Request and justification for lifting the import measures on Japanese food regarding radionuclides

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Export and International Affairs Bureau
Ministry of Agriculture, Forestry and Fisheries
(MAFF) JAPAN

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農林水産省

Control of radionuclides in food production

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.

Restriction on planting of crops, in particular, rice

Measures for reduction of radionuclide contamination

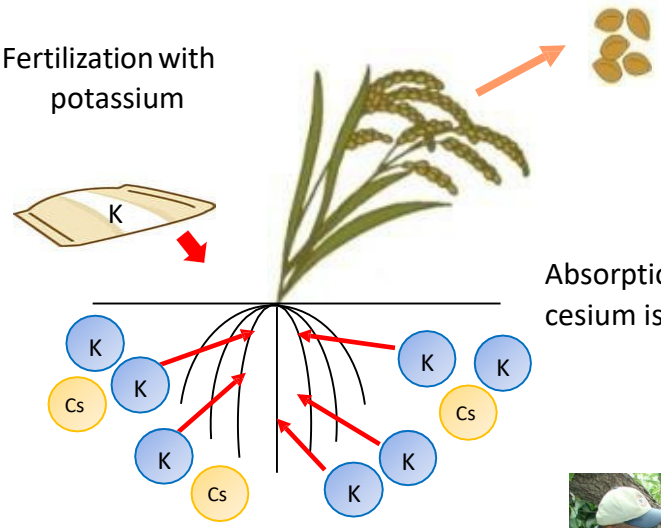
- Regulation of materials used for production of food and feed
- Decontamination of crops
- Decontamination of soils in farmland

Analysis of contamination factors

Sampling and testing

If exceed

Restriction of distribution



Absorption of radioactive cesium is blocked.

Decontamination of farmland (Removal of topsoil)

Decontamination of a pear tree (Removing the bark)

Administrative system for control of radionuclides in food

Nuclear Emergency Response Headquarters

- Set and remove restriction on food distribution and intake
- Set the guidelines of monitoring plan

Instructions

Local (prefectural) governments

- Develop plans and implement monitoring for food
- Implement shipment and intake restrictions for foodstuff

Request / Support

Reports

Ministry of Health, Labor and Welfare

Set the maximum levels of radionuclides in food

- Disclose monitoring results

Support

Cooperation

Inquiries

Findings

Ministry of Agriculture, Forestry, and Fisheries

- Regulate materials used for production of food and feed
- Support monitoring plans and provide the technical advice
- Provide technical advice for reduction of radionuclides at production sites

Food Safety Commission

- Evaluate health impact from radionuclides in food

Nuclear Regulatory Commission

Radiation Council

Control system of radionuclides in food

- ✓ Food is monitored by prefectural governments based on the maximum levels of radio-cesium (^{134}Cs+^{137}Cs) in food set by the Ministry of Health, Labour and Welfare. The items exceeding the levels are recalled and disposed of based on the Food Sanitation Act.
- ✓ Depending upon the prevalence of the incidence, the distribution is suspended for such items on an area basis, based on the Act on Special Measures Concerning Nuclear Emergency Preparedness (ASMCNEP).
- ✓ By this system, food exceeding the levels are neither distributed nor exported.

■ Establish maximum levels of radio-cesium (JMLs) in food*

Drinking water	10 Bq/kg
Milk	50 Bq/kg
Infant food(s)	50 Bq/kg
General food(s)	100 Bq/kg

*The effect of radionuclides other than radio-cesium is taken into account in maximum levels setting

【The Food Sanitation Act】

■ Monitor radionuclides in food**

- ➢ The national government establishes the guidelines on monitoring plans
- ➢ Prefectural governments conduct the monitoring

** The monitoring plans are annually revised, focusing on the items with higher concentration (targeted sampling).

【 ASMCNEP 】

【If an item exceeding the JMLs is observed】

■ Recall and dispose of the item containing radionuclides above the maximum levels

