

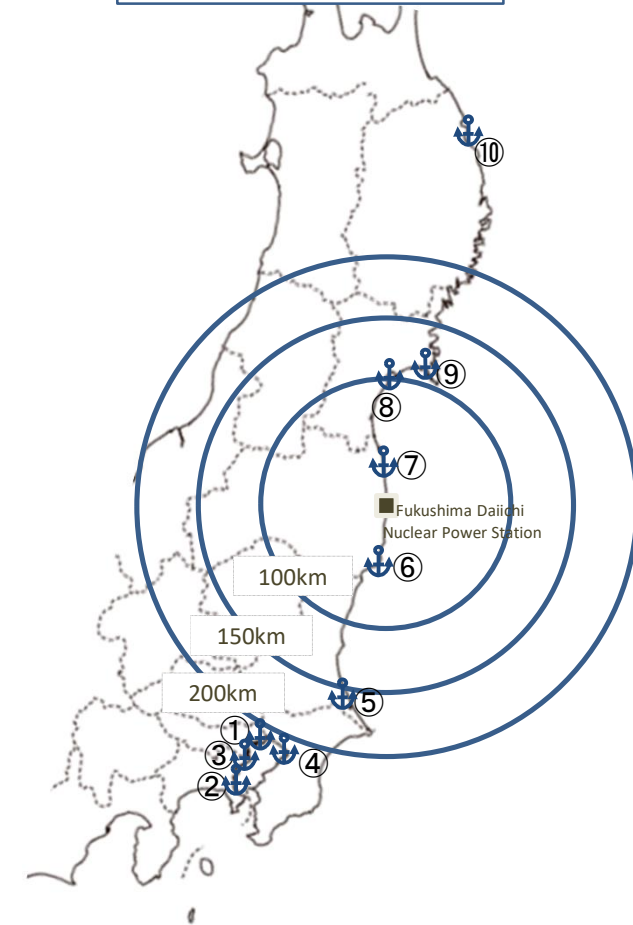
# Measurement of Radiation Dose for Air in the Ports

(the Pacific side of Northeast Japan)

		Measurement points	Date	Observed value	Annual exposure calculation
①	Port of Tokyo	Oi Wharf	2025/1/9	0.050 $\mu\text{Sv/h}$ = 0.000050 mSv/h	0.44 mSv
②	Port of Yokohama	Honmoku Wharf (BC gate)	2025/1/9	0.030 $\mu\text{Sv/h}$ = 0.000030 mSv/h	0.26 mSv
③	Port of Kawasaki	Kawasaki Environment Research Institute <4km from the port>	Measurement suspend		
④	Port of Chiba	Chiba Prefectural Environmental Research Center <9km from the port>	2025/1/22	0.027 $\mu\text{Sv/h}$ (AM:8:00) = 0.000027 mSv/h	0.24 mSv
⑤	Port of Kashima	Kamisu City Hall	2025/1/22	0.037 $\mu\text{Sv/h}$ (AM:8:00) = 0.000037 mSv/h	0.32 mSv
⑥	Port of Onahama	Aquarium Fukushima	2024/7/22	0.040 $\mu\text{Sv/h}$ (AM:8:00) = 0.000040 mSv/h	0.35 mSv
⑦	Port of Souma	No.2 Wharf	2024/7/22	0.090 $\mu\text{Sv/h}$ (AM:8:00) = 0.000090 mSv/h	0.79 mSv
⑧	Port of Sendai-shiogama	Takasago Container Terminal	2024/11/29	0.069 $\mu\text{Sv/h}$ = 0.000069 mSv/h	0.60 mSv
⑨	Port of Sendai-shiogama	Nakajima Wharf	2024/11/29	0.093 $\mu\text{Sv/h}$ = 0.000093 mSv/h	0.81 mSv
⑩	Port of Kuji	Research Institute for Environmental Sciences and Public Health	2025/1/22	0.022 $\mu\text{Sv/h}$ (AM:8:00) = 0.000022 mSv/h	0.19 mSv

[http://www.mlit.go.jp/kowan/kowan\\_fr1\\_000040.html](http://www.mlit.go.jp/kowan/kowan_fr1_000040.html)

