

CURRENT STATUS AFTER THE NUCLEAR POWER PLANT ACCIDENT

COMMUNICATION FROM JAPAN

Revision

The following communication, received on 25 June 2020, is being circulated at the request of the Delegation of Japan.

ABSTRACT

In response to the accident at Tokyo Electric Power Co. Fukushima Daiichi Nuclear Power Station in 2011, Japan has taken a comprehensive approach in securing food safety. The accumulated monitoring data demonstrates that the contamination level is very low and Japanese food has been safe for the public. The joint FAO/IAEA Division has evaluated that Japan's measures and response against radionuclide contamination in food are appropriate and that the food supply chain is controlled effectively. Majority of the countries and regions which provisionally introduced import measures on Japanese food has lifted them based on the scientific evidence, and the number of countries and regions which still maintain the measures are reduced to 20. Given the provided evidence, there is no need to impose additional import control measures and Japan calls on Members to remove existing measures.

1 INTRODUCTION

1.1. In response to the accident at Tokyo Electric Power Co. (TEPCO) Fukushima Daiichi Nuclear Power Station (NPS) in March 2011, 54 countries and regions introduced import measures on Japanese food products, and 34 have lifted them based on objective assessment. However, 20 countries and regions still maintain import measures, such as import bans, additional test requirement and certificates, and non-detectable level tolerance at border inspection tests.

1.2. This document updates the situation of radioactivity surrounding Japanese food, nine years after the accident at the NPS. In particular, this paper updates the risk management measures taken to secure food safety and to prevent environmental impacts from the NPS, and the resulting monitoring data, so that a more objective assessment of risk and review of the import measures on Japanese food provisionally adopted by the Members would be facilitated.

2 FOOD SAFETY CONTROL AND STATUS OF SAFETY IN JAPANESE FOOD

2.1. Japan, soon after the accident, started decontamination such as of the crop land and fruit trees, control over feeds and agricultural inputs and introduced a risk-based food monitoring scheme. The effective dose from dietary intake has also been surveyed.

2.2. Japanese maximum permissible levels for radioactive caesium in food (JMLs)¹ were set to meet the intervention exemption level of the Codex Alimentarius Commission (Codex), 1mSv/year, a level

¹ JMLs are 50Bq/kg for milk and infant food and 10Bq/kg for drinking water and 100Bq/kg for other food products.

considered as safe for the public, and in consideration of the released nuclides and with highly conservative and hypothetical assumptions in the safe side, including that 50% of the food intake is contaminated. Accordingly, the JML for food in general is set as 100 Bq/kg², while the corresponding Codex guideline level is 1,000 Bq/kg and even 10,000 Bq/kg can be adopted for food with small consumption (CXS 193-1995).

2.3. The monitoring has covered a wide variety of food products including that consumed in large amounts and with elevated concentration of radionuclides in consideration of the effective dose. The monitoring plans have been annually revised, reflecting the past test results, focusing on the products with higher concentration. Testing samples have been reduced³, especially in farm products, due to undetectable level of concentrations.

2.4. All of the recent monitoring results in marketed food products remain far below the Codex guideline level and non-compliance cases continue to be minimal.⁴ The national laws mandate that food products exceeding the stringent JMLs are recalled and disposed of, and their shipment is suspended. If there are exceeding cases in a particular food product over an area, Japan suspends shipment of the products from the area. Japan's regulatory framework thus prevents the food products exceeding the JMLs from neither entering the food chain nor being exported.

2.5. The test results of Japanese food products at the destination countries, detected non-compliance with the Codex guideline level only soon after the accident⁵, and non-compliance with the JMLs has not been detected for more than 6 years.⁶

2.6. The total dietary study conducted since September 2011 at plural sites including Fukushima shows that the estimated annual effective dose from food intake remains digits smaller than the intervention exemption level of the Codex.⁷ Both food monitoring and dietary exposure assessment provide consistent evidence to confirm the effectiveness of the control system in Japan and the safety of Japanese food products.

2.7. The Joint FAO/IAEA Division stated in September 2019, "the situation with regard to the safety of the food supply, fishery and agricultural production remain stable" and Japan's "measures to monitor and respond to issues regarding radionuclide contamination of food are appropriate, and that the food supply chain is controlled effectively by the relevant authorities".

3 WATER MANAGEMENT AT TEPCO FUKUSHIMA DAIICHI NUCLEAR POWER STATION AND THE SEA AREA MONITORING RESULTS

3.1. As part of the decommissioning process of the NPS, Japanese government and the TEPCO have undertaken substantial measures to safely manage the contaminated water generated in the reactor and turbine buildings by groundwater and rainwater inflow. Although the rising rate has been significantly reduced, the water is continuously generated and the water purified by the multi-nuclide removal equipment (ALPS treated water) is accumulated in tanks at the NPS. Currently, towards determining its basic policy on the handling of ALPS treated water, Japanese government continues to listen to the opinions from the parties concerned including local residents considering the report of the advisory committee to the government (ALPS subcommittee).

3.2. Japan would like to note that regardless of the disposal methods, the water currently stored in tanks and with the concentrations above the regulatory standards for discharge is to be re-purified

² JMLs are 50Bq/kg for milk and infant food and 10Bq/kg for drinking water and 100Bq/kg for other food products.

³ Approximately 340 thousand in JFY 2015 and 280 thousand in JFY 2019. Substantial number of samples occupies that from the products before shipment. It also includes samples from the products only for the risk assessment and not for shipment.

⁴ Monthly data of MHLW published in JFY2019: Cs134+Cs137: 110-260 Bq/kg, in kind of products with local/small consumption such as seasonal wild leaf buds and dried mushroom powder (0.05%, out of around 10 thousand samples).