【The Food Sanitation Act】

【If cases exceeding the JMLs are observed in a particular product over an area】

■ Suspend shipment of the items from the area

【 ASMCNEP 】

Maximum levels of radio-cesium in food

		Codex	Japan
Annual radiation dose limit †		1 mSv	1 mSv
Assumed ratio of contaminated food		10 % ††	50 %
Maximum levels of radio-cesium in food	Drinking water		10 Bq/kg
	Milk		50 Bq/kg
	Infant food	1,000 Bq/kg †††	50 Bq/kg
	Other than the above food	1,000 Bq/kg †††	100 Bq/kg (General food)
		Food consumed in small quantities †††† 10,000 Bq/kg	

† The dose limit should be expressed as an effective dose of 1 mSv in a year. (ICRP, Publication103, 2007, p98)

†† The ratio of the amount of the foodstuffs per year from areas contaminated with radionuclides to the total amount produced and imported annually in the region or country under consideration(CXS 193-1995).

††† The food under the Codex guideline level should be considered as safe for human consumption (CXS 193-1995).

†††† For food consumed in small quantities that represent a small percentage of total diet and hence a small addition to the total dose, the Codex guideline Levels may be increased by a factor of 10. (CXS 193-1995).

Note: The Japanese maximum levels of radio-cesium in food are set also in consideration of other radionuclides released by the accident namely ^{90}Sr, ^{106}Ru, ^{238}Pu, ^{239}Pu, ^{240}Pu and ^{241}Pu.

Results of the monitoring on radio-cesium ($^{134}Cs+^{137}Cs$) in major items, JFY (Japanese Fiscal Year) 2022

The major items show that all are below the Codex guideline levels (GLs) considered as safe for human consumption as well as the Japanese maximum levels (JMLs).

Apr 2022–Mar 2023

	Number of samples	Samples exceeding	
		Codex GLs	JMLs
Grain	1,102	0	0
Vegetables	2,637	0	0
Fruit	416	0	0
Seafood*	7,265	0	0
Beef	5,343	0	0
Livestock products (except beef and milk)	305	0	0
Milk and infant food	1,289	0	0
Tea, drinking water and beverages	228	0	0
Cultivated mushrooms	1,602	0	0
Processed food (widely distributed)	1,678	0	0
Subtotal	21,865	0	0

* This covers majority of fish and shellfish species publicized in the statistics for aquaculture and marine catches in 2021, and the derived products. The species occupy 95 % of the total amount of catch and produce in Japan. (e-stat, https://www.e-stat.go.jp/) Rest of the species are categorized as minor items.

Legend : Table created by MAFF based on the monthly data of "Levels of radionuclides in foods tested in respective prefectures" by press released date (MHLW https://www.mhlw.go.jp/english/topics/2011eq/index_food_radioactive.html) The monitoring is conducted based on the guidelines of monitoring plan.

Results of the monitoring on radio-cesium in minor items with higher concentrations and the effective radiation dose, JFY2022

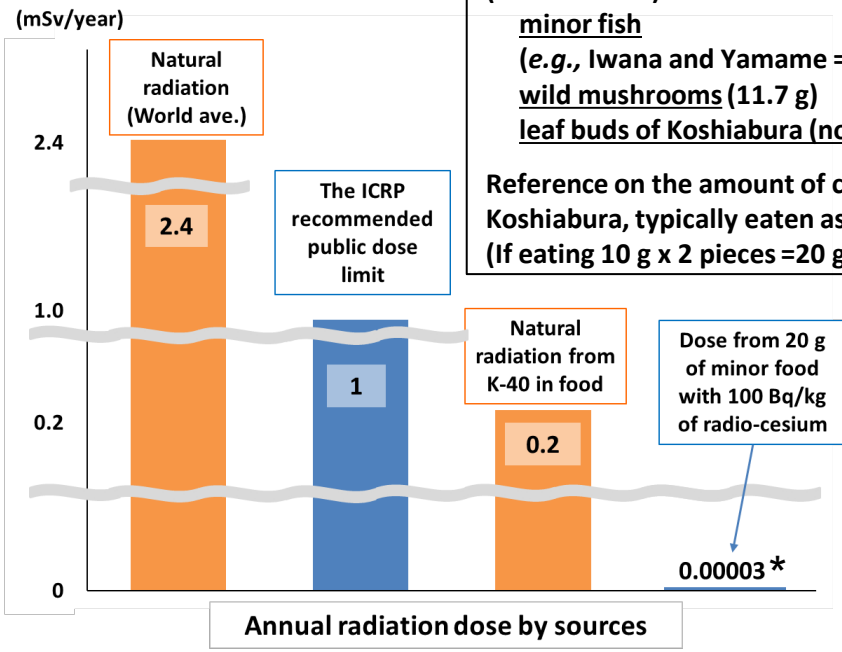
Specific wild harvests which tend to have higher concentration of radionuclides are local items consumed in small quantities, and not a commodity for export. All samples, including those from where the shipments are suspended, are below the Codex GLs considered as safe for human consumption. Recall cases based on the JMLs in marketed items are small and all are individually followed up and the shipments are suspended.

