

# Governance for Trans-boundary Volcanic Disaster -a case of 2010 Eyjafjallajökull Eruption-

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The volcanic eruption occurred in one country can trigger different effect in other country. The experience of 2010 Icelandic volcano Eyjafjallajökull eruption demonstrated the necessity of international governance for trans-boundary effect caused by eruption. In Iceland, national disaster response was effective to evacuate people from hazardous area and there were no humanitarian damages caused by eruption. However, the estimation of volcanic ash plumes and its dispersion caused huge international air traffic disruption or airport closure, and left large international economic and industrial impact. Followings are problems found through the 2010 eruption.

First, the necessity of international collaboration for observing atmospheric dispersion of volcanic ash. As for 2010 eruption, Icelandic Meteorological Agency (IMO) informed London Volcanic Ash Advisory Center (VAAC) which observes Iceland, about the plume height, ash content and other data. Based on the provided data, London VAAC predicted ash dispersion over Europe. However, there was no detailed discussion between IMO and London VAAC when and how often they communicate prior to eruption. It is important to update forecast using satellite imagery or observation of ashfalls in other countries.

Second, the necessity of immediate information sharing with both local and international medias. During the eruption, there was a huge need for information from international medias. A communication team, composed by professional communicator from various institutions gathered at the National Crisis Coordination and Command Center (NCCCC). Press conference were held and status reports were prepared and distributed. Such an international information sharing system should be discussed prior to disaster.

Disaster management systems are generally developed to respond hazard activity in each country based on its own regulation. However, 2010 experience showed there is no international agreement or regime to respond such a trans-boundary effect. Immediate crisis communication among hazard origin country, international institute and possibly affective country is required to reduce secondary effect, which shows importance or precautionary approaches for trans-boundary volcanic disaster.

Keywords: trans-boundary disaster, volcano, governance, Eyjafjallajökull