Distance from Fukushima Daiichi Nuclear Power Station



- ①Source: Bureau of Port and Harbor Tokyo Metropolitan Government <[http://www.kouwan.metro.tokyo.jp/jishin\\_kouwankyoku\\_oshirase/measurement/](http://www.kouwan.metro.tokyo.jp/jishin_kouwankyoku_oshirase/measurement/)>
- ②Source: Yokohama Port Corporation <<http://www.yokohamaport.co.jp/radiation/>>
- ③Source: Kawasaki City <<http://www.city.kawasaki.jp/300/page/0000085880.html>>
- ④Source: Chiba Prefecture <<http://www.pref.chiba.lg.jp/taiki/h23touhoku/houshasen/monitarinpost.html>>
- ⑤Source: Nuclear Regulation Authority <<https://radioactivity.nsr.go.jp/map/ja/index.html>>
- ⑥⑦Source: Fukushima Prefecture <<https://www.pref.fukushima.lg.jp/site/portal/ps-houshasen.html>>
- ⑧⑨Source: Miyagi Prefecture <<http://www.pref.miyagi.jp/soshiki/kouwan/housyano.html>>
- ⑩Source: Iwate Prefecture <<http://www.iwate-taiki.jp/radiation/pc/index.html>>

- 1) 1 Gray/hour (Gy/hr)  $\cong$  1 Sievert /hour (Sv/hr).
- 2) 1 mili-Sievert (mSv) = 1000 micro-Sievert ( $\mu\text{Sv}$ )  
1 micro-Sievert ( $\mu\text{Sv}$ ) = 1000 nano-Sievert (nSv)
- 3) "Annual exposure calculation" is the estimation under the condition that the hourly radiation dose measurement at the measurement point is accumulated 24 hours throughout the year.
- 4) The figure in parenthesis below the measured value indicates the measurement time

According to the Ministry of Education, Culture, Sports, Science and Technology, examples of exposure level of radiation in daily life is as below.

- Chest X-ray (once) 0.05 mSv
- 1 roundtrip between Tokyo and New York by air 0.2 mSv
- Stomach X-ray (once) 0.6 mSv

According to the WHO, a person is exposed to approximately 3.0mSv/year on average.

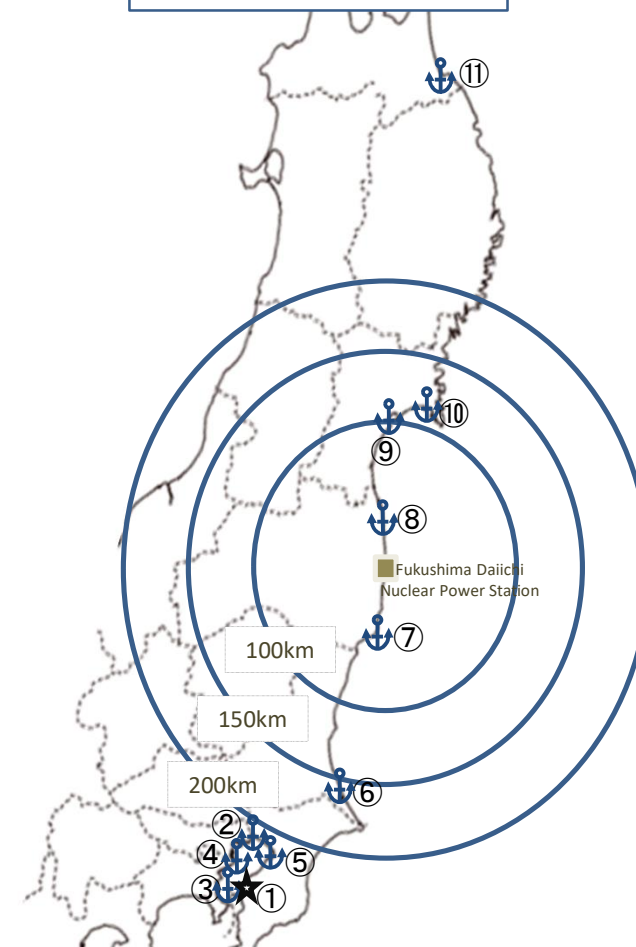
# Measurement of Radioactivity for Seawater in the Ports