Apr 2022–Mar 2023

	Number of samples	Recall cases: Codex GLs[1)]	Recall cases: JMLs	Remarks[2)]
Seafood with minor catches	3,437	0	0	
Game meat	1,733	0	0	
Wild plants and wild mushrooms	5,684	0	11	Koshiabura (2) (120–130 Bq/kg); Bamboo shoot (1) (270 Bq/kg); mushrooms (8) (110–1,500 Bq/kg)
Processed food (local products)	291	0	0	
Subtotal	14,444			

1) A factor of 10 may be applied for food consumed in small quantities.
2) Item, (number of samples) (concentration of radio-cesium)

The radiation dose from minor items is negligible. The distribution is limited, and majority of the people have not purchased/consumed such wild harvests.



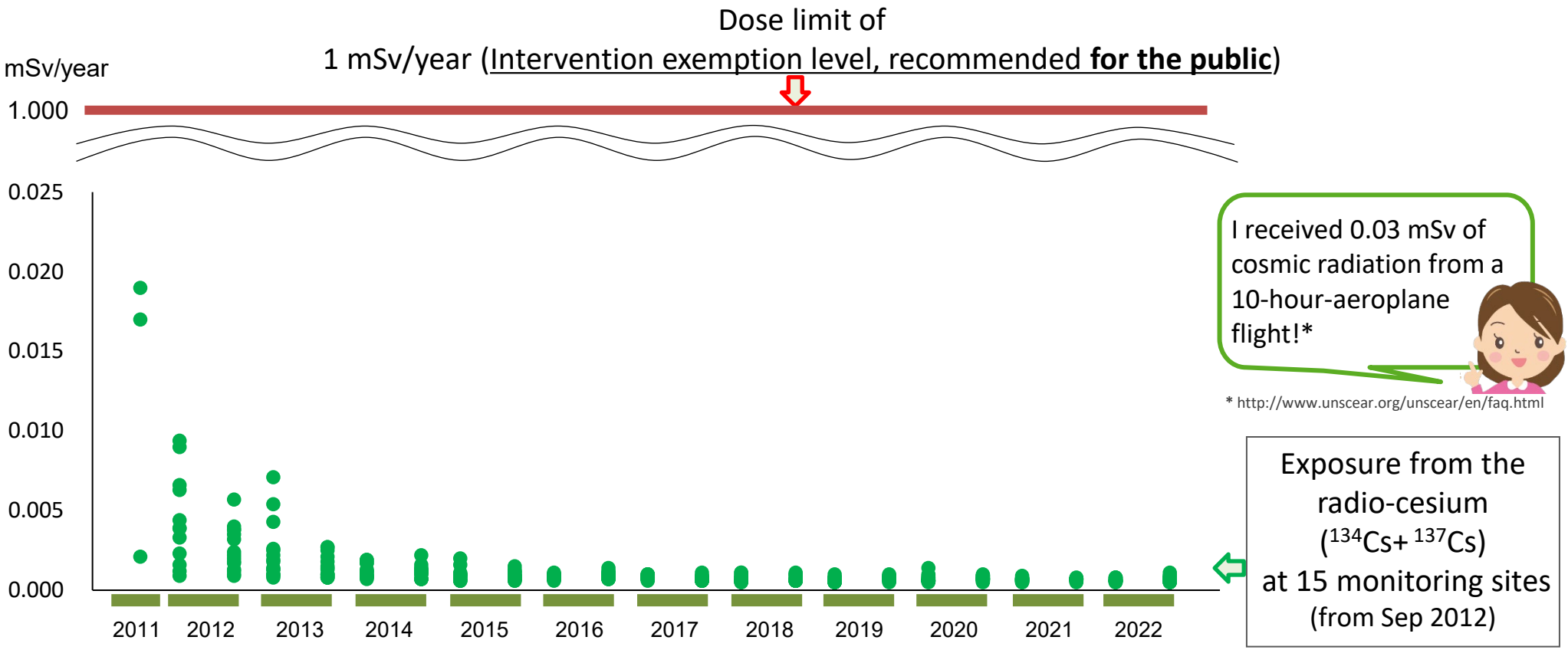
Japanese average annual consumption: (MHLW. 2010)
minor fish
(*e.g.,* Iwana and Yamame = 9.1 g)
wild mushrooms (11.7 g)
leaf buds of Koshiabura (no data)

