

**A Report from Chairperson of WCSMO-9 about Present Situation of Japan after the huge earthquake and the subsequent Tsunami and holding WCSMO-9 in Shizuoka, Japan**

2011/04/03

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First of all, I appreciate very much many people in the world for their sympathy and supports to the massive catastrophic earthquake with magnitude 9.0 occurred on March 11 at 14:46 Japan Standard Time off the northwest coast of Japan. The subsequent huge wave (Tsunami) also attacked and flooded many cities and villages away in northwest coast.

It was the most powerful earthquake ever recoded in Japan. Though the hypocenter of the quake is in deep sea in Miyagi prefecture in Northern Tohoku Area where Tohoku university is located, the quake propagated in wide Pacific Coast Areas from Hokkaido area to Kanto and Chubu areas .What was the worse, repeated several large tsunamis attacked the Pacific Coast Areas and swamped, scooped and swept away many houses, buildings, vehicles, ships and destroyed cities and villages completely. And Fukushima I nuclear power plant run by Tokyo Electric Power Company (TEPCO) consists with six light water, boiling water reactors (BWR) was damaged and the cooling systems to cool the plant down did not work thoroughly by the 14 meters (16ft) tsunami because of knocking out emergency generators needed to run pumps which cool and control the reactors. According to today's newspaper the number of dead people to 12 thousands and the number of people whose safety were not known becomes more than 18 thousands. This is an unprecedented disaster.

We also thanks very much that many professional people also came to Japan and gave kinds of technical supports after the disaster.

By the way, many persons who wish to attend at WCSMO-9 in Shizuoka have been anxious about the aftershocks which usually follow the big earthquake and leaks of radioactive fallout from the reactors. And the WCSMO-9 can be held in the originally schedule under such situation? As a chairperson, I should now report the following:

**(1) Aftershocks**

Several aftershocks occurred after the huge earthquake but lately the number decrease rapidly. By June when WCSMO-9 to be held, there might be no need to

worry about aftershocks.

## **(2) Fukushima nuclear accidents**

### **(a) Locations of Fukushima, Tokyo and Shizuoka**

Fukushima nuclear power plant I is located in Fukushima prefecture about 210 kilometers (130 miles) north of Tokyo and Shizuoka City about 194km south of Tokyo. Thus Shizuoka City is about 400 kilometers south of Fukushima nuclear plant I.

### **(b) What happened in Fukushima nuclear plant I**

Reactors #4, 5, 6 among six reactors had been shut down prior to the earthquake for the maintenance. The remaining reactors #1, 2, 3 shut down automatically after the earthquake. But the cooling and control systems did not work because of the knocking down the emergency generator systems by 14 meters (46ft) tsunami. The earthquake and tsunami damage in the area prevented from any assistance from elsewhere. Then evidence arose of partial core meltdown in the reactors #1, #2, and hydrogen explosion oxidation of zirconium by steam took place which damaged containment inside reactor 2 and fires broke out at the reactor #4. Spent fuel rods to be cooled down in the pools of #1-4 began to be overheated as the water levels in the pools became lower.

The TEPCO gave warning of the possibility radioactive releases.

### **(c) What done for avoiding the crisis**

The Japanese government announced the evacuation of thousand residents within 2km of reactors and then the evacuation zone was extended to 20km and advised the residents within a further 10km to stay indoors.

To cool the fuels several approaches were taken by the devoted workers. By the Tokyo Fire Department the Self Defense Force stored and sea water has been sprayed to the reactors by making use of special vehicles and were dropped by helicopters. The US army also gave big supports and assists.

Construction work was done to supply external power sources to the 6 reactors and to begin to cool and control the fuels using the generators and pumps.

Repair works are still continued and such a method as spraying special resin to cover the surface of ground at the plant site and other repair works may be done to avoid scattering of radioactive materials and to shut down the leaks of water containing rather strong radioactive materials in the ditches of reactors

to the sea.

**(d) Radiation levels and radioactive contamination**

Many participants may worry about the radiation levels and radioactive contamination. From the information published daily by MEXT (Ministry of Education, Culture, Sports Science and Technology), we can show you the values of nuclear radiations in the air in various cities.

Here I show you the values of relevant cities to WCSMO-9

**Tokyo:** 0.092 micro Sv per hour (normally 0.028~0.079) (1.2 –fold)

**Chiba:** (Narita Airport) 0.066 (0.022~0.044) (1.5 –fold)

**Shizuoka:** (Conference location) 0.040 (0.0281~0.0765) (ordinary)

**Nagoya:** (Nagoya Airport) 0.039 (0.035~0.074) (ordinary)

**Osaka:** (Kansai Airport) 0.042 (0.042~0.061) (ordinary)

From those data, we can say there are a little influence on the data in Tokyo and Chiba but nothing on Shizuoka, Nagoya and Osaka. The amounts converted above values in per year are lower than the limit value for human body to keep health, 1,000 micro Sv per year. So far it no need for us to be so nervous.

I also attached the figures which show the transitions of values in a week and the values which we receive in daily life for reference.

**(3) Holding WCSMO-9 in the original plan**

When we considered above mentioned present situations of aftershock and the radiation leakage, so far we can not find any rational reason for cancellation or postpone of WCSMO-9. Thus at this moment, the Local Organizing Committee has determined to hold WCSMO-9 following the scheduled original plan, it means, from June 13 through June 17. Then we contacted with the Executive Committee members and the International Paper Committee members and asked their opinions and received approval from them.

Furthermore we made up our mind to put the deadlines of early registration and full paper off until May 6 to provide enough time for participants to make a decision.

Finally Japanese people now try to make lots of efforts to support the people who met the tragic disaster and to assist the recovery from the disaster. Many attendances at WCSMO-9 might encourage Japanese researchers and Japanese people.

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