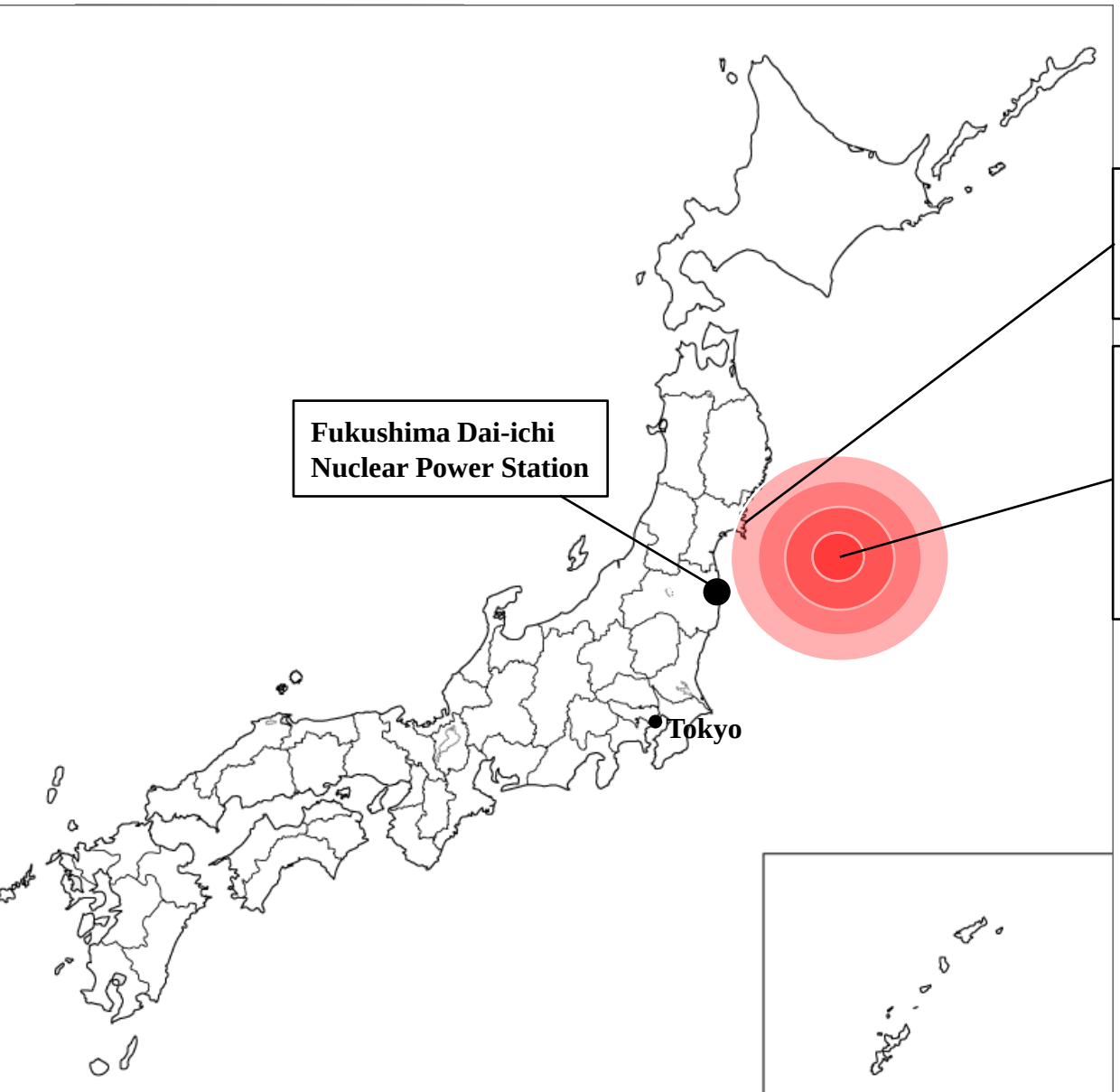
The Great East Japan Earthquake and Efforts to ensure the Safety of Food

June 30, 2011

Government of Japan

Japan Faces an Unprecedented Challenge
(Enormous Earthquake, Tsunamis and Nuclear Accident)



Tsunamis
14 meters or higher
(highest one ; estimated)

Earthquake:
Magnitude - 9.0 quake (March 11)
(After shocks)
Magnitude - 7 class 5 times
Magnitude - 6 class 76 times
Magnitude - 5 class 415 times

Damage

KYODO NEWS

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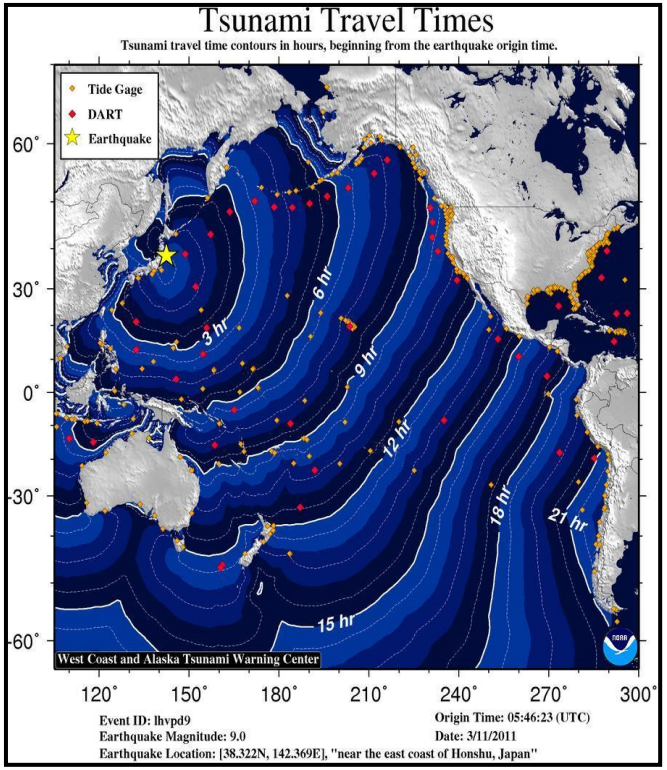
Casualties : over 28,000