Reference on the amount of consumption: Koshiabura, typically eaten as TEMPURA (If eating 10 g x 2 pieces =20 g)

* Ratio of Cs-134 and Cs-137 is 3:97, which is calculated from the data of the samples that exceeded the JML in 2022, Dose coefficients used for calculation are 0.000019 mSv/Bq and 0.000013 mSv/Bqeach.

Total Diet Study: Estimation of radiological annual intake from food in Japan

According to the biannual market basket surveys, the effective dose from radio-cesium in food has been estimated as far below the intervention exemption level of 1 mSv/year (0.0005–0.0011 mSv/year in 2022). Considering the share of Japanese food commodities in total intake, the effect is significantly lower for consumers in foreign countries.



Note: In the long term, the majority of radiation doses through food intake, derived from the TEPCO's Fukushima Daiichi Nuclear Power Station accident, are attributed to radio-cesium.

Source: The press release as of 30 Jun 2023. https://www.mhlw.go.jp/stf/houdou/0000205937_00020.html (In Japanese)

Monitoring results of radionuclides in Japanese food performed by importing countries/regions

Monitoring of Japanese food at the destination countries, detected non-compliance to their reference levels only soon after the accident, and even that to the Japanese maximum levels has not been detected over 10 years.

Last retrieved on 8 August 2023

Country/ region	Reference level	Monitoring period	Number of non-compliances Cs-134 Cs-137	Number of non-compliances I-131	Number of test samples	Reference Source	Reference Description *Notes in Italic by MAFF*
EU	Japanese maximum levels [1), 2)]	2011-2023	**1** (June. **2011**)	0	unknown	**RASFF:** Rapid Alert System for Food and Feed	*Non-compliance has not been found at import controls for more than 11 years. A sample which exceeded the Codex guideline level and the provisional JML[1)] was only found in green tea in June 2011 (Cs-134: 485 Bq/kg +Cs-137: 553 Bq/kg)*
Hong Kong	Codex guideline levels	Mar. 2011 – Aug. 2023	0*	**3** (Mar. **2011**)	752,986[3)] (2011-2020)	**CFS:** Daily situation update of food surveillance on food imported from Japan	"The 3 unsatisfactory samples that exceeded the Codex guideline level of I-131 were announced on 23 March 2011." ** A sample which exceeded the current JML[2)] of Cs-134 & 137, was last found in dried mushroom (167 Bq/kg) in August 2013.*
Taiwan	Taiwanese maximum levels [4)]	Mar. 2011 –Aug. 2023	0	0	213,606	**Taiwan FDA:** 日本輸入食品每日輻射檢測結果	「250個樣本被檢驗出含微量輻射，未超出我國及日本標準。*(250 samples were found to contain low levels of radiocesium not exceeding the maximum levels of both Taiwan and Japan.)*」[5)]
Korea	Korean maximum levels (≈ JMLs)	Mar. 2011 – Aug. 2023	0	0	388,097	**Ministry of Food and Drug Safety**: 일본산 수입식품 방사능검사 결과	*Non-compliance has not been found at import controls since March 2011.*

Note: The referenced Codex guideline levels are 1,000 Bq/kg for radioactive cesium (Cs-134+Cs-137) and 100 Bq/kg for radioactive iodine (I-131); EU lifted the import measures on 3 August 2023.

