

Disasters induced by ground deformation at the foot area, Usu 2000 eruption

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Serious ground deformation occurred at the foot of Usu Volcano, was associated with magmatic uplifting of Nishiyama craters during the 2000 eruption. Not only the linear constructions such as road, railway, tunnel, and water pipe but also houses and sabo-dams were damaged and/or destroyed by the ground deformation. We show the characters of the deformation and the disaster.

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Ground deformation started all around the Volcano, and subsequently concentrated in the area around Nishiyama craters. Extensional horsts and grabens were formed in doming area near the craters. The ground surface around the dome moved northward and southeastward like a large landslide and many compressional deformations occurred in northern and southwestern foot of the dome and of the volcano. At the west of the dome, several strike-slip faults and related small grabens were found. Most of damages were caused by compressional deformation of ground-surface, and some of them were related to normal and lateral -slip faults.