

## **A risk assessment of Municipal Mitigation System with Hazard Maps by GIS Analytical Results at Nasu Volcanic area**

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Nasu volcano, located in the north of Tochigi prefecture, is an active volcano of rank-B activity level. Nasu volcanic area is one of very famous resorts crowded with millions of visitors yearly. The purpose of the study is to consider a draft method of assessment for mitigation and risk management at Nasu volcanic area, by using 2D and 3D geo-spatial analyses with Arc GIS (Geographic Information System) .

A volcanic hazard map was published in 2002 and a municipal plan for volcanic disaster mitigation was also established. However, the capacity of refuge facilities is very far from the satisfaction because of taking refuge of huge numbers of visiting tourists in a case of volcanic emergency, which is clearly shown on various 2D and 3D maps by present GIS analysis. After the result of present GIS assessments, several major points of the present municipal plan for volcanic disaster mitigation are urgently to be improved in view of the threat of volcanic activity at Nasu volcanic area.