

Will History Repeat? The Great Flood of the Future.

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Across the diverse cultures that span the globe, a common thread emerges in the form of cataclysmic flood stories, which unleash destruction in their wake. However, these stories may hold hidden truths beyond mere folklore.

As our planet undergoes rising temperatures and climate change shifts in weather patterns, the world's glaciers are slowly melting, leading to a rise in global sea levels. The loss of glaciers poses significant environmental and social hazards, as exemplified by the tragic events of 1941 when a glacial lake outburst flood claimed the lives of 5,000 individuals in Huaraz (Carey, 2010, 17).

Delving into the effects of climate change, Dr. Sridhar Anandakrishnan, a glaciologist, and geophysicist at Penn State, has conducted extensive research on ice sheets in Antarctica and Greenland. In a notable study, Dr. Anandakrishnan and his team examined the instability of Antarctica's Thwaites Glacier. They concluded that if this glacier were to retreat completely, global sea levels would rise by three meters. However, this scenario is not expected to occur for several centuries unless current conditions worsen due to global warming (Scambos, 2017, 1).

Considering the impact of a single glacier's melting on global sea levels, one can only imagine the consequences if the 200,000-plus glaciers worldwide were to melt simultaneously.

The research paper titled "How much, how fast?: A science review and outlook for research on the instability of Antarctica's Thwaites Glacier in the 21st century" sheds light on the implications of global sea level rise solely from the Thwaites Glacier. Such a rise would necessitate coastal areas to relocate inland, resulting in a significant influx of people. Collaborating with various organizations, the researchers behind this academic work strive to find solutions to combat glacier mass loss and its subsequent effects on rising sea levels and dangerous hazards. Ultimately, only time will tell if we are destined to face a cataclysmic flood akin to those from folklore or if we can divert its arrival for several more centuries.

- Carey, M. (2010). Melted Ice Destroys a City: Huaraz, 1941. In M. Carey (Ed.), *In the Shadow of Melting Glaciers: Climate Change and Andean Society* (pp. 17-37). Oxford Academic. <https://doi.org/10.1093/acprof:oso/9780195396065.003.0002>
- Scambos, T. A., Bell, R. E., Alley, R. B., Anandakrishnan, S., Bromwich, D. H., Brunt, K., Christianson, K., Creyts, T., Das, S. B., DeConto, R., Dutrieux, P., Fricker, H. A., Holland, D., MacGregor, J., Medley, B., Nicolas, J. P., Pollard, D., Siegfried, M. R., Smith, A. M., & Yager, P. L. (2017). How much, how fast?: A science review and outlook for research on the instability of Antarctica's Thwaites Glacier in the 21st century. *Global and Planetary Change*, 153, 16–34. <https://doi.org/10.1016/j.gloplacha.2017.04.008>