

A global scale geospatially located landslide dam dataset

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🌐 <https://eps.leeds.ac.uk/civil-engineering/pgr/6439/hang-wu>

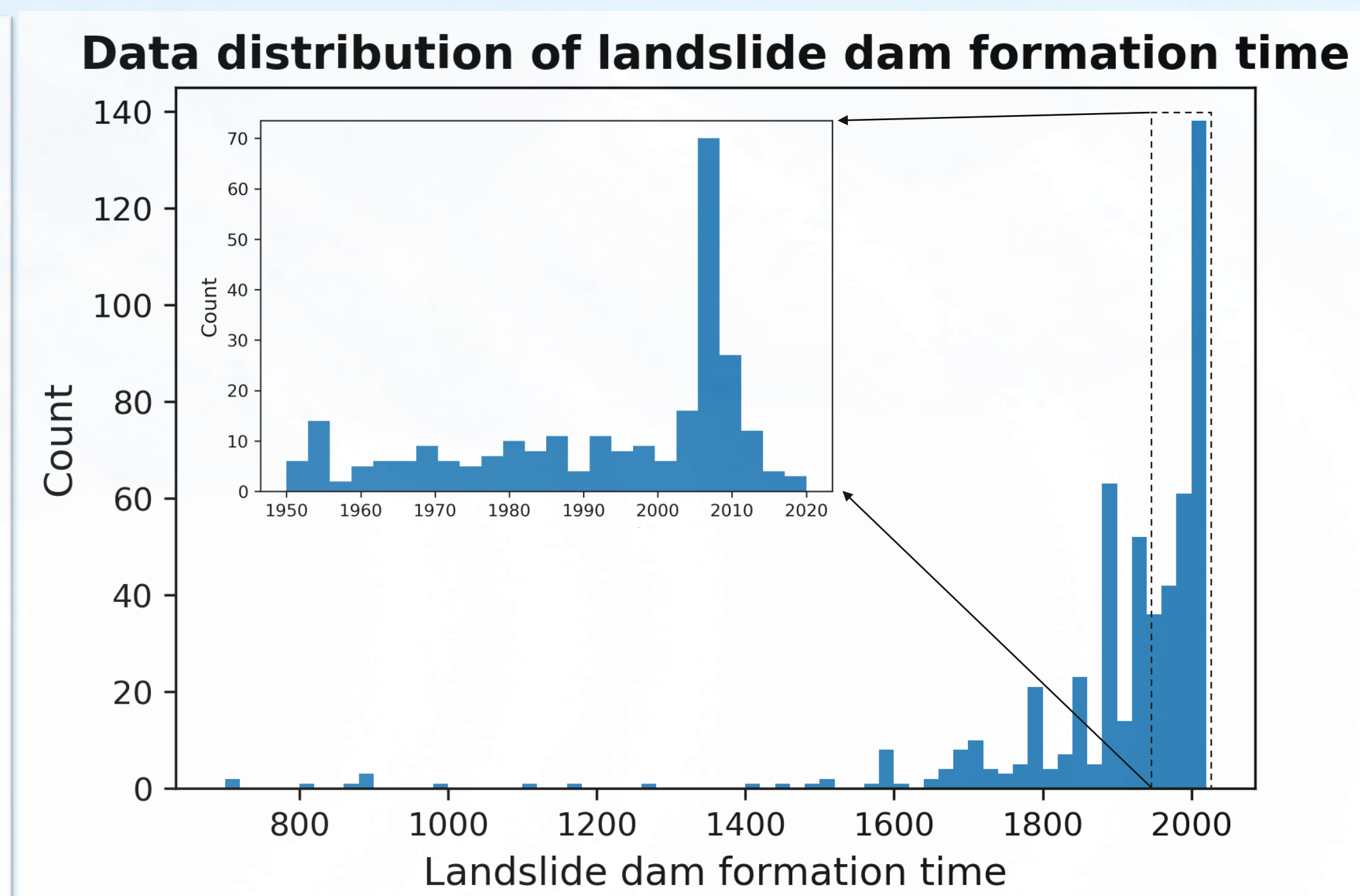
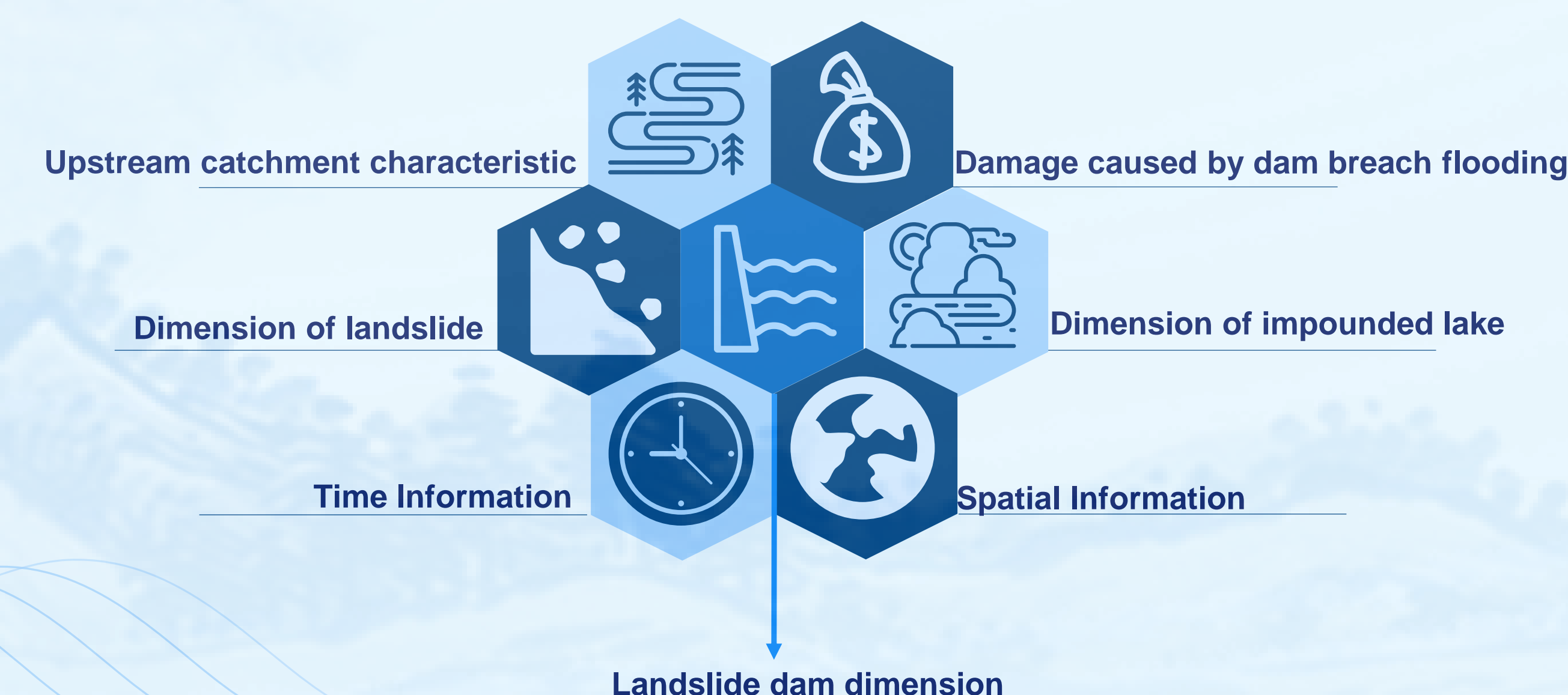
