

New hazard map of the Shinmoedake volcano, Kirishima volcano group, Japan

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I propose a new hazard map of the Shinmoedake volcano, Kirishima volcano group, which considered the eruptive pattern for the past 300 years. Historic records and stratigraphic studies of the Shinmoedake volcano reveal that each major eruptive activity at historical age progressed with time from phreatic to magmatic. I assumed here that the eruptive activity progresses in such as the following four stages:

Stage 1: precursory activity stage: increase of volcanic earthquake, occurrence of volcanic tremor, ground deformation, etc.

Stage 2: phreatic activity stage: new fuming, steam explosion, air shock, fallout ash, lahar, etc.

Stage 3: phreatomagmatic activity stage: base surge, fallout lapilli, lahar, etc.

Stage 4: magmatic activity stage: pyroclastic flow, fallout pumice, fire, lahar, lava flow, etc.