- Dead : over 15,400
- Missing : over 7,400
- Injured over 5,300

Evacuees : over 124,000

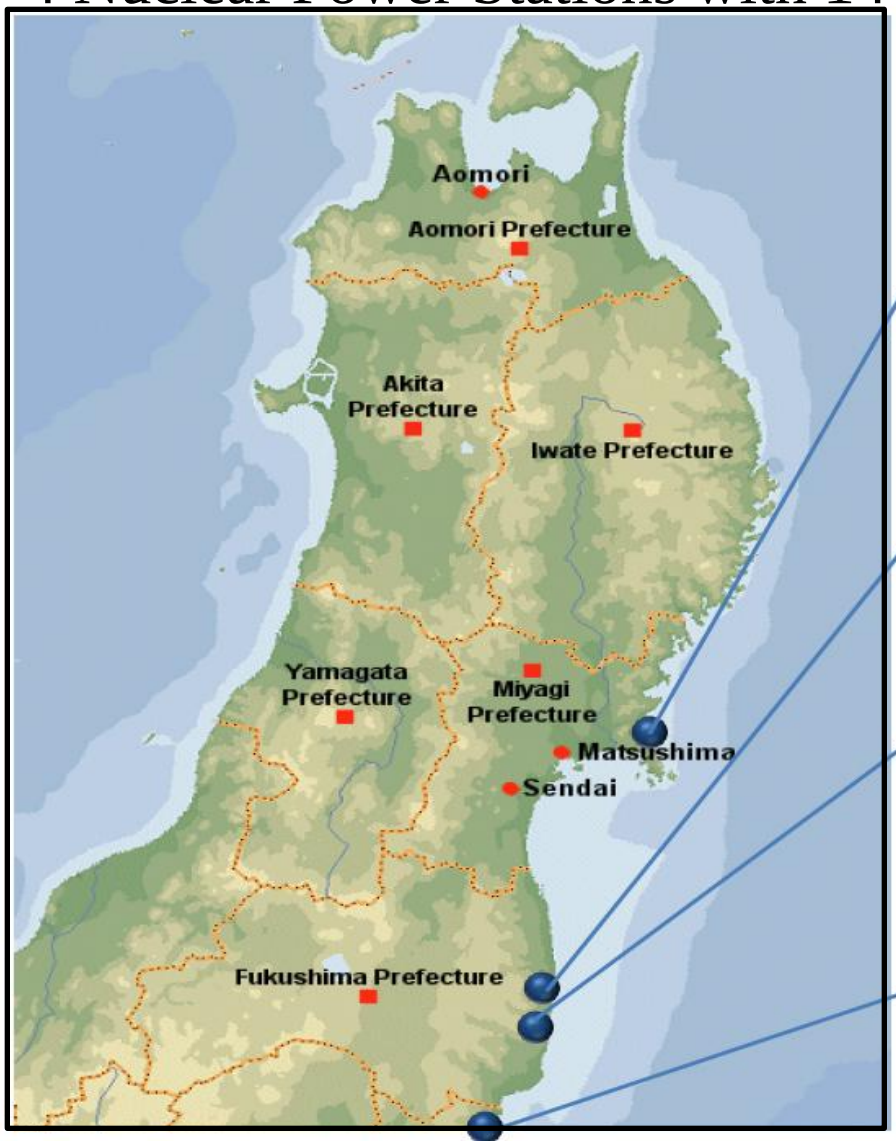
(As of June 20th)