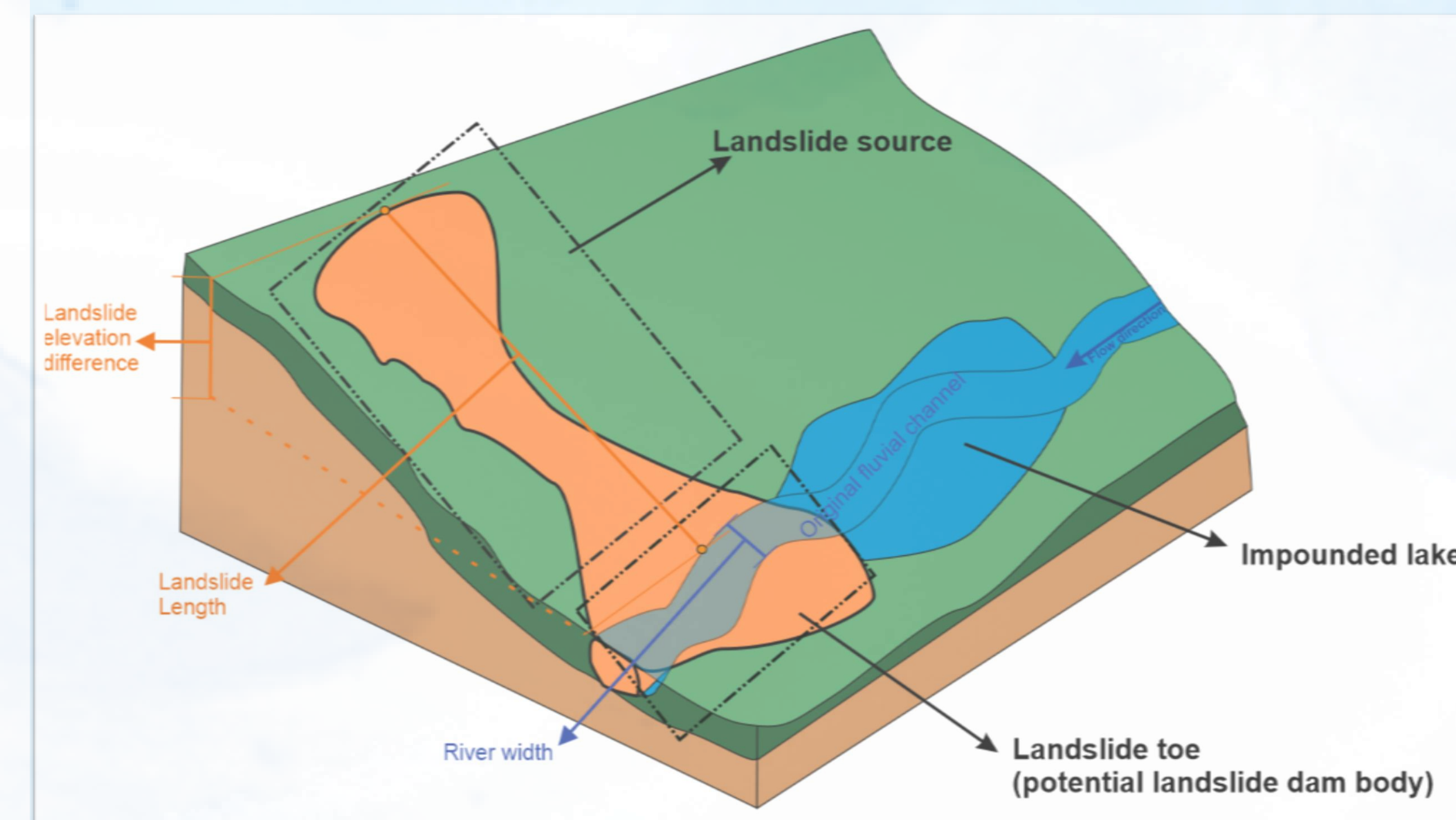
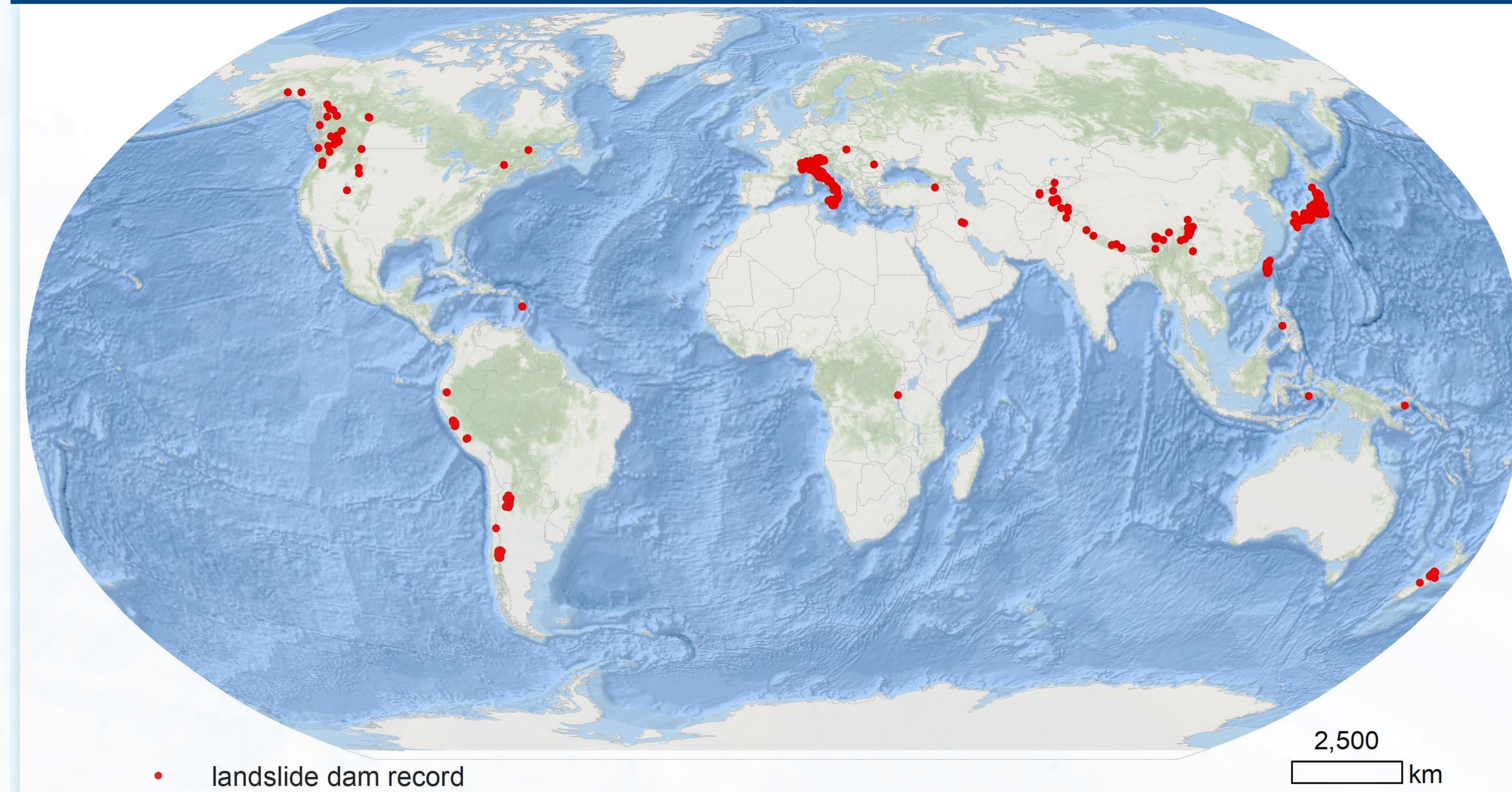
Motivation

