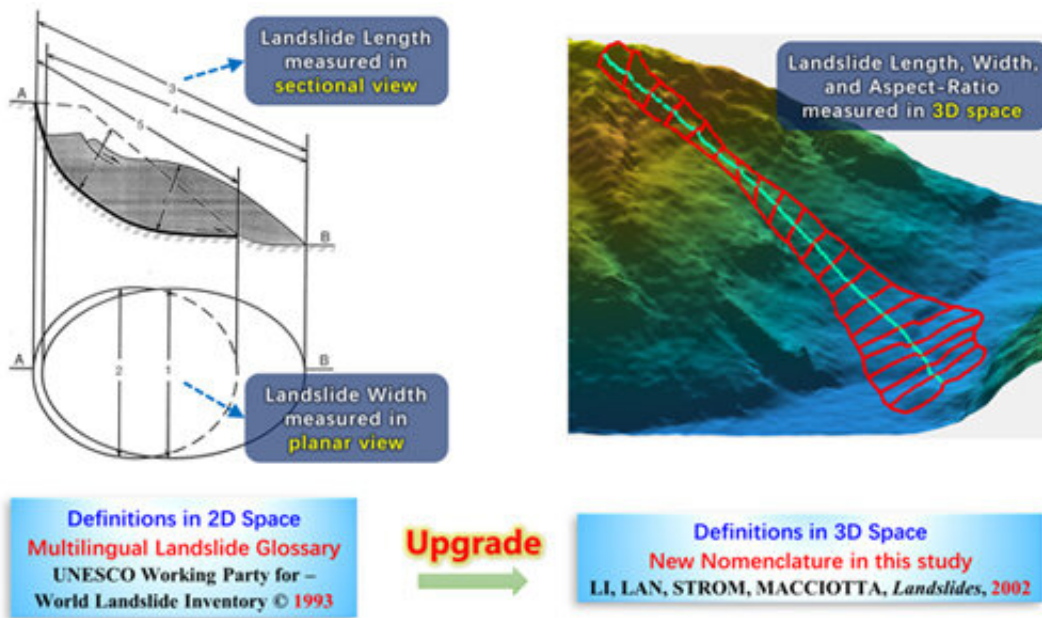


# Researchers upgrade international nomenclature of landslide geometry

September 13 2022, by Zhang Nannan



Upgrade of the widely-used international nomenclature of landslide geometry.  
 Credit: Prof. Lan's team

A common nomenclature of landslide geometry is the basis for describing and understanding landslides. A landslide is defined as the movement of rock, debris, or earth down a slope—a phenomenon in three-dimensions (3D) space. However, landslide geometry is currently defined in 2D space and does not effectively reveal the movement characteristics of landslides. Traditional nomenclature defines length and width of landslides in 2D space (in a planar or sectional view), which is

inevitably misleading when used to understand landslides.

Prof. Lan Hengxing's team at the Institute of Geographic Sciences and Natural Resources Research (IGSNRR) of the Chinese Academy of Sciences (CAS) and their collaborators proposed an upgrade of the widely-used international [nomenclature](#), in which landslide geometry is defined in 3D space, thus facilitating a better understanding of landslide motion processes. Results were published in *Landslides*.

The researchers put forward to define and measure landslide length, width, and their ratio (aspect-ratio,  $\epsilon$ ) in 3D space. They found that measurements in 3D space can derive true "path-dependent" geometric parameters, which reveal landslide movement characteristics, while traditional measurements in 2D views only generate "path-independent" parameters.

"We have developed an automatic approach for measuring those 'path-dependent' landslide geometric [parameters](#), and implemented the approach in an open-source software Automatic Landslide Profile Analysis," said Dr. Li Langping at IGSNRR.

**More information:** Langping Li et al, Landslide length, width, and aspect ratio: path-dependent measurement and a revisit of nomenclature, *Landslides* (2022). [DOI: 10.1007/s10346-022-01935-2](https://doi.org/10.1007/s10346-022-01935-2)

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