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## Climate variability following large volcanic eruption: CMIP6 model investigation

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Volcanic eruptions are an important driver of climate variability. Multiple literature sources have shown that after large explosive eruptions there is a decrease in global mean temperature, caused by an increased amount of stratospheric aerosols which influence the global radiative budget. In this study, we investigate the changes in several climate variables after a volcanic eruption. Using ESMValTool (Earth System Model Evaluation Tool) on an ensemble of historical simulations from CMIP6, such variables as global mean surface temperature (GMST), Arctic sea ice area and Nino 3.4 index were analyzed following the 1883 Krakatoa eruption. While there is a definite decrease in the multi-model mean GMST after the eruption, other indices do not show as prominent change. The reasons for this behavior are under investigation.