



**Asia-Pacific
Economic Cooperation**

2017/SOM1/EPWG/035

Agenda Item: 10.14

Follow Ups of Kumamoto Earthquake

Purpose: Information

Submitted by: Japan



**11th Emergency Preparedness Working Group
Meeting
Nha Trang, Viet Nam
18-19 February 2017**

The 11th APEC Emergency Preparedness Working Group Meeting
18-19 February 2017, Nha Trang, Vietnam

Agenda Item 10: Major Disasters in APEC Region and new policy initiatives

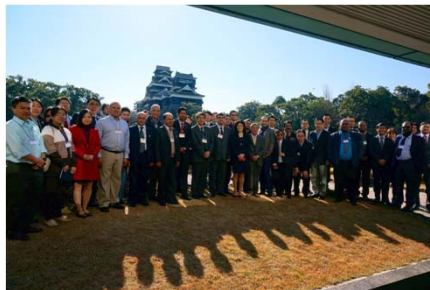
10.14 Follow ups of Kumamoto earthquake

Damages of the Earthquakes in Kumamoto



Kumamoto Earthquakes in 2016 and ADRC study visit

On 14 and 16 April 2016, earthquakes occurred in the middle of Kyushu Island, in southwestern Japan, measuring seven on the seismic intensity scale of the Japan Meteorological Agency (JMA), causing 137 deaths in Kumamoto prefecture including those passed due to the injury or stress after the disaster. In order to learn from this experiences, 22 Asian countries visited together with Cabinet Office and ADRC and discussed DRR challenges.



ADRC Study visit to the affected areas by the Kumamoto Earthquakes

19-20 December 2016, Kumamoto, Japan

Mashiki Town

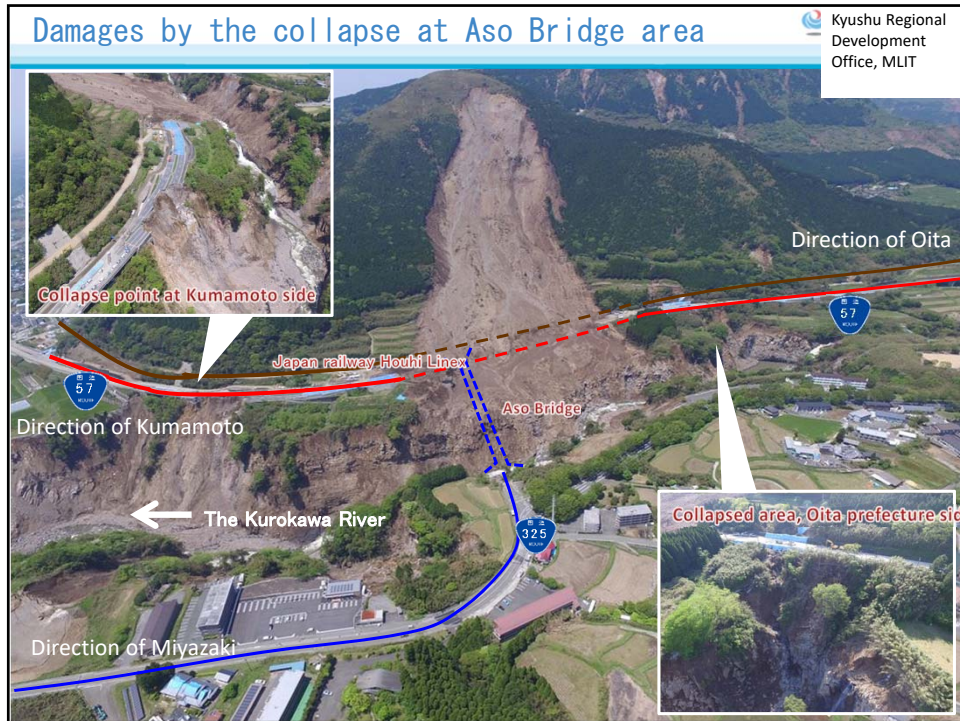
ADRC study visit participants discussed Mashiki town officials evacuation and organisation of temporary housing complex towards immediate recovery for affected residents.



Photo: Community center located at Techno Temporary housing complex.



Photo: Mashiki Town removal of the collapsed houses underway .



ADRC Study visit to the affected areas by the Kumamoto Earthquakes

19-20 December 2016, Kumamoto, Japan

Aso Bridge Area

Participants from 23 ADRC member countries visited the collapsed Aso Bridge area. Emergency works have been undertaken since May 5th, 2016 including earthworks and building of mounds, slope protection works by using construction machines for automatic operation, due to the cracks as well as unstable earth and sand left at the top of the slope.



Photo: Collapsed slope



Photo: MLIT :

Left: Images of the slope from the vehicle carrying camera.



Right: Operation by using four monitors for one unmanned machine.

ADRC Study visit to the affected areas by the Kumamoto Earthquakes

19-20 December 2016, Kumamoto, Japan

Kumamoto Castle and participative recovery

Due to the Kumamoto earthquakes, in total 169 national cultural properties have been damaged in the six affected prefectures. Amongst all, wooden turrets of the Castle designated as “national important cultural property” and the Kumamoto castle site including ramparts designated as national “Special historic site” have been severely affected. Damaged cultural properties spread all the Kumamoto prefecture. Recovery of the cultural heritages, sources of local pride and symbols attracting many tourists could provide opportunities for participative recovery.



ADRC study visits to the affected areas

ADRC has organized study visits to the affected areas by natural disasters including those with member countries :

- Gujarat earthquake in 2001
- Indian Ocean earthquake and Tsunami in 2004
- Kumamoto Earthquakes in 2016



Gujarat Earthquake, Jan.2001,India

Participant from six member countries in addition to those from India joined the team



Indian Ocean Earthquake & Tsunami, Dec.2004

ADRC dispatched study visit teams soon after the quakes to xx countries and