NOAA/US Dept of Commerce, http://wcatwc.arh.noaa.gov/

Nuclear Reactors near Epicenter of the Earthquake

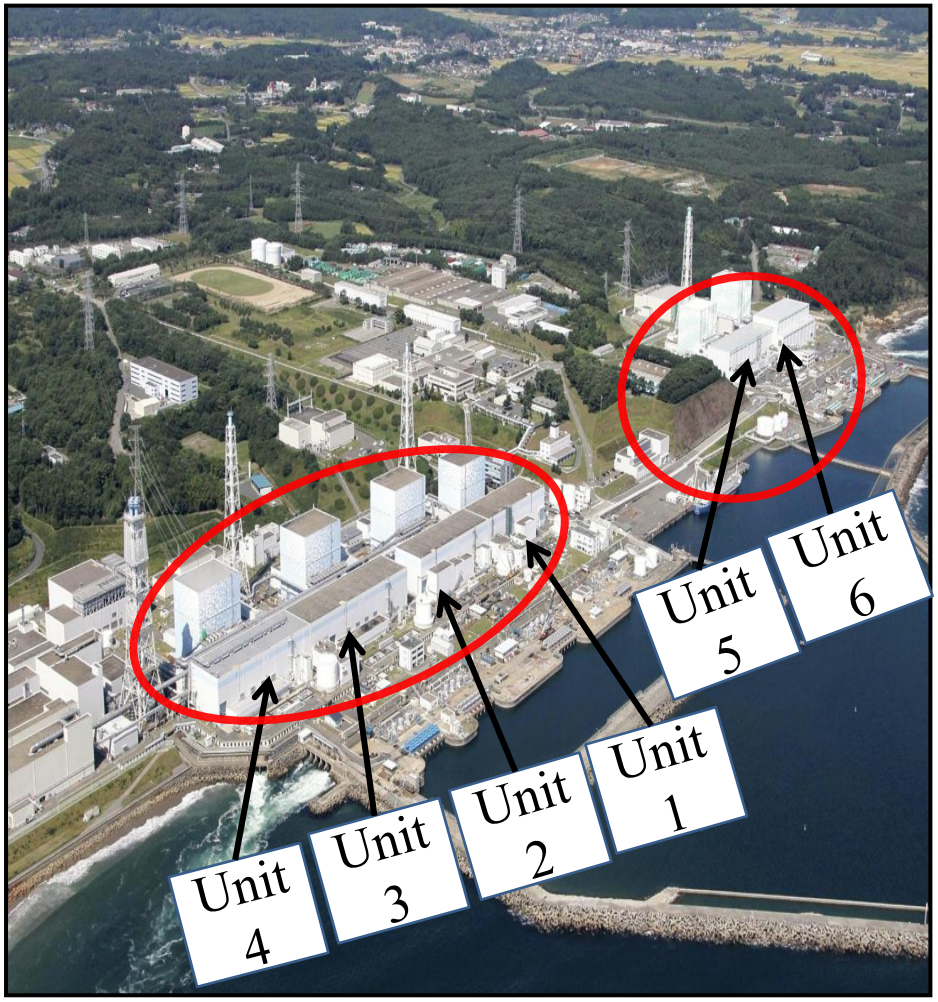
4 Nuclear Power Stations with 14 Units



		automatic shut down	cold shut down
Onagawa			
Unit 1	524 MW, 1984-	✓	✓
Unit 2	825 MW, 1995-	✓	✓
Unit 3	825 MW, 2002-	✓	✓
Fukushima Dai-ichi			
Unit 1	460 MW, 1971-	✓	
Unit 2	784 MW, 1974-	✓	
Unit 3	784 MW, 1976-	✓	
Unit 4	784 MW, 1978-	Periodical inspection	
Unit 5	784 MW, 1978-		✓
Unit 6	1,100 MW, 1979-		✓
Fukushima Dai-ni			
Unit 1	1,100 MW, 1982-	✓	✓
Unit 2	1,100 MW, 1984-	✓	✓
Unit 3	1,100 MW, 1985-	✓	✓
Unit 4	1,100 MW, 1987-	✓	✓
Tokai Dai-ni			
Unit 1	1,100 MW, 1978-	✓	✓

Fukushima Dai-ichi Nuclear Power Station

Before the Earthquake and Tsunamis

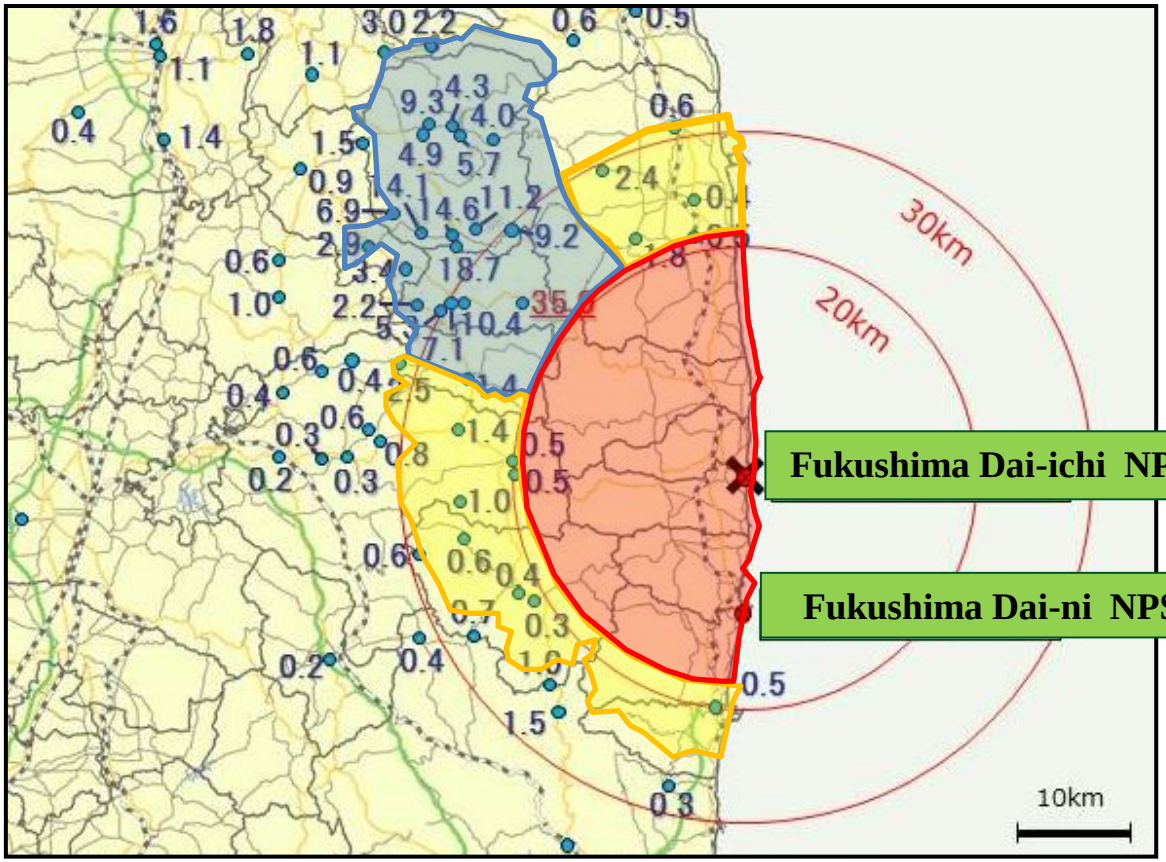


TEPCO

After the Earthquake and Tsunamis

Air Photo Service Inc (Myoko, Niigata Japan)

Fukushima Dai-ichi Nuclear Power Station



20 km radius of the plant

→ Restricted Area

Area where accumulated annual dose may reach 20 mSv

→ Deliberate Evacuation Area

Other areas between approx. 20 and 30km radius of the plant

→ Evacuation-Prepared Area

Main Challenges

1. **To cool down the reactors and contain the spread of radioactive substances (into the sea, soil and atmosphere);**
2. **To protect people's health and ensure the safety of food and products;**
3. **To ensure rigorous and intensive monitoring.**

TEPCO's Roadmap towards Restoration from the Accident

TEPCO: Tokyo Electric Power Company

Mar.11 | Apr.17 | May.17 (Revision on the plan)