- Landslide dams causing catastrophic flooding were commonly reported around the world
- Little is known about where landslide dams are clustered and how they connect to climate and geology at the global scale
- For further analysis of landslide dam impact on flood, a detailed and comprehensive dataset of landslide dams with precise spatial location is not currently available at the global scale

Conclusion

- A new global landslide dam dataset is currently developing with 744 records collated from bibliographic works in a number of languages;
- The dataset shows that landslide dam records clustered in the river up-stream areas around the world, which is supported by the spatial distribution and geomorphology data of the records;
- The number of landslide dams record increases exponentially during the past 1000 years, with the highest peak in the last 20 years.

Dataset

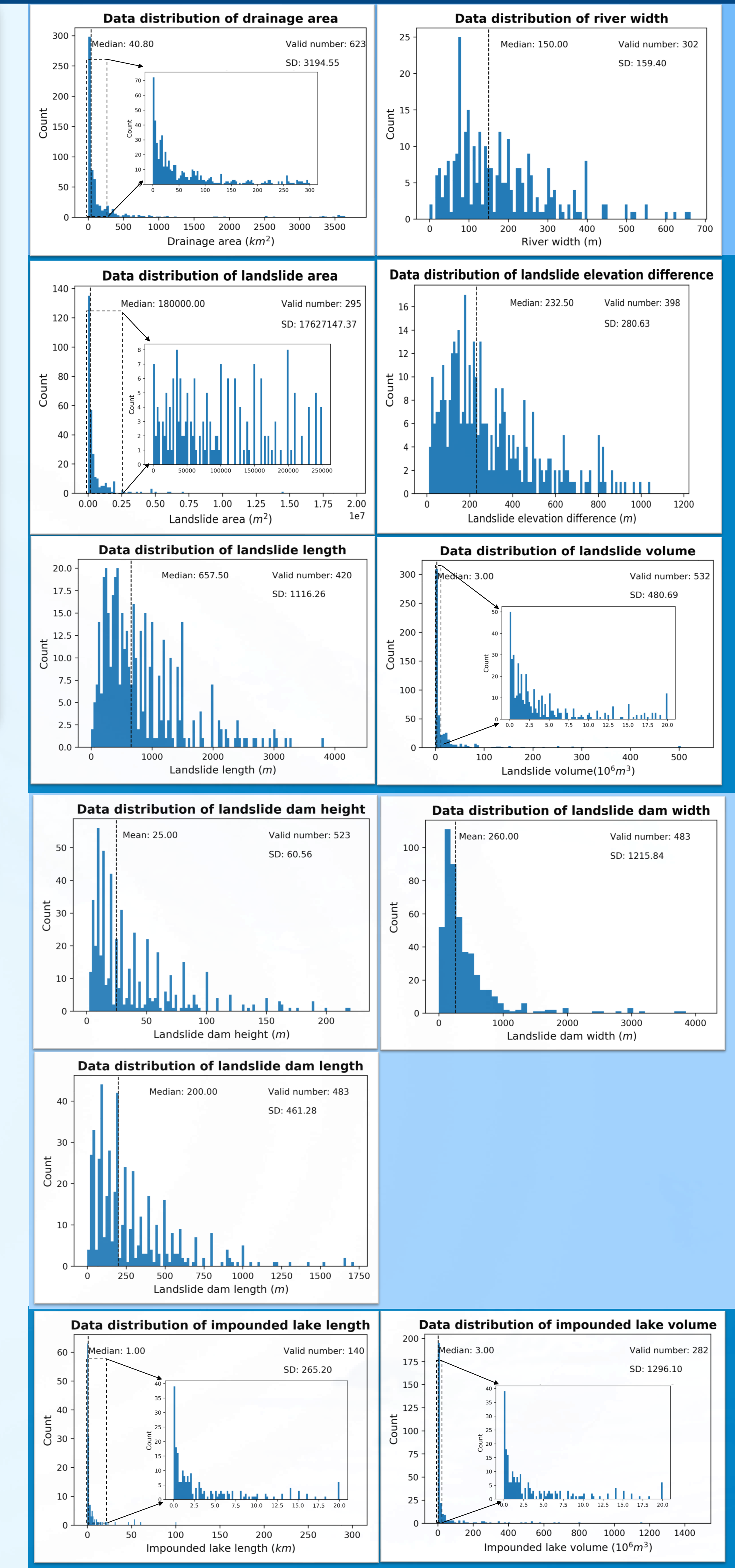


📊 744 records (76% in 100m precision)

🕒 Period: A.D.700 to 2020

⌚ Triggers of landslide dam formation

- ❑ Climate (~31%): instant weather event; climate alteration
- ❑ Geology(~61%): geological background; tectonic movement; geological hazards
- ❑ Hydrology (~15%): fluvial erosion; infiltration



Fluvial System

Landslide Source

Landslide Dam

Impounded Lake