## The Reconstruction Assistance from Kumamoto Earthquake by the Grassland Conservation Volunteers in the Aso National Park

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The Kumamoto Earthquake struck the Aso Area of Kumamoto Prefecture on April, 14 and April 16 in 2016, killing at least 24 people. The earthquake (The A magnitude-7.3) caused by the sediment disaster in the mountain slope. Regarding the damage to agriculture, the surface ruptures, landslides across the grasslands and damages to barns posed severe challenges to the continuation of the livestock industry. However, due to the assistance of volunteers such as Green Stock and the efforts of the Grassland Restoration Committee, local residents were able to overcome the destruction. This study analyzed the recovery efforts of the grassland conservation volunteers in a chronological order using the following time frames. The time to secure survival, the time to secure living conditions, the time to secure livelihood, and the time until the resumption of business activities. The study applied various research methods. Interviews were conducted with the members of Aso Green Stock and the Grassland Restoration Committee. The question topics were as follows: the reconstruction assistance and the implementation periods following the Kumamoto Earthquake, the support activities, and methods of information distribution. The interview surveys were conducted on May 4, 2017, September 12, and September 13, 2017, and September 8, 2018. Therefore, the Grassland Restoration Committee conducted an emergency questionnaire to the livestock farmers on the disaster support, immediately after the Kumamoto Earthquake. On June 15, about two months after the earthquake the Grassland Restoration Committee has restored a pasturage road, which was damaged by surface ruptures. On June 17 damaged water wells, feeders and farm fences were repaired or replaced. Three months after the Kumamoto Earthquake, on July 19 new water tanks were installed in the grasslands of Minami-Aso Village. Also, 11 months after the Kumamoto Earthquake, the Grassland Restoration Committee carried out supporting activities in order to restart the fire controlled burning for the livestock farmers on the grasslands where the land had been damaged by surface ruptures.3 days after the Kumamoto Earthquake, on April 19th, Aso Green Stock surveyed the area struck by the disaster and assessed the extent of damage to the grasslands. 11 days after Kumamoto Earthquake, the Aso Green Stock started raising funds for the affected livestock farmers. The donations have reached approximately 2.8 million yen in four months. So Green Stock implemented three projects as emergency support for the livestock farmers. Firstly, it supported the resumption of the fire controlled burning in the ruptured grassland areas. Secondly, it repaired the grassland roads that were damaged by the earthquake. Thirdly, it raised fences for preventing cattle and horses from slipping into the cracks across the grasslands. It also repaired the barns and cattle sheds damaged by the earthquake. Aso Green Stock organized sightseeing tours and exchange opportunities in order to facilitate constructive participation efforts. These tours included grassland management experiences, barbecues and visits to the local hot springs. The tours began in Oct, 2016; buses departed from the cities of Fukuoka and Kumamoto in Kyushu. In total, 119people have participated in these events. As a result of the aforementioned efforts, the partnerships with the volunteers of the grassland preservation before the Kumamoto Earthquake have led to the swift recovery of the livestock farmers following the earthquake. After 6 months, the disaster support activities of the grassland volunteers have successfully developed into various tourist and exchange projects.

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