Around 3 months | Around 6~9 months

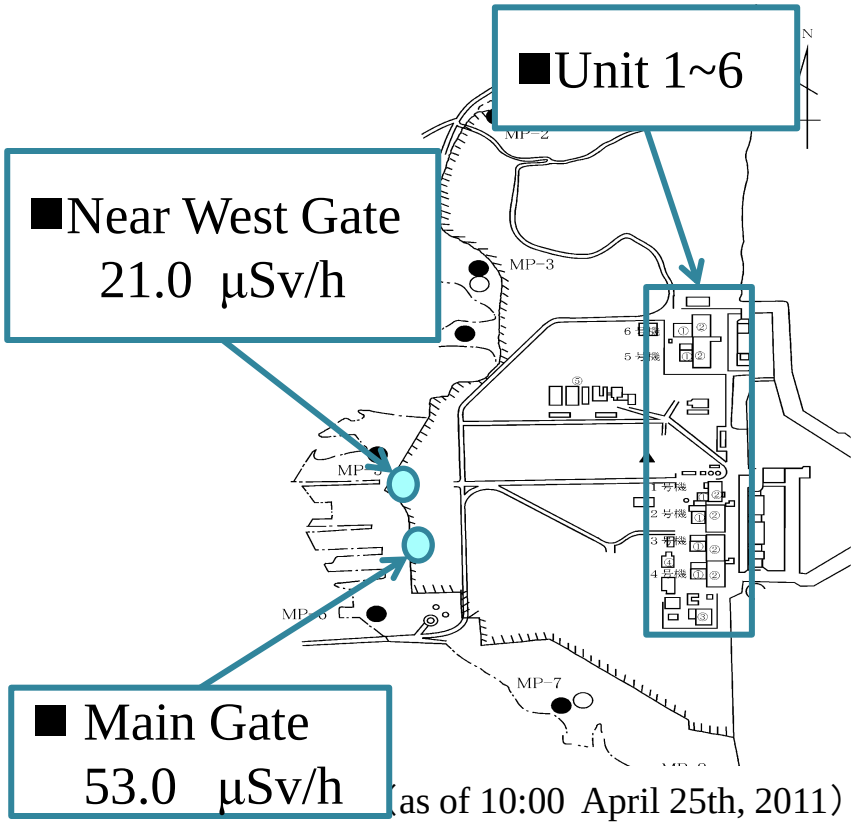
Step 1 | **Step 2**

Target	Radiation dose in steady decline	Controlling release of radioactive materials (significant reduction of dose level)
Reactors	**Stable cooling** - Cooling by minimum injection rate - Reuse of accumulated water - Nitrogen gas injection - Securing heat exchange function	**Cold shutdown** - Establishment of circulation system of cooling water - PCV flooding - Securing heat exchange function
Spent Fuel Pools	**Stable cooling** - Improvement in injection operation - Circulation cooling system	**More stable cooling** - Remote-controlled injection operation - Consideration/Installation of heat exchange function
Contaminated Water	**Secure storage place** - Installation of storage/processing facilities - Installation of storage facilities/decontamination processing	**Reduction of total amount of contaminated water** - Expansion of storage/processing facilities - Decontamination/Desalt processing - Storage/management of sludge waste etc. - Mitigation of contamination in the ocean

Environmental Radioactive Level at Fukushima Dai-ichi

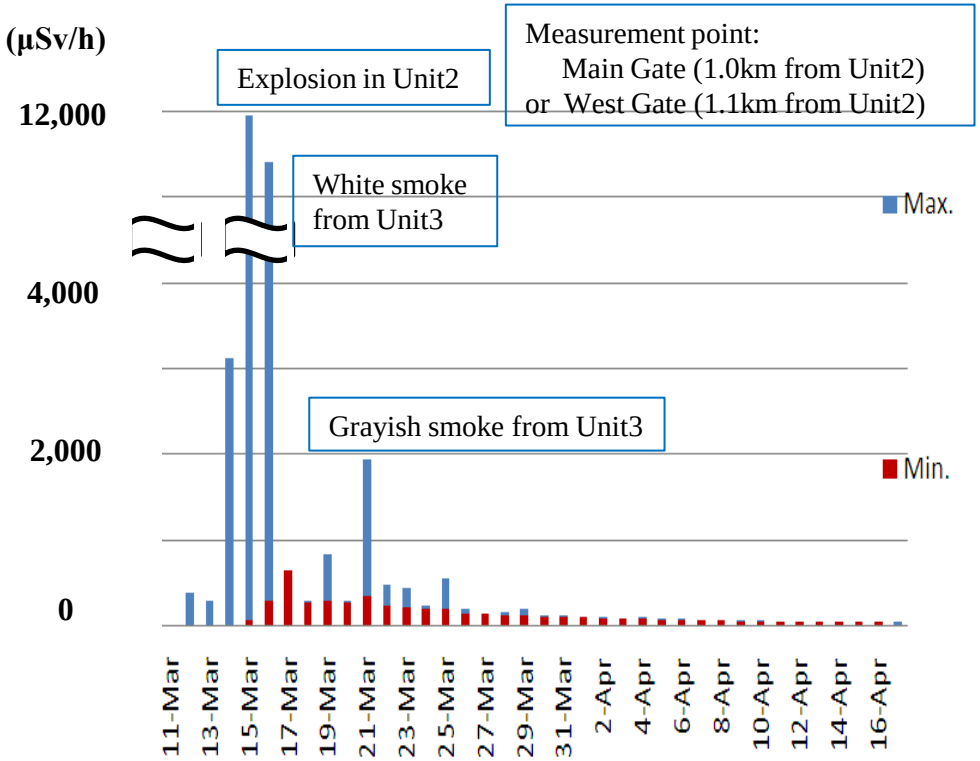
TEPCO monitors radioactivity levels every 10 minutes and releases the results immediately. Radioactivity levels rose on March 15th but have since fallen and remain low.

