




# Natural Disasters & Earth Systems: Flood in Sierra Leone

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# What to know about Mudslides and Floods

- A landslide The movement of rock and debris down a slope
- Landslide and mudslide are terms that mean the same thing.





# GEOSPHERE

ROCKS AND SOLDS

# Geosphere

- A slip occurs when material on the land fail to make up a slope and result in gravity pushing it down
- Landslides are triggered by natural causes or human activities
  - Vibrations of earthquakes
  - Elevations of water pressure from prolonged rainfall
  - Modifications of slopes i.e. construction or highways
- Landslide can range from abrupt collapses or slow gradual slides
- Areas to avoid when this natural disaster occurs are hilltops or close the coastline



# What happened in Sierra Leone?

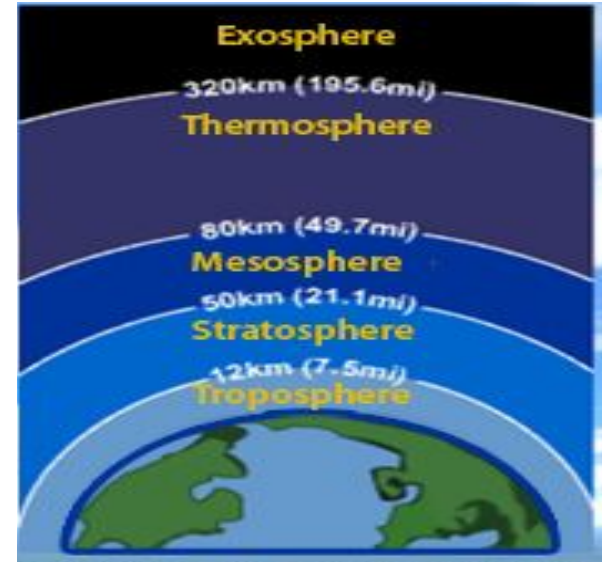
- In Sierra Leone the mudslide was triggered by the flood
  - Heavy rains oversaturated the ground which caused it to be waterlogged and lose friction
- The lack of working infrastructure and deforestation made the slide more intense
- Human activities played a role in the mudslide
  - Mining and construction

A composite image of Earth from space. The Earth is the central focus, showing continents and oceans. To the right, a bright comet with a long tail curves across the dark blue sky. The background is filled with colorful nebulae in shades of purple, blue, and white, and scattered stars.

Atmosphere

# Atmosphere

- What is the Atmosphere, and what does it do?
  - Keep the sun rays from entering and burning everything
  - Rain, which happens with warm air cools.
  - Hold oxygen in so that we can breath
  - The Atmosphere is like a invisible cover of gasses surround the earth.

