

Section 3 Responding to Disasters Anticipated to Occur

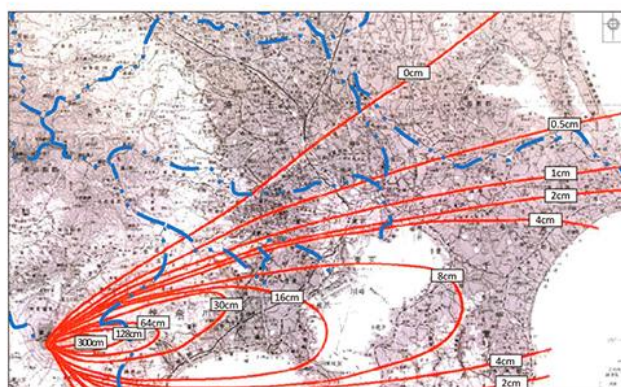
3-1 Development of Countermeasures against Wide-Area Ash Falls from Major Volcanic Eruptions

A major volcanic eruption may cause considerable disruptions to the life and social and economic activities of people living around the base of the mountain and those living afar alike, as volcanic ashes fall over an extensive area. In this view, the Working Group on Countermeasures for Wide-Area Ash Falls from Major Volcanic Eruptions (established in August 2018 under the Disaster Management Implementation Committee, National Disaster Management Council) has discussed approaches to emergency response measures for major volcanic eruptions affecting an extensive area encompassing urban areas, in which city functions are concentrated.

Reference: <http://www.bousai.go.jp/kazan/kouikikouhaiworking/index.html>

As a first step to developing effective countermeasures for wide-area ash falls, the Working Group studied the conditions of ash falls that can cause disruptions to road and railway traffic, electricity and other lifeline utilities, and buildings and facilities. In the future, it intends to discuss emergency response measures for wide-area ash falls from major eruptions with a focus on the impact on urban areas, using model cases. Specifically, the distribution of ash falls from major eruptions of Mt. Fuji and their damage will be studied using the data of the 1707 Hiei Eruption (Fig. 3-1-1) and a model simulating the chronological change of ash fall distribution until the end of the eruption event. Then, based on the simulated damage situation, the Working Group will study measures each entity (*i.e.* facility managers, residents, etc.) should take and basic principles for emergency response measures, including the ash removal process and securing of ash disposal sites (Fig. 3-1-2).

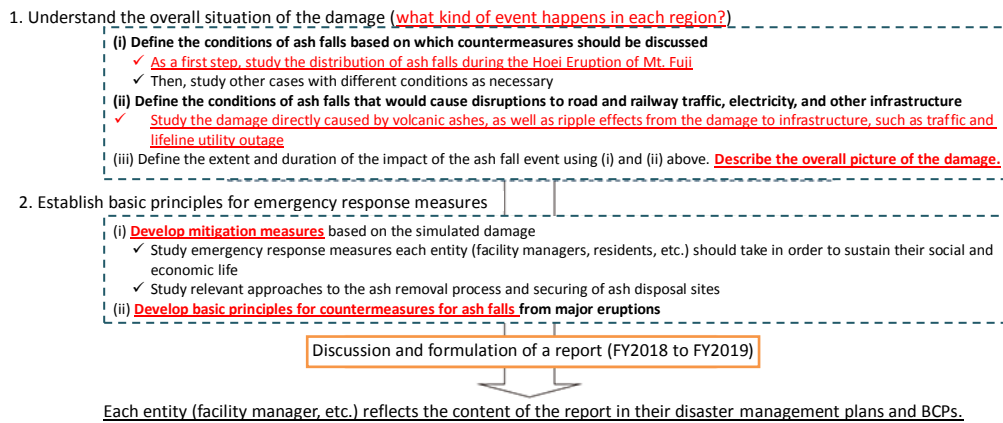
Fig. 3-1-1 Ash Fall Distribution during the 1707 Hiei Eruption of Mt. Fuji (Records)



