

Example of report on develop criteria to rank the impacts

[Environment](#), [Water](#)



1. Natural disaster due to landforms and processes: Earthquake Magnitude 9.0

Location: Tohoku, Japan/March 11, 2011,

Geologic/geomorphic setting: Japan sits right where it is affected by four tectonic plates. The four plates are the Pacific Plate to the east, the Philippines Sea Microplate to the south, the Eurasian Plate to the west, and the North American Plate to the north.

Triggers: The earthquake hypocenter is where a slip occurs on a fault plane between the North American and Pacific Plates. The Earth Observatory Singapore explained that a megathrust occurred because the edges of the two plates stuck together causing friction. Subsequent effects: The force of both the plates pushing against each without being able to move because of the friction makes energy build up. The build-up is a slow process taking hundreds and hundreds of year. When the amount of energy is bigger than the amount of friction the North American plate jerked back making the earth quake. The Pacific Plate slipped under the island, then “ popped up” so that there was the earthquake and the tsunami.

2. Periglacial region: The Central Yakutia in Siberia is an example and maybe the planet Mars.

How will GW impact periglacial regions? Candada and Siberia has already been impacted with thawing due to warming. Periglacial areas are supposed to be ice in the form of perma-frost all year

Amount of ice – 40 to 80 percent of ice by volume

Identify pingos and Polygon wedge ice – The shapes that the surface of a region form because of the thawing and freezing. Water pools inside the formations when thawing happens.

Amount of time region is frozen – Thaw for short period in summer

Use criteria to rank impacts by importance

1. The amount of ice in a region is the most important measure for identifying the amount of impact global warming has on a periglacial region. This can be measured on Earth in the Siberian areas and in Canada periglacial regions. Scientists measure the percent volume of ice. They can also measure the amount of pooling water during thawing periods.
2. Identifying and studying the geomorphological formations, the polygon wedge ice for example, helps scientists identify whether freezing and thawing has occurred. Scientists identified the formations of pingos and polygon on Mars. They are using the information to learn more about the way the earth can expect to react to global warming.
3. Studying when and the amount of time a region is goes through freezing and thawing. This is important information in order to understand if the length of time of thawing is gradually or quickly increasing.

References

Earth Observatory Singapore <http://www.earthobservatory.sg/media/news-and-features/294-japan2011.html>

Séjourné, A.; Costard, F.; Gargani, J.; Marmo, C. Formation and evolution of

<https://assignbuster.com/example-of-report-on-develop-criteria-to-rank-the-impacts/>

periglacial landforms in context of global warming: Comparison Earth-Mars.

Abstract is at <http://adsabs.harvard.edu/abs/2012EGUGA..14.1047S>

Article is at <http://www.lpi.usra.edu/meetings/lpsc2012/pdf/1881.pdf>