

CURRENT STATUS AFTER THE NUCLEAR POWER PLANT ACCIDENT

COMMUNICATION FROM JAPAN

Revision

The following communication, received on 13 July 2021, 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 (NPS) 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 Centre of Nuclear Techniques in Food and Agriculture has evaluated that measures to monitor and respond to issues regarding radionuclide contamination of food are appropriate, that the food supply chain is controlled effectively by the relevant authorities and that the public food supply is safe. The 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 14. Given the provided evidence, there is no need to impose additional import control measures and Japan calls on Members to remove existing measures. Regarding the discharge of the ALPS (Advanced Liquid Processing System) treated water, Japan takes measures based on the international standards and international practice, fully taking into account the impact on the environment as well as the health and safety of people, and continues to receive IAEA reviews and provide relevant information to the international community.

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, and 40 have lifted them based on objective assessment. However, 14 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, 10 years after the accident at the NPS. In particular, this paper provides an update on 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 feed and agricultural input 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 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/kg, 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 items 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 items with higher concentration (targeted sampling). Testing samples have been reduced², especially in farm products, due to undetectable level of radioactivity. The results in JFY2020 are all within the Codex guideline levels considered as safe for human consumption.

2.4. Non-compliance cases are limited to seasonal wild harvests rarely consumed and traded in local niche market.³ The national laws mandate that items exceeding the stringent JMLs are recalled and disposed of, and their shipment is suspended. If there are exceeding cases in a particular item over an area, Japan suspends shipment of the item from the area. Japan's regulatory framework thus prevents the food exceeding the JMLs from neither entering the food chain nor being exported. Non compliance in food imported from Japan has not been detected by the destination countries for more than seven years⁴, while the non-compliance has been continuously detected by the European Union such as in mushrooms originated from countries affected by Chernobyl accident.⁵

2.5. 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.⁶ Both food monitoring and dietary exposure assessment provide consistent evidence which confirm effectiveness of the control system in Japan and safety of Japanese food.

2.6. The Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture stated in April 2021, "measures to monitor and respond to issues regarding radionuclide contamination of food are appropriate, that the food supply chain is controlled effectively by the relevant authorities and that the public food supply is safe".

2.7. Eleventh March marked a decade after the Great East Japan Earthquake. A footage "Food Safety and Radionuclides after March 2011" has been launched under our one-stop "Reference" website.

3 WATER MANAGEMENT AT TEPCO FUKUSHIMA DAIICHI NUCLEAR POWER STATION AND ANNOUNCEMENT OF THE BASIC POLICY ON HANDLING OF THE ALPS TREATED WATER

3.1. On 13 April 2021, Japan announced "the Basic Policy on handling of the Advanced Liquid Processing System (ALPS) treated water at TEPCO Fukushima Daiichi Nuclear Power Station (NPS)". Japan selected discharge into the sea as the method of handling of the ALPS treated water.

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

² Approximately 280 thousand in JFY 2019 and 54 thousand in JFY 2020. The monitoring guideline was revised in March 2020, and beef samples were drastically reduced. Monitoring is mainly performed at the production stage. It also includes wild harvests and products monitored for environmental risk assessment and NOT for sales.

³ Monthly data of MHLW published in JFY2020: Cs134+Cs137: 110-1,700 Bq/kg, in seasonal wild harvests, i.e. leaf buds and uncommon mushrooms (0.3%, out of around 7 thousand samples of marketed items, even by targeted sampling).

⁴ The last case of non-compliance with JML detected in Japanese food was dried mushroom (Cs134+Cs137: 167Bq/kg), detected by Hong Kong in August 2013.

⁵ Cs137: 674-2,304 Bq/kg in mushrooms (in 2020 and January-June 2021).

Source: RASFF Portal, European Commission

<https://webgate.ec.europa.eu/rasff-window/portal/?event=searchResultList>.

⁶ Results of biannual market basket surveys: Effective dose from radioactive caesium was around 0.0010mSv/year in early 2020, 1/1,000 of the intervention exemption level.

3.2. The actual discharge is subject to the approval of the Nuclear Regulation Authority and will be conducted approximately after two years from the announcement of the basic policy, in a way complying with the regulatory standards set based on international standards. To ensure the safety, the review will be conducted by the IAEA.

3.3. On 22 April 2021, the IAEA provided their assessment on the sea area monitoring results during September to December 2020 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". Japan will assess the potential impact on the marine environment prior to the actual discharge and continue monitoring after the discharge, with continuous disclosure of relevant information.

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

3.5. Japan has continuously explained the status of TEPCO Fukushima Daiichi NPS and its consideration on handling of the ALPS treated water to the international community by providing accurate information based on scientific evidence to the IAEA, holding briefing sessions and sharing monthly reports with the diplomatic missions in Tokyo, and through other means. Japan has received IAEA review missions since the accident at Fukushima Daiichi NPS, and disclosed the findings of the missions. Japan will continue such efforts.

4 CONCLUSION

4.1. 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 markets.

4.2. The joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture has evaluated that Japan's measures and response against radionuclide contamination in food are appropriate and that the food supply chain is controlled effectively, and that the public food supply is safe. Japan keeps the monitoring data and relevant information highly transparent and continues collaboration with the international organizations.

4.3. Risk of water contamination at NPS is constructively managed and there has been no detectable change in marine environment and the biota. Japan will implement the discharge of the ALPS treated water in accordance with international practice and strictly comply with regulatory standards regarding safety. Thus, the discharge cannot be a reason for imposing import measures on Japanese food.

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

References

One stop "Reference", Ministry of Agriculture, Forestry and Fisheries (MAFF), Japan
<http://www.maff.go.jp/e/export/reference.html>

Presentations

- 1) Request and justification for lifting import measures on Japanese food regarding radionuclides, Food Industry Affairs Bureau, MAFF
- 2) Announcement of the Basic Policy on handling of the ALPS treated water at TEPCO's Fukushima Daiichi Nuclear Power Station, Agency for Natural Resources and Energy, METI

Links - Japan

- 1) Information on the Great East Japan Earthquake – Food, Ministry of Health, Labour and Welfare (https://www.mhlw.go.jp/english/topics/2011eq/index_food.html)

- 2) 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>)
 - a) Briefing Session on the Basic Policy of Handling of Multi-nuclide Removal Equipment (ALPS) Treated Water at TEPCO's Fukushima Daiichi Nuclear Power Station, April 2021
(https://www.meti.go.jp/english/press/2021/0413_001.html)
 - b) ALPS treated water (including the Basic Policy)
(<https://www.meti.go.jp/english/earthquake/nuclear/decommissioning/atw.html>)
- 3) 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>)
- 4) Monitoring information of environmental radioactivity level, Nuclear Regulation Authorities -
(<https://radioactivity.nsr.go.jp/en/>)
- 5) 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

- 1) 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/>
- 2) IAEA, Fukushima Daiichi Status Updates
<https://www.iaea.org/newscenter/focus/fukushima/status-update>
 - a. IAEA assessment on aspects presented in the February 2021 report "Events and highlights on the progress related to recovery operations at TEPCO's Fukushima Daiichi Nuclear Power Station", pp. 34-35
<https://www.iaea.org/sites/default/files/21/04/events-and-highlights-february-2021.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>
- 3) 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>
- 4) 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)
https://journals.sagepub.com/doi/pdf/10.1177/ANIB_37_2-4