Source: Cabinet Office

Fig. 3-1-2

Discussion Process



Source: Cabinet Office

3-2 Deliberations on Large-scale, Extensive Evacuation from Flooding or Storm Surge Inundation in the Tokyo Metropolitan Area

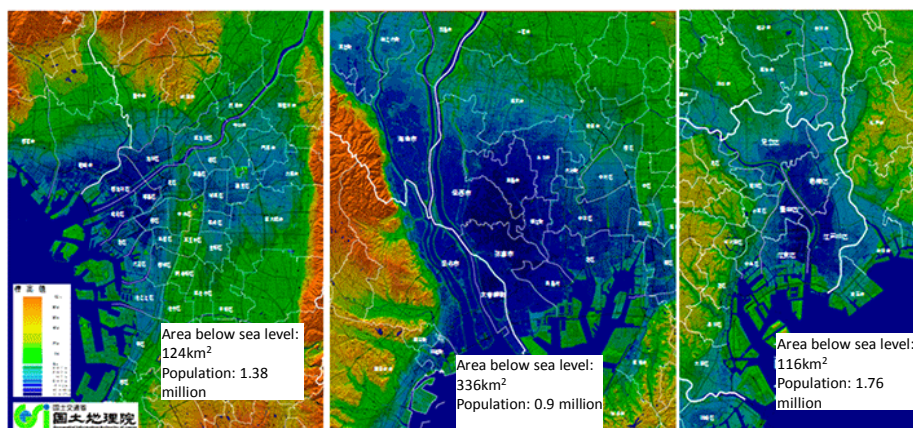
Experts predict that there will be risks of major flood disasters that would require large-scale, extensive evacuation, as typhoons may increase their intensity into the future with global warming. Extensive portions of Japan's three major metropolitan areas are located below sea level (Fig. 3-2-1). As such, large-scale flooding caused by the collapse of river embankments is expected to result in huge crowds as large numbers of residents seek to evacuate, as well as many people being left stranded after failing to escape in time.

Accordingly, approaches to large-scale, extensive evacuation from flooding or storm surge inundation were examined in Japan's three major metropolitan areas at the Working Group for Studying Large-scale, Extensive Evacuation from Flooding or Storm Surge Inundation established under the National Disaster Management Council's Disaster Management Implementation Committee in June 2016. The working group submitted a report titled "Basic Approaches for Large-scale, Extensive Evacuation from Flooding or Storm Surge Inundation" in March 2018.

Reference: <http://www.bousai.go.jp/fusuigai/kozuiworking/index.html>

Fig. 3-2-1

Areas below Sea Level in the Three Major Metropolitan Areas



Source: Formulated by the Cabinet Office based on materials from the Geospatial Information Authority of Japan (GSI)

In order to identify initiatives that administrative and other organizations should promote for large-scale,

extensive evacuation from major floods and discuss collaboration and role sharing among these organizations based on the above report, the Cabinet Office has hosted three sessions of the Study Group on Extensive Evacuation from Large-Scale Flood Disasters in Urban Areas from June 2018 to March 2019 in cooperation with the Tokyo Metropolitan Government. The main topics of the meetings were the securing of extensive evacuation sites, evacuation means and guidance.

Reference: <http://www.bousai.go.jp/fusuigai/suigaiworking/suigaiworking.html>

As for the first topic (*i.e.* securing of extensive evacuation sites), the meeting members will work to identify challenges by the end of FY2019 concerning the matching of evacuee communities and accepting communities using the regional block system, which groups multiple communities into one block. As for the second topic (*i.e.* securing of evacuation means and guidance), the evacuation means and destinations will be discussed based on the estimated transportation capacity of railway companies. Also, as common measures that would serve both topics ((1) securing extensive evacuation sites and (2) securing evacuation means and guidance), the members will work on developing measures to mitigate the number of region-wide evacuees, a model that shows how related organizations should share their roles, and a timeline for inter-organizational collaboration in normal times and in times when the risk of a disaster is heightening.