

Why do we need an aftershock forest for seismic disaster mitigation?

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Hazard and risk modelers are targeting several vastly different stakeholders or stakeholder in their model results: the scientific community, governmental institutions, engineers and the larger technical community, and finally the public.

Aftershock forecasting is one of the most successfully modeled in the scientific community but not well implemented in society. The 2016 Kumamoto Earthquakes were associated with many strong earthquakes. The largest quake with a magnitude (M) 7.3 occurred on April 16, 2016, which was 28hours after the M6.5 earthquake. The aftershock forecast issued by Japan Metrological Agency (JMA) immediately after the M6.5 event said very high probability, 3,000 times as high as usual probability. However this information might bring safety information for public because the name of “an aftershock” was misunderstood by public so that a coming quake would be smaller than the previous one. As a result, JMA has stopped issuing probabilistic aftershock forecast in a week after the strong event, but just says that there will be a strong ground motion and advises people to prepare the strong motion.

We will discuss how we should communicate such risk information to reduce natural disasters.

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