⁵ The last cases are: green tea (Cs134: 485 Bq/kg + Cs137: 553 Bq/kg) by France, in June 2011; and dried mushroom (Cs134: 47Bq/kg + Cs137: 120Bq/kg) by Hong Kong, in August 2013.

⁶ The last cases are: green tea (Cs134: 485 Bq/kg + Cs137: 553 Bq/kg) by France, in June 2011; and dried mushroom (Cs134: 47Bq/kg + Cs137: 120Bq/kg) by Hong Kong, in August 2013.

⁷ Results of biannual market basket surveys: Effective dose from radioactive caesium was maximum 0.0010mSv/year in early 2019, 1/1000 of the intervention exemption level.

and diluted to meet those set based on effective dose limit of 1mSv/year, recommended by the International Commission on Radiological Protection, before discharge. Japan regularly receives the Peer Review Mission from the IAEA, most recently in April 2020 for the review of the management of ALPS treated water and the report of subcommittee. The IAEA acknowledged that the two options recommended by the subcommittee is "technically feasible". In order to counter the miscommunications, Japan would like to clarify that whichever option is to be taken, there is no way of releasing contaminated water to the environment. Accordingly, the disposal has no relevance to the safety of Japanese food.

3.3. The IAEA provided their assessment on the sea area monitoring results in September 2019 and stated "no significant changes were observed in the monitoring results for seawater, sediment and marine biota", "the levels measured by Japan in the marine environment are low and relatively stable." and "that Japanese laboratories monitoring seawater, marine sediment and fish from near the Fukushima Daiichi NPS produce reliable data".

4 TRANSPARENCY

4.1. Japan has been publishing food and environmental monitoring data, as well as relevant information and data concerning the NPS, through our English websites described in the "references". The status of seawater around the NPS can be viewed in real-time through TEPCO website and weekly at Nuclear Regulation Authorities' website.

5 CONCLUSION

5.1. In summary, the evidence shows that Japanese food has been safe for the public for many years and we have a very effective control system in place which guarantees trade of safe food and that fulfils the national standard, for both domestic and international market.

5.2. Risk of water contamination at NPS is constructively managed and there has been no detectable change in marine environment and the biota. From the accumulated data obtained, there is no detectable potential of food contamination which raises concerns on food safety, attributable to the environmental changes caused by the nuclear accident.

5.3. The joint FAO/IAEA Division has evaluated that Japan's measures and response against radionuclide contamination in food are appropriate and that the food supply chain is controlled effectively. Japan keeps the monitoring data and relevant information highly transparent and continues collaboration with the international organizations.

5.4. Given the provided evidence, there is no need to impose additional control measures on Japanese food products and Japan calls on Members to remove their measures.

References

- 1) One stop "Reference", Ministry of Agriculture, Forestry and Fisheries (MAFF), Japan
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Links - Japan

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- b. Mid-and-Long-Term Roadmap towards the Decommissioning of TEPCO's Fukushima Daiichi Nuclear Power Station Units 1-4
(<https://www.meti.go.jp/english/earthquake/nuclear/decommissioning/index.html>)
 - b.2. Report of the Subcommittee on Handling of ALPS treated water at TEPCO's Fukushima Daiichi Nuclear Power Station, February 2020,
https://www.meti.go.jp/english/press/2020/0210_001.html
- c. FACE the FACTS: The Situation of TEPCO's Fukushima Daiichi NPS (FDNPS) is stable
(<https://www.mofa.go.jp/mofaj/files/000564692.pdf>)
- d. BOOKLET to Provide Basic Information Regarding Health Effects of Radiation, Chapter 7 Environmental Monitoring, Ministry of Environment
(<http://www.env.go.jp/en/chemi/rhm/basic-info/index.html>)

- e. Monitoring information of environmental radioactivity level, Nuclear Regulation Authorities - (<https://radioactivity.nsr.go.jp/en/>)
- f. Radioactive Concentration measured by Seawater Radiation Monitor near Fukushima Daiichi Nuclear Power Station
(<http://www.tepco.co.jp/en/nu/fukushima-np/f1/seawater/index-e.html>)

Links - International organizations

- 2) GENERAL STANDARD FOR CONTAMINANTS AND TOXINS IN FOOD AND FEED (CXS 193-1995)
<http://www.fao.org/fao-who-codexalimentarius/codex-texts/list-standards/en/>
 - 3) IAEA, Fukushima Daiichi Status Updates
<https://www.iaea.org/newscenter/focus/fukushima/status-update>
 - a. IAEA assessment on aspects presented in the July 2019 report "Events and highlights on the progress related to recovery operations at Fukushima Daiichi Nuclear Power Station", pp. 32-33
<https://www.iaea.org/sites/default/files/19/09/events-and-highlights-july-2019.pdf>
 - b. Interlaboratory Comparisons 2014–2016: Determination of Radionuclides in Sea Water, Sediment and Fish, IAEA Analytical Quality in Nuclear Applications Series No. 59, 2019
<https://www.iaea.org/publications/13470/interlaboratory-comparisons-2014-2016-determination-of-radionuclides-in-sea-water-sediment-and-fish>
 - 4) IAEA Follow-up Review of Progress Made on Management of ALPS Treated Water and the Report of the Subcommittee on Handling of ALPS treated water at TEPCO's Fukushima Daiichi Nuclear Power Station, REVIEW REPORT TO THE GOVERNMENT OF JAPAN, Vienna, Austria, 2 April 2020
<https://www.iaea.org/sites/default/files/20/04/review-report-020420.pdf>
 - 5) Annals of the International Commission on Radiological Protection (ICRP), PUBLICATION 103, The 2007 Recommendations of the International Commission on Radiological Protection, p103 (Effective dose limit for the public: 1mSv in a year)
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