(the Pacific side of Northeast Japan)

[http://www.mlit.go.jp/kowan/kowan\\_fr1\\_000040.html](http://www.mlit.go.jp/kowan/kowan_fr1_000040.html)

	Measurement Points	Date	Iodine I-131	Cesium Cs-134	Cesium Cs-137
①	Tokyo bay Uraga-Suido Traffic Route (ND = Less Than 5Bq/kg)	2025/1/7	ND	ND	ND
②	Port of Tokyo Mid point between Oi Terminal and Aomi Terminal (ND = Less Than 2-3Bq/kg)	2025/1/6	ND	ND	ND
③	Port of Yokohama Yokohama Passage/ Tsurumi Passage (ND = Less Than 1Bq/kg)	2025/1/14	ND/ND	ND/ND	ND/ND
④	Port of Kawasaki Kawasaki Passage	Measurement suspend			
⑤	Port of Chiba Chiba Passage (ND = Less Than 0.8Bq/kg)	2025/1/7	ND	ND	ND
⑥	Port of Kashima 3km off the coast of Hirai (ND = Less Than 1×10 <sup>-3</sup> Bq/kg)	2024/11/14	-	<0.68	<1.0
⑦	Port of Onahama No.4 Wharf (ND = Less Than 1Bq/kg)	2024/7/5	ND	ND	ND
	Otsurugi Wharf (ND = Less Than 1Bq/kg)	2024/7/5	ND	ND	ND
⑧	Port of Souma No.2 Wharf (ND = Less Than 1Bq/kg)	2024/7/1	ND	ND	ND
⑨	Port of Sendai-shiogama Takasago Container Terminal (ND = Less Than 1Bq/kg)	2024/11/13	ND	ND	ND
⑩	Port of Sendai-shiogama Nakajima Wharf (ND = Less Than 1Bq/kg)	2024/11/13	ND	ND	ND
⑪	Port of Hachinohe Hattaro Area (in the port)	End of March 2019			

Distance from Fukushima Daiichi Nuclear Power Station



- ①Source: Kanto Regional Development Bureau, MLIT <<https://www.pa.ktr.mlit.go.jp/kyoku/radiation/index.htm>>      ND=Not Detected、LTD=Less Than Detectable  
 ②Source: Bureau of Port and Harbor, Tokyo Metropolitan Government  
 <[http://www.kouwan.metro.tokyo.jp/jishin\\_kouwankyoku\\_oshirase/measurement/](http://www.kouwan.metro.tokyo.jp/jishin_kouwankyoku_oshirase/measurement/)>  
 ③Source: Yokohama Port Corporation <<http://www.yokohamaport.co.jp/radiation/#air2/>>  
 ④Source: Yokohama Port Corporation <<http://www.city.kawasaki.jp/580/page/0000031724.html>>  
 ⑤Source: Chiba Prefecture <<http://www.pref.chiba.lg.jp/kouwan/houshasen/h23sokuteikekka.html>>  
 ⑥Source: Nuclear Regulation Authority <<https://radioactivity.nsr.go.jp/ja/list/349/list-1.html>>  
 ⑦⑧Source: Fukushima Prefecture <<https://www.pref.fukushima.lg.jp/site/portal/ps-houshasen.html>>  
 ⑨⑩Source: Miyagi Prefecture <<http://www.pref.miyagi.jp/soshiki/kouwan/housyano.html#kaisui>>  
 ⑪Source: Aomori Prefecture <<http://www.pref.aomori.lg.jp/soshiki/kendo/kowan/housya.html>>

1) Sample is collected from surface of the sea

## [Reference]

- Standard value under the Food Sanitation Act of Japan (enforced on April 1st, 2012) is shown as follows;
  - Drinking water; under 10Bq (becquerel) /1kg water
  - ※Bq (becquerel) is defined as the activity of a quantity of radioactive material.
  - ※The sum total of target radioactive materials (Cesium 134, Cesium 137, Strontium 90, Plutonium, Ruthenium 106).