Monitoring Posts and the Readings at the Fukushima Dai-ichi NPS



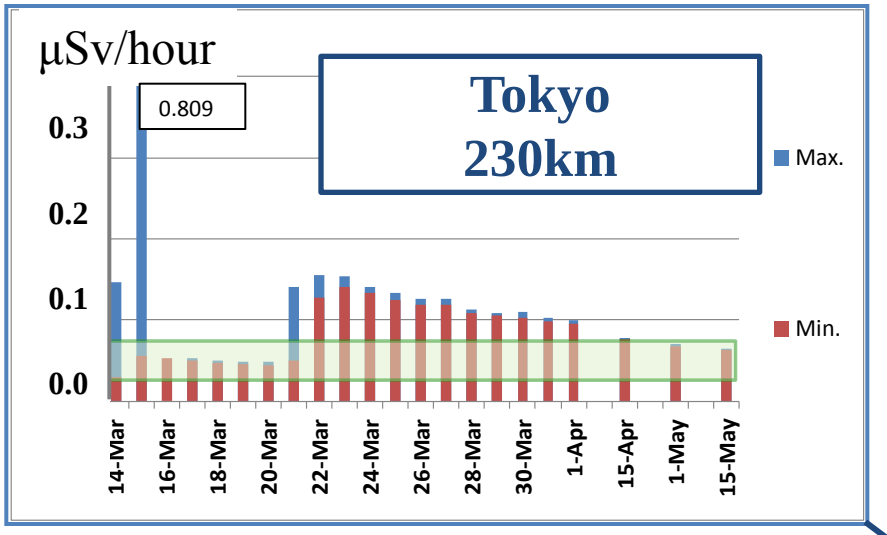
（as of 10:00 April 25th, 2011）

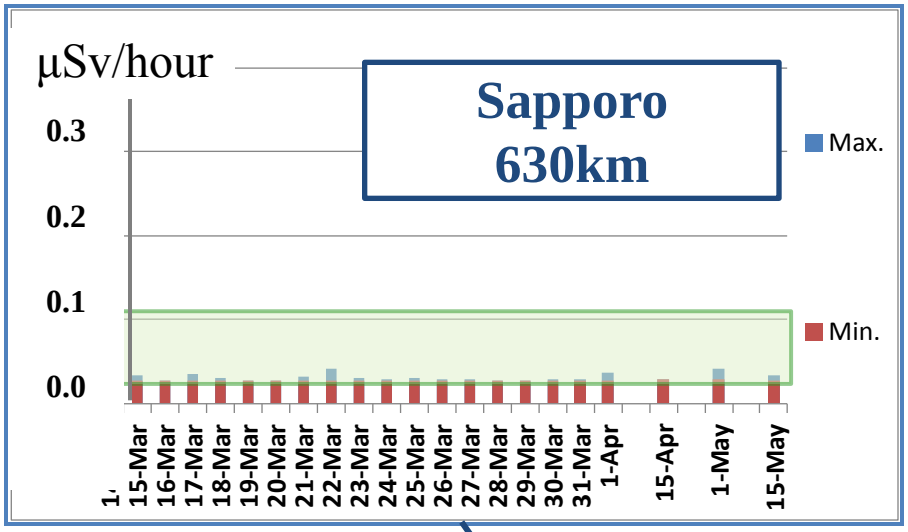
Environmental Radioactivity Level at the Fukushima Dai-ichi NPS

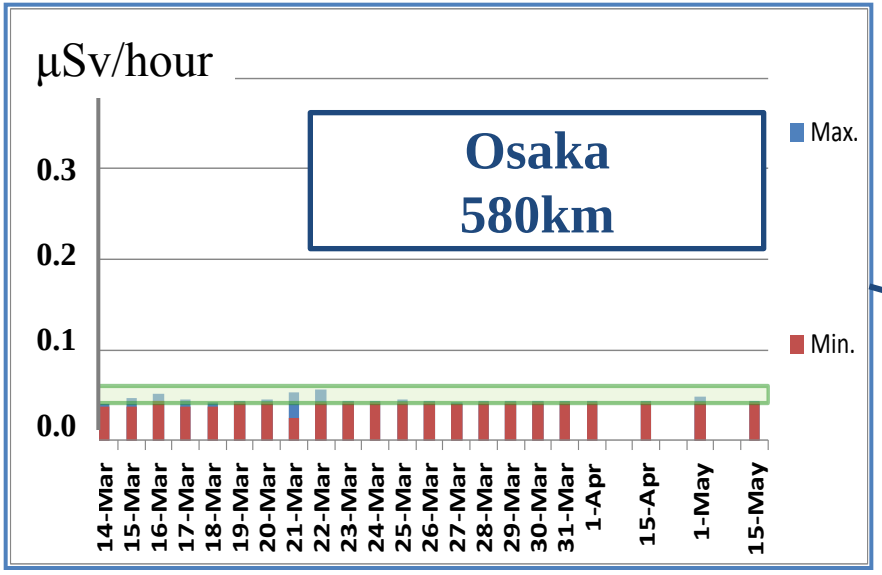


TEPCO

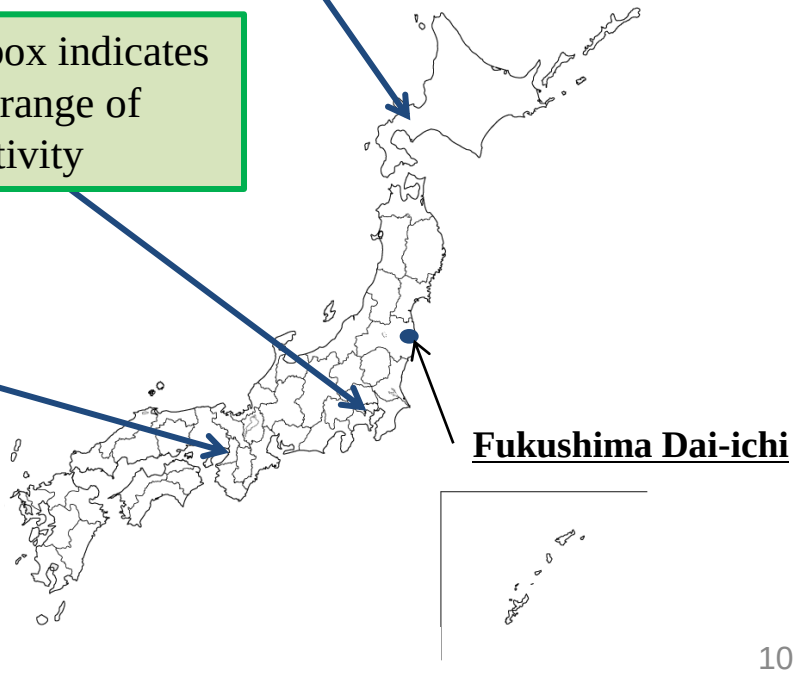
Atmospheric Readings in Tokyo, Osaka and Sapporo





