**SUPPLEMENTARY MATERIAL**

We manually delimited 56 landslides based on very high resolution (VHR) optical imagery available in Google Earth for July 2018. The delineation is available as a spatial dataset in ***landslides\_lucma.gpkg***. A geopackage (GPKG) file can be opened in any GIS software as listed [here](https://www.geopackage.org/implementations.html) .

The mapping was done in coordinate reference system (CRS) WGS 84, and later projected to WGS 84 / UTM zone 18S. Several attributes were derived for each manually identified landslide, as shown in Tab. 1 below. The derivation of elevation-related characteristics was based on the ALOS-1 PALSAR RTC DEM from 20.10.2010 with a 12.5 m resolution. Characteristics of the landslide type and movement were assigned manually from visual interpretation of VHR imagery in Google Earth and field documentation, while the occurrence and timing of occurrence were derived from visual interpretation of daily scenes of VHR imagery on the Planet Explorer online tool.

**Tab. 1:** Attributes assigned to each of the manually identified landslides present in the supplementary spatial dataset (***landslides\_lucma.gpkg***). Adapted from Table 2 in main manuscript.

|  |  |  |  |
| --- | --- | --- | --- |
| **Attribute** | **Attribute name on .GPKG file** | **Description** | **Units** |
| Location | lat\_centroid long\_centroid | Longitude and latitude of the centroid of the landslide | °S; °W |
| Head scarp elevation | head\_scarp\_elevation | The elevation of the highest point of the landslide | m a.s.l. |
| Deposition elevation | deposition\_elevation | The elevation of the lowest point of the landslide | m a.s.l. |
| Area affected | area\_affected | Area affected by the landslide (including detachment, transport and deposition zones) | m2 |
| Reach (m) | reach\_m | A distance between the head scarp and the lowest reach of landslide deposition | m |
| Vertical difference | vertical\_difference | Vertical difference between the head scarp elevation and the elevation of the lowest reach of landslide deposition (Deposition elevation) | m |
| Reach (°) | reach\_d | A mean slope calculated from Vertical difference and Reach (m) | ° |
| Type | type | Distinction between ‘flow’ and ‘slide’ type\* | - |
| Release and deposition zone (in relation to road location) | movement | Distinction between: (i) landslide onto the road; (ii) landslide downslope the road; and (iii) complex landslide | - |
| Occurrence | occurrence | Time period between the closest pre- and post-landslide images | date |
| Timing of occurrence | timing\_of\_occurrence | Time period between road construction and the occurrence of landslides | days |
| Geometry | geom | Manual delineation as polygon geometries in projected CRS: WGS 84 / UTM zone 18S | m |

\* - flow type landslide is defined as a landslide where the length to width ratio is > 3