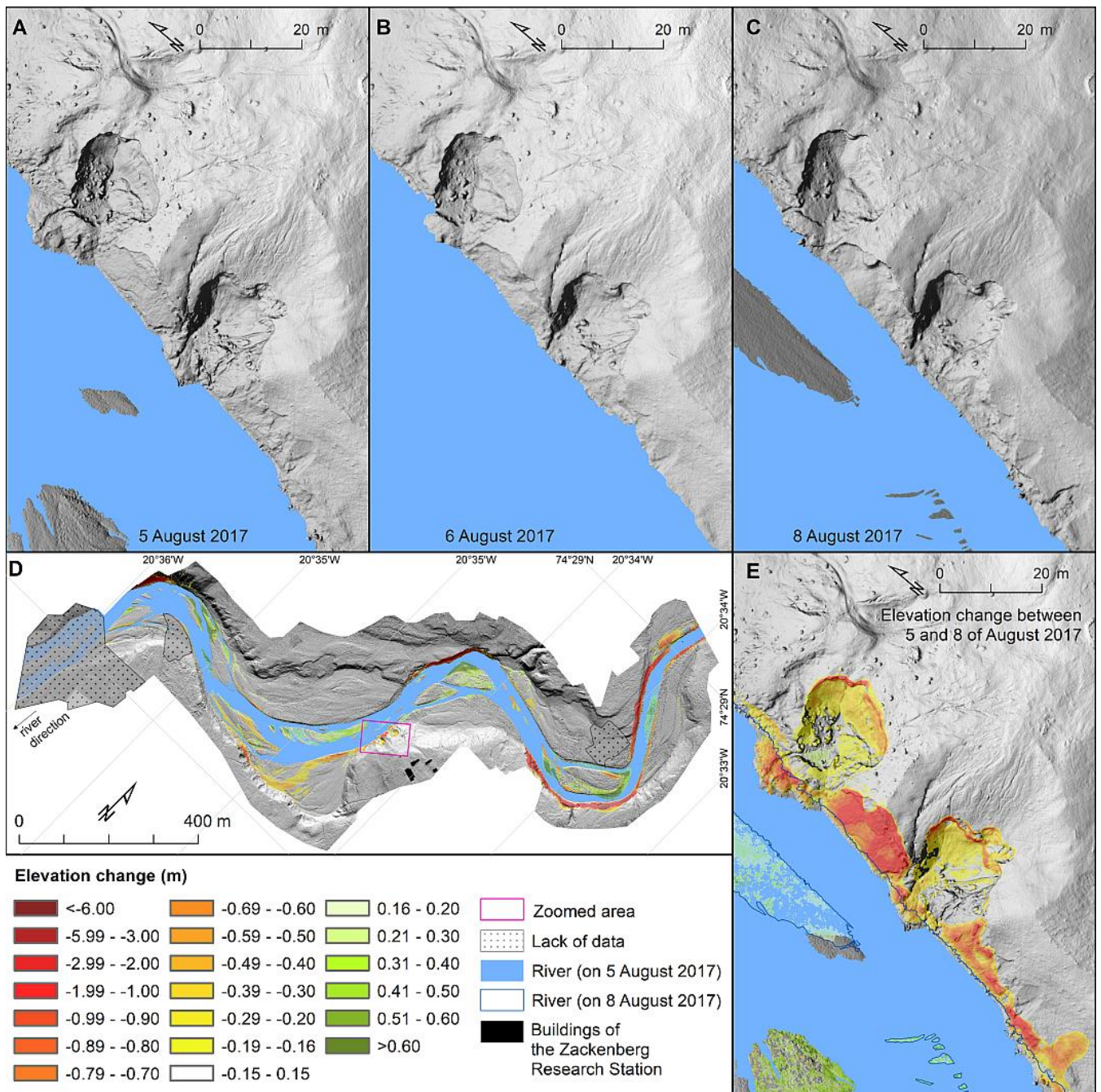


Figure 9: Examples of DEM of Differences demonstrating geomorphic change detection for two debris flows located in the proximity of Zackenberg Research Station.