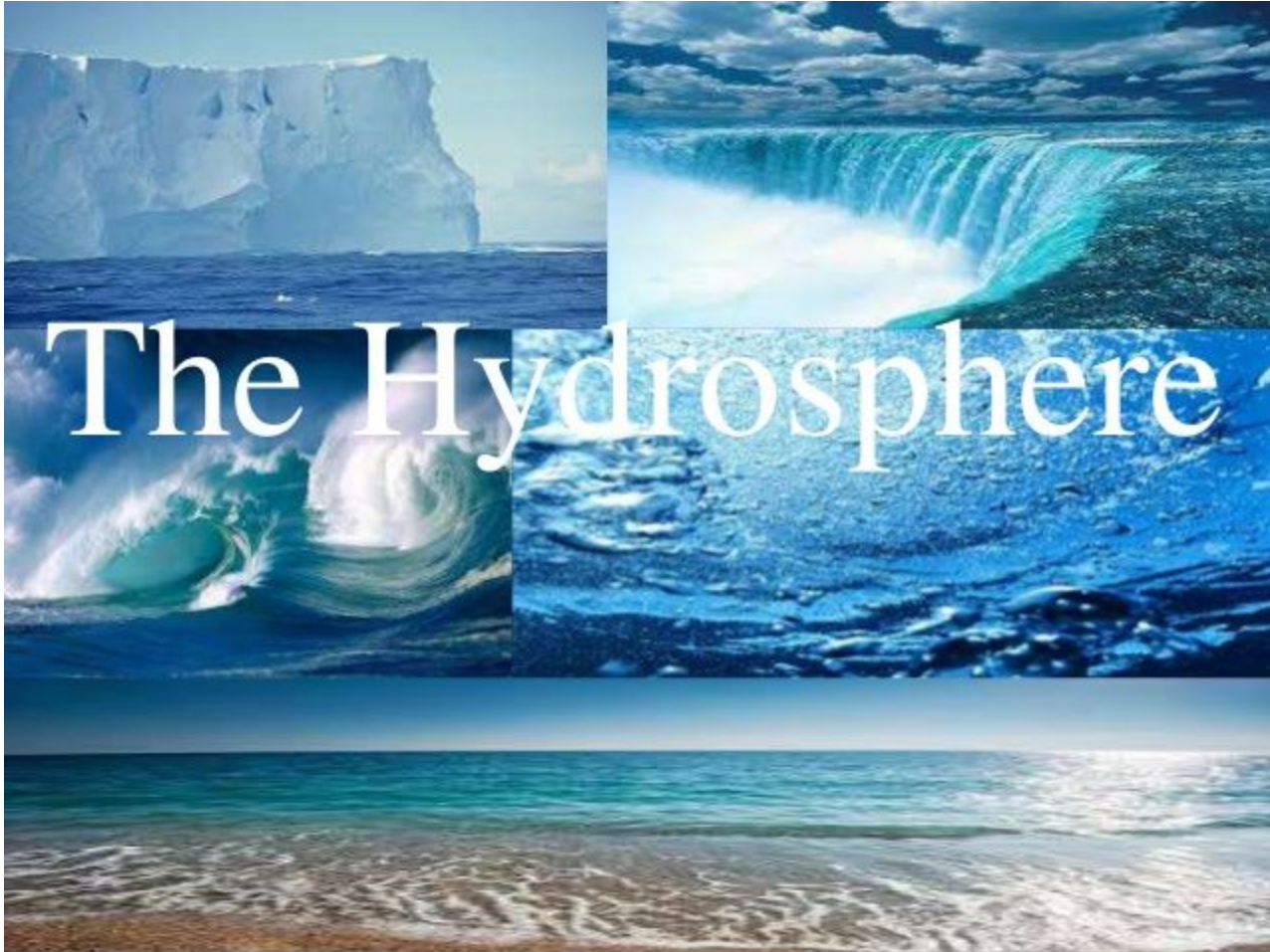




# Sierra Leone Atmosphere, & How It Contributed

- Very hot temperature
- Air hold lots of moisture which causes lots of rain
- Lots of rain creates flooding
- Flooding softens the ground creating mudslides

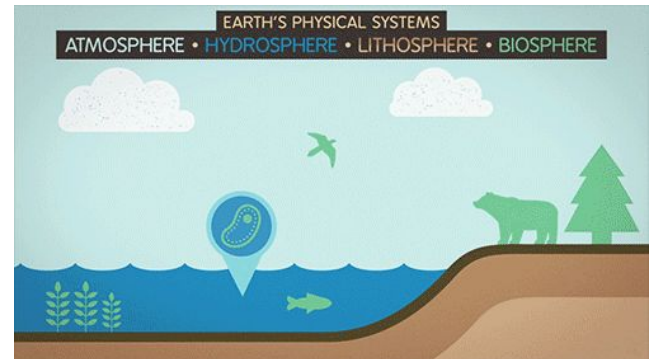




# The Hydrosphere

# Hydrosphere

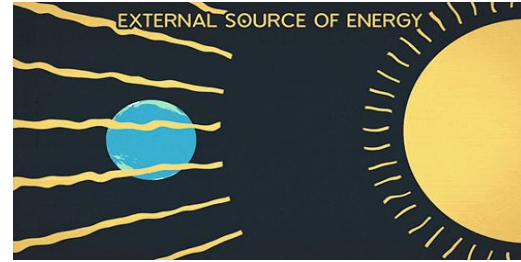
- When the flood happened water pressure caused saturation of slope material.
- Mudslides happen when water immediately increase on the ground that result floods of water saturated rock, earth and debris.
- When mudslides occur it usually start on a steep slope and most of the time it can be activated by a natural disaster.



[https://www.google.com/alpha-beebeeber.org/presentation/?author=0&usp=slides\\_web](https://www.google.com/alpha-beebeeber.org/presentation/?author=0&usp=slides_web)



# Biosphere



- Though the exact death toll was unknown, as many as 200 people were killed during the flood. Some dead bodies were found stuck in trees branches and rooftops. People used ropes to recoup some bodies from the fast running water. Many people were injured and there weren't enough ambulances to transport them to the remaining hospitals. In other places of the city people were stuck in vehicles surrounded by water, some were waiting on rooftops to be rescued.
- "Oswald Hanciles, a spokesman for President Ernest Bai Koroma, said that residents were building recklessly and cutting down trees that would otherwise help protect the land."

# Links we used

Barry, Jaime Yaya. “‘All We See Is Dead Bodies’: Sierra Leone Floods and Mudslides Ravage Freetown.” *The New York Times*, The New York Times, 14 Aug. 2017,  
[www.nytimes.com/2017/08/14/world/africa/sierra-leone-floods-freetown.html](http://www.nytimes.com/2017/08/14/world/africa/sierra-leone-floods-freetown.html).

“11 Facts About Landslides.” *DoSomething.org | Volunteer for Social Change*,  
[www.dosomething.org/facts/11-facts-about-landslides](http://www.dosomething.org/facts/11-facts-about-landslides).

“What causes Landslides?” *What causes Landslides? - Geoscience Australia*,  
[www.ga.gov.au/scientific-topics/hazards/landslide/basics/causes](http://www.ga.gov.au/scientific-topics/hazards/landslide/basics/causes). Accessed 18 Sept. 2017.  
<http://www.ga.gov.au/scientific-topics/hazards/landslide/basics/causes>

“Explaining the Deadly Sierra Leone Mudslide.” *National Geographic*, National Geographic Society, 16 Aug. 2017,  
[news.nationalgeographic.com/2017/08/sierra-leone-mudslide-deadly-video-spd/](http://news.nationalgeographic.com/2017/08/sierra-leone-mudslide-deadly-video-spd/).  
<http://news.nationalgeographic.com/2017/08/sierra-leone-mudslide-deadly-video-spd/>

“What is a Landslide?” *What is a Landslide?* - *Geoscience Australia*,  
www.ga.gov.au/scientific-topics/hazards/landslide/basics/what. Accessed 18 Sept. 2017.

<http://www.ga.gov.au/scientific-topics/hazards/landslide/basics/what>

“Flooding, Mudslides Kill at Least 300 in Sierra Leone.” *Weather Underground*,  
www.wunderground.com/cat6/flooding-mudslides-kill-least-300-sierra-leone. Accessed 18 Sept. 2017.

<https://www.wunderground.com/cat6/flooding-mudslides-kill-least-300-sierra-leone>

“Explaining the Deadly Sierra Leone Mudslide.” *National Geographic*, National Geographic Society, 16 Aug. 2017,  
news.nationalgeographic.com/2017/08/sierra-leone-mudslide-deadly-video-spd/. Accessed 18 Sept. 2017.

<http://news.nationalgeographic.com/2017/08/sierra-leone-mudslide-deadly-video-spd/>