

International Risk Governance for Transboundary Volcanic Disaster-Focusing on Disaster Response of Hunga Tonga-Ha'apai Eruption

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This research focuses on international disaster risk governance for transboundary volcanic disaster. 2010 Icelandic volcano Eyjafjallajökull eruption caused airport closures and flight cancellations in Europe which resulted in huge socio-economic damages. The experience demonstrated difficulties in policy decision making, caused by lack of international coordination mechanism among related agencies, and difficulties to obtain scientific data defining the policy. This event has triggered the emergence of new disaster risk governance in Europe, which has following characteristics;

- (1) networking and collaboration among different actors such as government departments (disaster management, transportation, environment, etc.), scientists, the private sector and media.
- (2) international collaborations for real-time monitoring of atmospheric dispersion and fall of volcanic ash.
- (3) collaboration with environmental monitoring institutes to monitor environmental effects of eruption.
- (4) real-time information sharing with both local and international communities and collaboration with medias

Compare to Europe, international disaster risk governance for transboundary volcanic disaster in Asia is still immature situation. As for humanitarian coordination, ASEAN Coordinating Centre for Humanitarian Assistance of disaster management (AHA Center) is established in 2011 as an inter-governmental organization to facilitate coordination and cooperation of disaster management among ASEAN member states. Also, AHA Center partners with international organizations, private sector, and civil society organizations such as the Red Cross and Red Crescent Movement, the United Nations, and AADMER Partnership Group. Regarding to near real-time monitoring caused by volcanic eruption, Asia-Pacific Space Agency Forum (ARSAF) started an international cooperation project "Sentinel Asia" in 2005, following the initiative of the International Charter "Space and Major Disasters" in 2000. Satellite imageries of disaster affected areas and value added products for the disaster management are provided immediately. The research focuses on international response for 2022 Tonga volcano eruption, and reveals how these international mechanisms were adopted and what are challenges for better international risk governance.

Keywords: transboundary disaster, volcano, governance