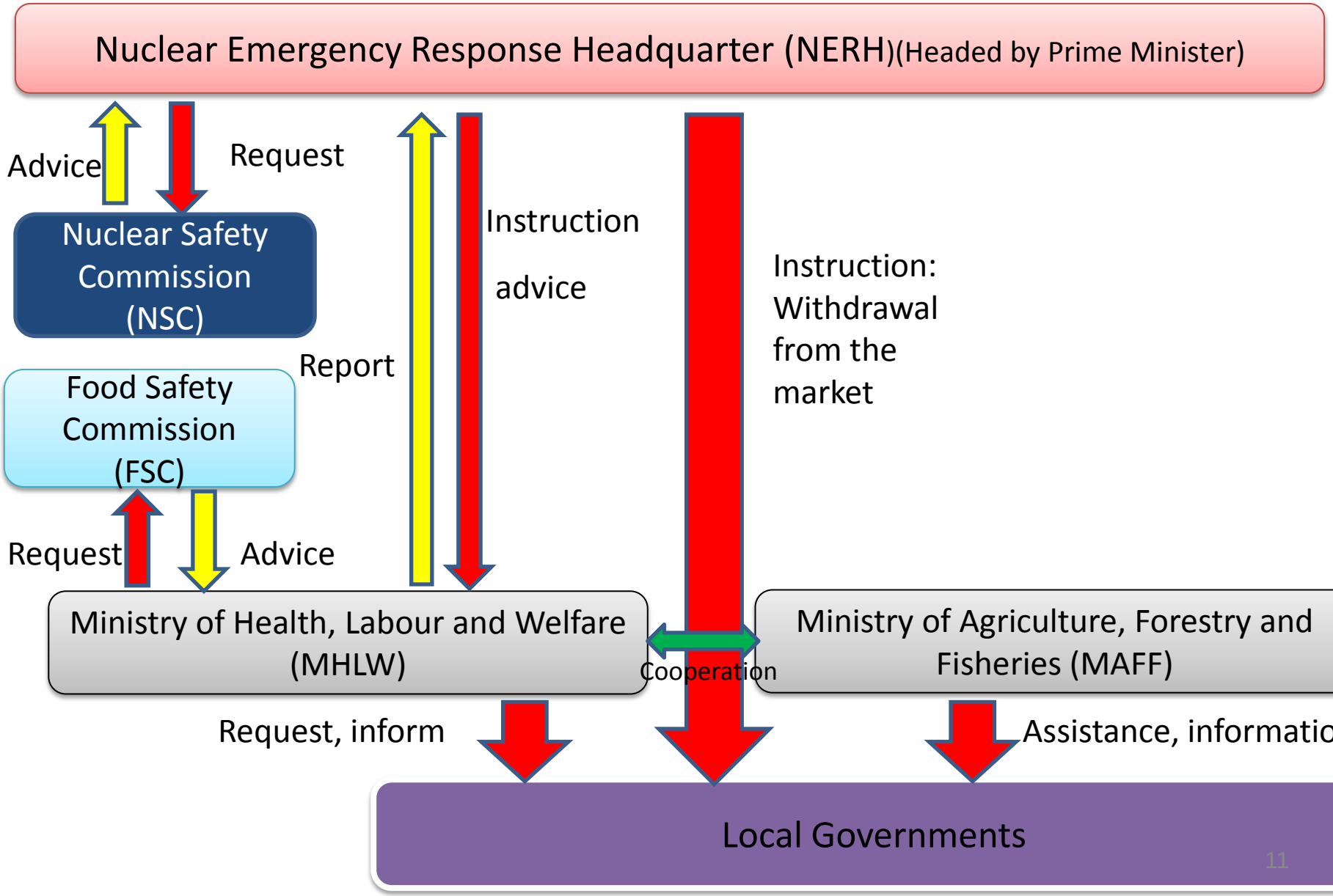


Green box indicates normal range of radioactivity



MEXT

Administrative System for Food Safety in the Situation of Nuclear Emergency



Regulation Values of Radioactive Materials in Food

In response to the accident of Fukushima Dai-ichi Nuclear Power Plant, the government of Japan has set provisional restriction values for radioactive materials in foods.

(bq/kg)

	Drinking Water	Milk and Dairy Products	Vegetables	Grain	Others
Radioactive Iodine	300	300*	2,000	—	Fishery products 2,000
Radioactive Cesium	200	200	500	500	Meat, Eggs, Fish and Others 500

*Provide guidance so that materials exceeding 100bq/kg are guided not to be used in milk supplied for use in powdered baby formula or for direct consumption.

Rigorous & Intensive Monitoring (1)

Source: INFOSAN/WHO

(June 27, 2011)

Food Category	Number of food samples tested	Number of foods positive at levels exceeding provisional regulation values
vegetable	4211	282
milk	574	23
fishery products	714	51
meat	166	0
egg	48	0
others	304	41
Total	**6017**	**397**