1) Japanese provisional maximum levels for radioactive cesium (Cs-134+Cs-137) were 200 Bq/kg for drinking water and dairy products and 500 Bq/kg for other food products by 31 March 2012.

2) Since 1 April 2012, Japan has adopted the current maximum levels of 10 Bq/kg for drinking water and tea and 50 Bq/kg for infant food and dairy products and 100 Bq/kg for other food products.

3) The monitoring results have been subsumed into the routine surveillance results from 1 January 2021, therefore the number of samples thereafter is not available.

4) Taiwanese maximum level for radioactive cesium was 370 Bq/kg by 31 March 2012. Taipei has adopted the same maximum levels of the current JMLs since then.

5) Even complying with the Taiwanese maximum levels, sampled products with any detectable level of radioactive cesium were either surrendered for disposal, shipped back or suspended for sales.

IAEA's evaluation on Japan's measures

The Joint **FAO/IAEA Center** states that 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 and that the public food supply is safe."

"…the situation regarding the safety of the food supply, fishery and agricultural production continues to remain stable. Food restrictions continue to be revised and updated as necessary in line with food monitoring results. …Based on the information that has been made available, the Joint FAO/IAEA Centre understands that ***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*** *and that* ***the public food supply is safe****."*

Source: Fukushima Daiichi Status Updates https://www.iaea.org/newscenter/focus/fukushima/status-update
IAEA assessment of 10 April 2023, based on the report 'Events and highlights on the progress related to recovery operations at TEPCO's Fukushima Daiichi Nuclear Power Station' provided by Japan in February 2023.

List of countries which lifted the import measures

Total 55 countries and regions have introduced import measures on Japanese food, notably the import bans and requirements of test certificates, following the nuclear power station accident in 2011, and nearly 90%, 48 of them have totally lifted the measures.

Month, Year	Countries
Jun. 2011	Canada, Myanmar
Jul. 2011	Serbia
Sep. 2011	Chile
Jan. 2012	Mexico
Apr. 2012	Peru
Jun. 2012	Guinea
Jul. 2012	New Zealand
Aug. 2012	Colombia
Mar. 2013	Malaysia
Apr. 2013	Ecuador
Sep. 2013	Vietnam
Jan. 2014	Iraq, Australia
May 2015	Thailand*
Nov. 2015	Bolivia
Feb. 2016	India

Month, Year	Countries
May 2016	Kuwait
Aug. 2016	Nepal
Dec. 2016	Mauritius, Iran
Apr. 2017	Qatar, Ukraine
Oct. 2017	Pakistan
Nov. 2017	Saudi Arabia
Dec. 2017	Argentina
Feb. 2018	Turkey
Jul. 2018	New Caledonia
Aug. 2018	Brazil
Dec. 2018	Oman
Mar. 2019	Bahrain
Jun. 2019	Congo DR
Oct. 2019	Brunei
Jan. 2020	Philippines

Month, Year	Countries
Jan. 2020	Philippines
Sep. 2020	Morocco
Nov. 2020	Egypt
Dec. 2020	Lebanon, UAE*
Jan. 2021	Israel
May. 2021	Singapore
Sep. 2021	U.S.A.
Jun. 2022	UK(GB)
July. 2022	Indonesia
Aug. 2023	EU
〃	Iceland
〃	Norway
〃	Switzerland
〃	Liechtenstein

* Excluding certain game meat which cannot be exported due to quarantine or other reasons.

（As of 15 August 2023）

Conclusions

1. Japan has a robust control system which prevents the distribution of food exceeding the Japanese maximum levels (JMLs), conservatively set in the safe side, throughout food supply chains.
2. Results of surveys in Japan and monitoring of imported food at destination countries indicate health risk of food produced in Japan is negligible to both the people in Japan and foreign countries.
3. The FAO/IAEA assessed that the measures and response against radionuclides contamination in food are appropriate and the food supply chain is controlled effectively.

Our proposal

- **There is no scientific rationale to maintain the import measures and Japan requests to remove them.**