**A landslide size classification system for improved science communication**

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* This abstract is for an **Oral**
* Proposed Session – **Geomorphic Hazards / Risk Management**

# ABSTRACT

# Size is a fundamental property of landslides, but size is described inconsistently within the scientific literature. There is currently no widely adopted size classification system applicable to all landslide types. A Scopus database search shows the most used landslide size descriptor is the term large, used to refer to landslides with volumes spanning ten orders of magnitude. Some size descriptors in use are unintuitive or potentially misleading (e.g. the term massive which also describes a material property). We argue that a formal size classification scheme would encourage more consistent and logical usage of size descriptors and improve landslide science communication.

# We have proposed a size classification scheme suitable for all landslide types. The scheme provides a log scale of size classes for volume and area, with base units of cubic metre and square metre, respectively. In theory, there is no limit to the number of size classes possible. Six size descriptors are suggested, each spanning 3 orders of magnitude: very small (10−3–100 m3), small (10–103 m3), medium (103–106 m3), large (106–109 m3), giant (109–1012 m3), and monster (1012–1015 m3). Our system does not replace existing (or preclude future) classification systems for specific landslide types (e.g. snow avalanche) that use numerical size classes, and it maintains consistency with some commonly used descriptors.

# Whatever system is used, we encourage people to define the terms they use and to quantify size where possible. This way, clearer meaning is given to the words used to describe the size of landslides, improving science communication.