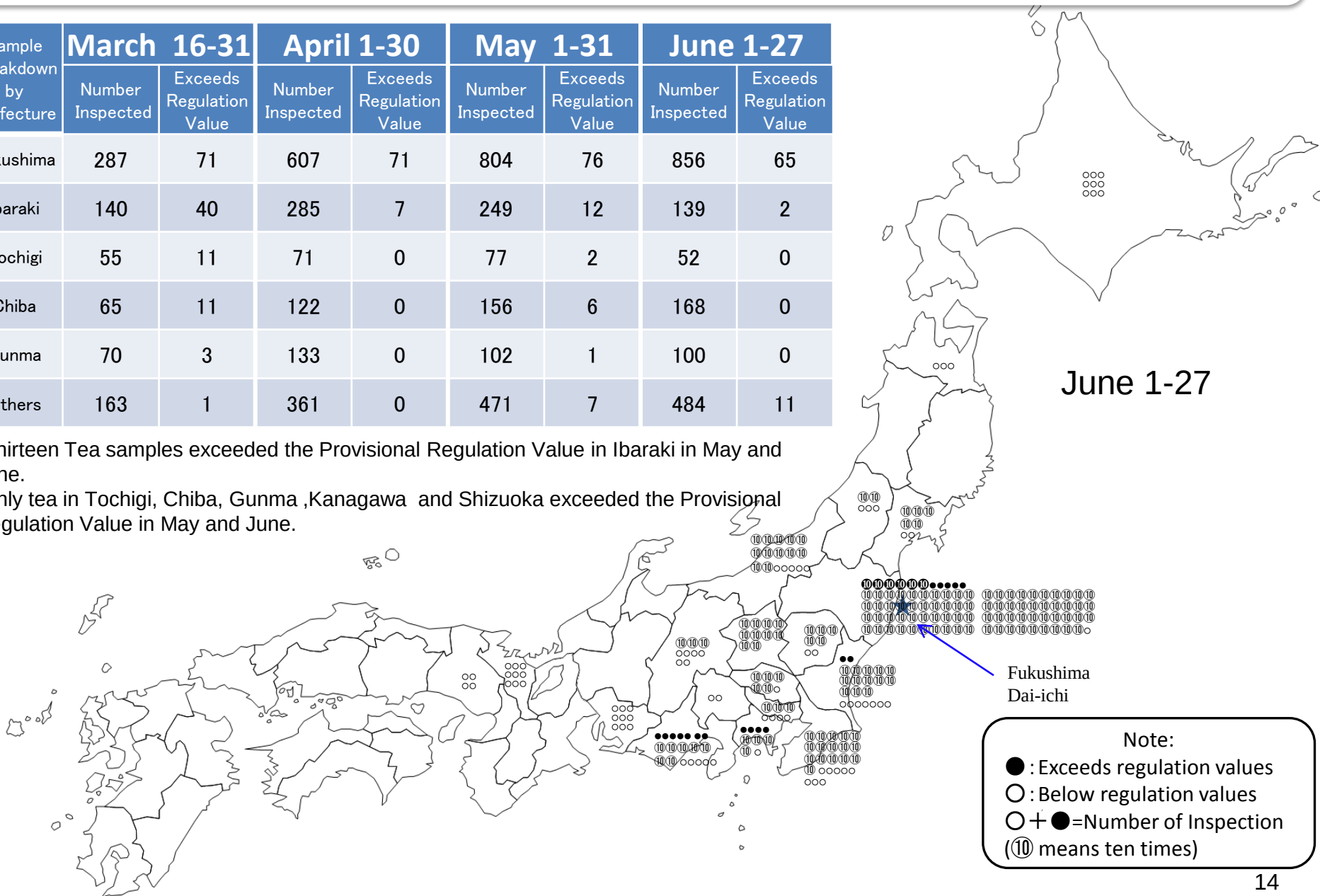
Please refer to the following URL for the details of test results.
http://www.mhlw.go.jp/english/topics/2011eq/index.html

Rigorous & Intensive Monitoring (2)

Sample Breakdown by Prefecture	March 16-31		April 1-30		May 1-31		June 1-27	
	Number Inspected	Exceeds Regulation Value	Number Inspected	Exceeds Regulation Value	Number Inspected	Exceeds Regulation Value	Number Inspected	Exceeds Regulation Value
Fukushima	287	71	607	71	804	76	856	65
Ibaraki	140	40	285	7	249	12	139	2
Tochigi	55	11	71	0	77	2	52	0
Chiba	65	11	122	0	156	6	168	0
Gunma	70	3	133	0	102	1	100	0
Others	163	1	361	0	471	7	484	11

*Thirteen Tea samples exceeded the Provisional Regulation Value in Ibaraki in May and June.

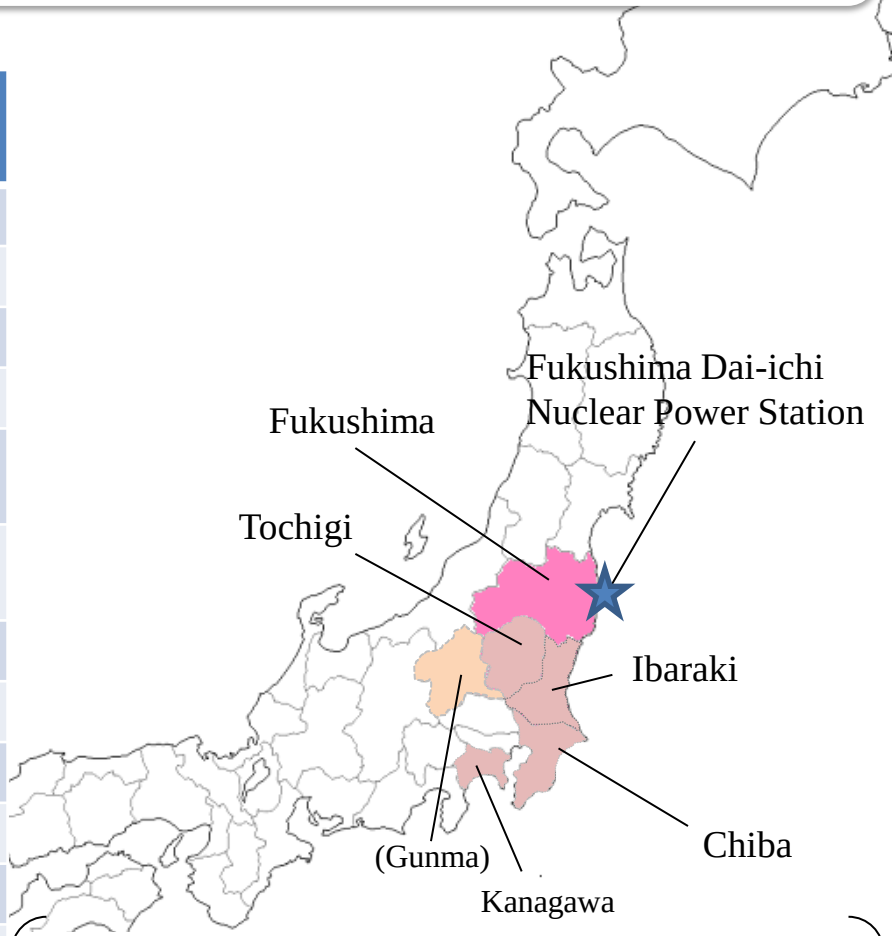
Only tea in Tochigi, Chiba, Gunma ,Kanagawa and Shizuoka exceeded the Provisional Regulation Value in May and June.



