Fukushima Daiichi Nuclear Power Plant Recovery: International Assessment and Update of Progress

In an effort to accelerate recovery in Fukushima Prefecture, the Japanese Government is working together with the Tokyo Electric Power Co. Ltd on the decommissioning of the Fukushima Daiichi Nuclear Power Plant and addressing the leak of contaminated water from the facility.

Sharing information with the International Atomic Energy Agency

In addition to all preceding efforts to share information with the international community informed, the Japanese Government has started to provide comprehensive and periodic reports on recovery operations at the Fukushima Daiichi Nuclear Power Plant, including progress updates and highlights, to the International Atomic Energy Agency (IAEA). The IAEA will make this information available on its website and include the agency's own assessment on various aspects of the reporting. Information as of December 20th, 2013 is already uploaded and available at the following link:

http://www.iaea.org/newscenter/news/2013/recoveryoperations201213.pdf

Information about the IAEA report is also available on the Ministry of Foreign Affair's webpage, as well as on the webpage of the Prime Minister of Japan and His Cabinet, both listed below:

http://www.mofa/go.jp/dns/inec/page18e_000038.html

http://www.kantei.go.jp/foreign/96_abe/decisions/2014/osensui_e.html

Summary of the IAEA's Assessment, "Events and highlights on the progress related to Recovery operations at Fukushima Daiichi NPS"

- Between November 25th and December 4th, 2013, a team from the IAEA was dispatched to the Fukushima Daiichi Nuclear Power Plant and confirmed that great progress has been made on the decommissioning activities at the site. Additionally, the IAEA provided in its assessment from the visit guidance for process improvements in various areas of operation.
- While radionuclide concentrations have increased only in a small area within the Fukushima Daiichi Nuclear Power Station port, there has been no indication of increases in the surrounding sea where levels remain within World Health

Organization guidelines for safe drinking water. The safety of public water supplies has been maintained.

- Food supplies are safe, and appropriate measures to monitor and promptly respond to any instance of radioactive contamination have been implemented.
- The Japanese government has been making efforts to improve communication with the public on the recovery situation at the Fukushima Daiichi Nuclear Power Station, earning the praise of the IAEA.

An excerpt from the IAEA's full report:

IAEA assessment on aspects presented in the December 2013 report *"Events and highlights on the progress related to recovery operations at Fukushima Daiichi NPS"*

Current conditions onsite

The *International Peer Review of Japan's Mid-and-Long-Term Roadmap towards the Decommissioning of TEPCO's Fukushima Daiichi Nuclear Power Station Units 1-4* conducted a visit to Fukushima Daiichi Nuclear Power Station from 25 November to 4 December 2013. Participants of the IAEA Decommissioning Mission had an opportunity to observe some of the listed activities on-site and also to view more detailed technical information which was presented by Japanese counterpart during the Mission. Progress in implementation of on-site activities has been significant, but the recovery situation remains complex. A preliminary summary report was submitted to the Government of Japan on 4 December 2013. The report highlighted:

- TEPCO has successfully begun to remove fuel assemblies from the Spent Fuel Pool of Reactor Unit 4, a task that is essential to ensuring the long-term stability of the accident site;

- While many challenges remain, the Government of Japan and TEPCO have developed a comprehensive set of well-defined measures to manage Fukushima Daiichi's extensive contaminated water issues;

- The NRA and other Japanese institutions have established a comprehensive monitoring programme to track concentrations of significant radionuclides and associated radiation levels in the environment around the accident site; and

TEPCO and METI have pressed forward with developing innovative tools to address key technical problems. For example, the development of remote technology to identify the location of reactor leaks has seen initial success and should serve as a significant step towards repairing the containment vessels.

In addition, the IAEA team made an assessment and provided advice in areas where current practices could be improved. For example:

- The Government of Japan and TEPCO were encouraged to continue their efforts to address water issues at the site, including preventing groundwater from entering the reactor buildings and monitoring the effectiveness of all such measures;

- Regarding the growing amounts of contaminated water at the site, TEPCO should bolster its efforts to treat this water and then examine all options for its further management, including the possibility of resuming controlled discharges in compliance with authorized limits. To pursue this option, TEPCO should prepare appropriate safety and environmental impact assessments and submit them for regulatory review;

- Japan needs to continue its transition to long-term stability of the site and to develop waste management solutions. Waste facilities should be planned to support the decommissioning process for its lifetime, and a laboratory should be established for waste characterization; and

- The NRA should enhance the seawater monitoring programme by coordinating inter-laboratory comparisons to ensure good harmonization of the environmental data.

It is expected that the situation onsite will continue to be very challenging and will require eventual resolution to ensure the plant's long-term stability.

A press release was issued by the IAEA on the date the mission concluded which has additional information:

http://www.iaea.org/newscenter/pressreleases/2013/prn201327.html

The preliminary summary report is available online which contains 19 acknowledgements and advisory points that were provided by the team:

http://www.iaea.org/newscenter/focus/fukushima/missionreport041213.pdf

Increased measurements in the sea

It is important to acknowledge that although increased radionuclide concentrations have been monitored in the sea, these have occurred only in a small area within the port of the Fukushima Daiichi Nuclear Power Station. The monitoring results that have been provided for the surrounding sea region and off shore areas indicated no rise in radionuclide concentrations and remain within the WHO guidelines for drinking water. The Japanese Government has been providing weekly updates to the IAEA on the monitoring results in the marine environment. Based on these reports and the information that has been made available, the IAEA considers the public is safe and sees no reason why this should not continue to be the case in the future.

Monitoring of food products

Since the latter part of 2013 there has been an increased level of interest regarding radionuclides in food items, especially fish, due to the reports of radionuclide contaminated water leakage at the Fukushima Daiichi Nuclear Power Station. Monitoring of food, both on the market and from production areas, continues and has been in place since the early days of the emergency. The results of monitoring and surveillance of food items does not indicate any new or any immediate issues for food products. The implementation and the removal of restrictions on food indicate the continued vigilance of the authorities in Japan and their commitment to protecting consumers and trade.

While caesium radionuclides remain at higher concentrations in some of such food products as wild meats, fish at the bottom of the sea and wild fungi, the vast majority of monitoring results indicate that radionuclide levels in foods are below levels of concern. A comprehensive surveillance and control regime is in place in Japan. A monitoring and sampling regime is used to identify where and when foods become affected as the inventory of caesium radionuclides in the environment is dispersed. The mechanism for placing restrictions on affected products is dynamic in order to respond to the surveillance monitoring. Legal measures apply under domestic food law to prevent unacceptable food from being marketed and further legal restrictions (or voluntary measures if more appropriate) are also applied or up-dated to cover production areas or activities related to the distribution of food. In summary, mechanisms are in place to prevent food with radionuclide levels in excess of the legal limits from entering the supply chain and these mechanisms continue to be implemented.

Based on the information that has been made available, the Joint FAO / IAEA Division understands that the measures taken to monitor and rapidly respond to any issues in the food system regarding radionuclide contamination are appropriate and that the public food supply is safe.

IAEA comments on improvements to public communication

It is clear that measures are being implemented to improve public communication by the Japanese Government on the situation of the recovery operations at the Fukushima Daiichi Nuclear Power Station. The Agency recognizes these concrete and clear actions that have been undertaken to improve global communication and foster a broader understanding of the wide range of the on-going activities. The IAEA welcomes such clear efforts and will continue to share this information provided by the Government of Japan with its Member States and the public.