

## Changes in the risk of sediment-related disasters under climate change due to global warming

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In snow-covered areas, sediment-related disasters are caused by meltwater as well as rainfall. Therefore, the risk of sediment-related disasters increases during the snow melting period, when snow melts almost every day with the progress of season. In addition, a large amount of meltwater generated by extreme weather events such as strong winds makes the risk high.

According to the latest studies, variation in precipitation, air temperature, winds and other meteorological elements in the winter time of Japan has been getting larger for the last few decades. Thus we believe that the timing, type, scale and hazard area of sediment-related disasters may change drastically in future winter seasons.

However the relationship between sediment-related disasters and climate change in snowy regions has not been fully investigated. This is because of the infrequency of extreme events and the sparseness of local meteorological stations.

Therefore, we intend to clarify the long term trends and probability of extreme weather events in a snow environment in district of heavy snow in warm-temperate zones of mountainous areas, using the meteorological data sets acquired by both the Forestry Agency and the Meteorological Agency.

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