Current Situation of Restrictions of Distribution

		Fukushima prefecture	Ibaraki, Tochigi, Chiba, Kanagawa prefecture
Raw milk		○	
Non-head type leafy vegetables	Spinach	○	
	Kakina	○	
	All others	○	
Head type leafy vegetables (cabbage, etc.)		○	
Flowerhead brassicas (broccoli, cauliflower, etc.)		○	
Turnip		○	
Shiitake mushroom		○	
Bamboo shoot		○	
Japanese plum		○	
Ostrich fern (*Kogomi*)		○	
Fresh Green tea leaf			○
Japanese sandlance (fish)		○	
Japanese dace		○	
Landlocked salmon		○	

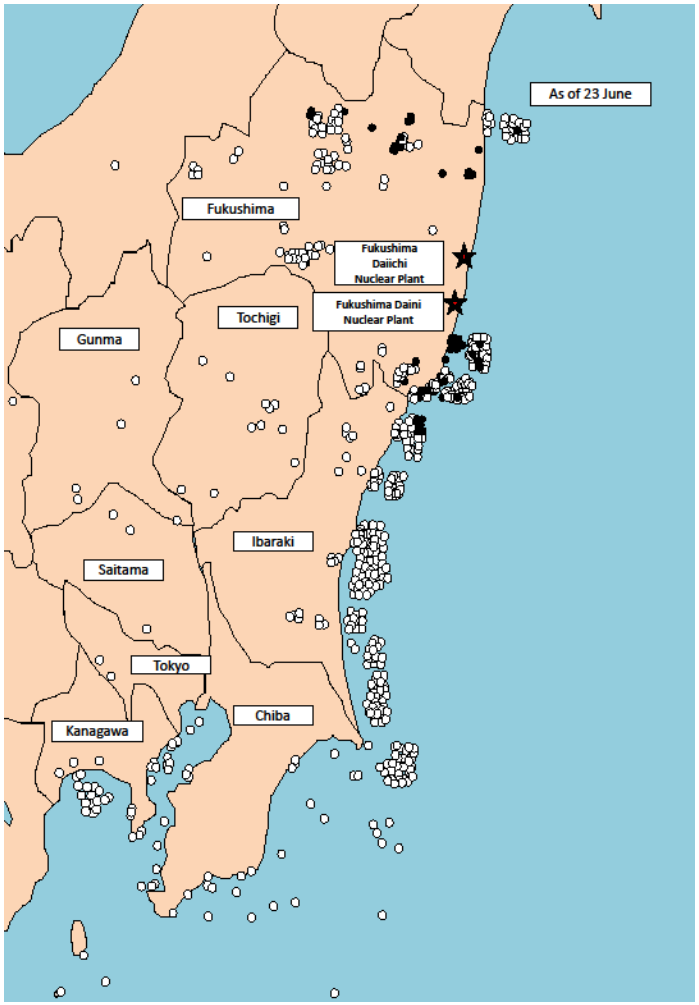
Prohibition on Japanese sandlance is applied to those caught in *the entire* prefectural sea area. Prohibition on other products in the table above is applied to those harvested in *designated regions* within the prefectures.



Note:
- Prohibition on all products harvested in Gunma prefecture has been lifted.
- Prohibition on products other than green tea leaf in Ibaraki, Tochigi, Chiba has been lifted.
- Other than the listed products, some products are being voluntarily kept out of distribution.

(e.g.) Japanese sandlance (Ibaraki pref.)
Fresh Green tea leaf (Shizuoka pref.)

Safety of Fishery Products



【As of June 23 rd】

● Samples over provisional regulatory value: 57
○ Samples below provisional regulatory value: 742

● Intensive inspections over a wide range of samples.

Inspections on radioactive substances in fishery products are conducted on a weekly basis at each major port under the cooperation between prefectural governments, the Fisheries Agency and fishing industries.

variety of samples

Ranging from coastal species to migratory species, as well as from surface species to bottom water species.

Samples which exceeded the provisional regulatory value

Japanese sand lance(juvenile), Japanese anchovy(juvenile), Ayu-sweetfish , Japanese-smelt, Wakame-seaweed, Mediterranean mussel, Hijiki-seaweed, Land-locked cherry salmon, Arame -seaweed, Japanese dace, Fat greenling, Brown hakeling, Stone flounder, Whitespotted char, Japanese mitten crab

(※Exceeding values are detected only in Fukushima Prefecture, except for Japanese sand lances in northern part of Ibaraki Prefecture as well.)

●Ensuring the safety of fishery products on the market.

Voluntary suspension of fishing will be implemented as soon as the inspection finds that the sample exceeds the provisional regulatory value. Weekly exploratory operations should be conducted in principle, and fishing operation should resume only after the levels of radioactive substances detected remain below the provisional regulatory value three times in a row. **(※)No fishery is currently conducted in Fukushima.**

●Monitoring of sea water.

Ministry of Education, Culture, Sports, Science and Technology (MEXT) has monitored the levels of radioactive substances in the seawater of coastal zone as well as offshore zone.

Foods restricted

Great Support of the International Community

Japan deeply appreciates the assistance offered from

161 countries and regions and
43 international organizations

Rescue teams were sent from 28 countries, regions and international organizations

US Navy/US Pacific Command
(Operation Tomodachi)

(As of June 24th)

Yomiuri Shimbun

“ARIGATO”

“Thank you”

˝ARIGATO˝ is a word to express appreciation.
The photograph shows the word **˝ARIGATO˝** which people affected by the Great East Japan Earthquake wrote on the shore using pine trees for the United States Armed Forces which had supported with the restoration of Sendai Airport.
˝ARIGATO˝ expresses the appreciation of the Japanese people for the support by each nation and their people.

Message from Prime Minister Naoto Kan regarding assistance received from overseas

Tuesday, March 22, 2011

I would like to express my most sincere appreciation for the condolences and assistance Japan has received from approximately 130 countries, more than 30 international organizations, and people all around the world in response to the Tohoku-Pacific Ocean Earthquake.

The rescue workers, search dogs, and nuclear power experts from various countries, as well as the human resources support from the U.S. Forces in Japan and others, assistance with food, medical supplies, blankets, and other supplies, and offers of assistance from over 670 NGOs and other organizations have all been profoundly uplifting to the Japanese people, who have come to realize acutely that “a friend in need is a friend indeed.” ...
On behalf of the Japanese people, I would like once again to express my deepest appreciation upon having received this truly tremendous outpouring of cordial assistance from around the world.

Naoto Kan
Prime Minister of Japan