

Mechanism of creation of an "unexpected" arising from 2016 Kumamoto Earthquakes

*Mamoru HAYASHI¹

1.University of TOYAMA

The 2016 Kumamoto Earthquakes occurred in the areas with the following aspects:

- (1) Experience from earthquake disasters in recent times.
- (2) Finding and sharing the knowledge of local private research organizations (NPO KSNDP = Kumamoto Society for Natural Disaster Research, first meeting in November 27th, 1992), catalogs and research books about earthquake.
- (3) Disaster prediction and warning by the central government through elaboration of hazard maps, etc.
- (4) Progress of earthquake resistance measures by the local governments of Kumamoto Prefecture, Kumamoto City and Mashiki Town.

Although it happened according to the scenario based on these predictable facts, (5) it is interesting that these earthquakes are said to be "unpredictable", saying "never expected to happen in Kumamoto", "unprecedented foreshock", "aftershock experience not applicable", etc.

Moreover, the multiple earthquakes are being considered as something extraordinary. Also, the damage caused by the multiple earthquakes of intensity 7 (the highest level in the Japanese seismic intensity scale) is seen as it would have been safe in a case of a single tremor of intensity 7. Here, it is possible to see the mechanism of an "unexpected" in order not to see the real facts and avoid taking into consideration the disaster experiences.

In the case of the 2016 Kumamoto Earthquakes, in which the intensity 7 was divided into foreshock and main tremor, the collapse of houses and buildings would have been more devastating if it were just one "main tremor". The "main tremor" occurred in the middle of the night, so the worst scenario could be avoided.

Keywords: Meiji Kumamoto Earthquake Disaster in 1889, Consider Everything as "Unprecedented", Difficulty to take into consideration the disaster experiences, Science communication for Earth and Planetary Sciences and Society, Risk Communication

