

Comprehensive Nuclear Test-Ban Treaty Organization PC**Ambassador Tibor TOTH****Executive Secretary****Talking Points***Will speak
freely***Fukushima Ministerial Conference (FMC) on Nuclear Safety****15-17 December 2012,****Fukushima, Japan**

The main goal of this international ministerial Conference is to contribute to strengthening nuclear safety worldwide. The CTBTO has substantial capabilities and activities to offer to this goal.

1. The lessons learned from the incident at TEPCO's Fukushima Nuclear Power Stations based on the IMS includes the following:

- On 11 March 2011, the PTS contributed to the rapid tsunami alerts; data from about 20 seismic and hydroacoustic stations were sent directly and in real time to seven warning centres in the region, including in Japan and the United States (Hawaii). As of today, Tsunami Warning Arrangements are in place with 10 countries.
- Seismic, hydroacoustic and infrasound signals were received. Almost 10.000 aftershocks were measured.
- More than 40 radionuclide stations have detected the radioactivity released from the Daiichi reactors and all but the closest station (Takasaki, Japan) were back to normal background radiation end of May 2011. In total, more than 1600 samples contained radiation originating from the nuclear power plants in Fukushima.
- A panel discussion and dedicated poster session on the Fukushima nuclear power

plant accident were conducted at the SnT2011. In June 2012 a workshop on "Lessons learnt from Fukushima" was conducted in Vienna.

2. The CTBTO contributed to the progress of the international efforts to strengthen nuclear safety:

- On 13 March 2011, first traces of radionuclides had been detected by the IMS and shared with all CTBT Member States.
- On 15 March, the first briefing was given to Member States including atmospheric transport simulations.
- Since 17 March, the PTS shares atmospheric radionuclide observations with the International Atomic Energy Agency (IAEA) and the World Meteorological Organization (WMO).
- Since 11 April, CTBTO participated in meetings of IACRNE (Inter-Agency Committee on Radiological and Nuclear Emergencies) and in 2012 became a formal member among 16 participating organizations (members) plus few corresponding (observers) organizations.

3. The CTBTO continues its efforts:

- The IMS network contains 80 particulate (80% certified) and 40 noble gas (80% installed, 33% certified) monitoring stations as well as 16 radionuclide laboratories (63% certified). The monitoring is being done around the year with high and timely data availability.

The CTBTO participates to the activities of IACRNE as formal member.

EU Joint Action V funds a project on enhancing Atmospheric Transport Modelling taking into consideration the needs of IACRNE. Besides of technical enhancements

(acquisition of the high quality meteorological fields at high resolution, optimizing the configuration of the ATM software), a major goal is to identify the needs in terms of the ATM support to civilian applications through interactions with external experts, including collaboration with the International Atomic Energy Agency (IAEA). Capacity building activities are conducted at NDCs that require technical assistance in order to enhance their capabilities to use IMS data and IDC products for nuclear explosion monitoring as well as for civil and scientific applications. This includes the observation of atmospheric radioactivity.

A major effort has started this year in providing NDCs for the first time with software for processing and analysing the IMS radionuclide data. Up to now, already 22 countries have received this software package.

4. Measures to protect people and the environment from ionizing radiation depend on scientific studies that may benefit from the IMS radionuclide data and IDC analysis.

- The source term of radioisotopes released from the Fukushima nuclear power accident has been calculated by various scientific papers based on the IMS measurements.
- The observed radioactivity and the isotopic ratios helped scientists to study the characteristics of the source (temperature reached in the nuclear reactors, core melting, time of fresh releases, etc.).
- The observed radioactivity is used by scientists to study the transport of isotopes through the environment including transfer factors, wash-out processes, re-suspension and other effects.
- The SnT2013 (17-21 June in Vienna) offers a platform for further discussions on findings based on the IMS data collected after the Fukushima nuclear power plant accident.