

NRA presentation

Sea Area Monitoring regarding ALPS treated water

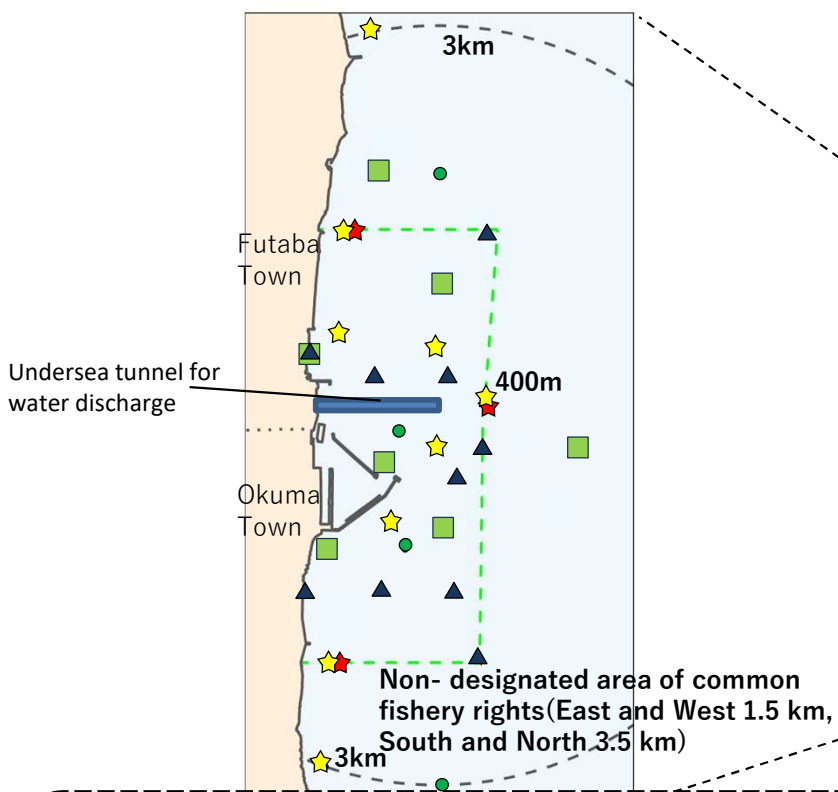
IMAI Toshihiro

Nuclear Regulation Authority JAPAN

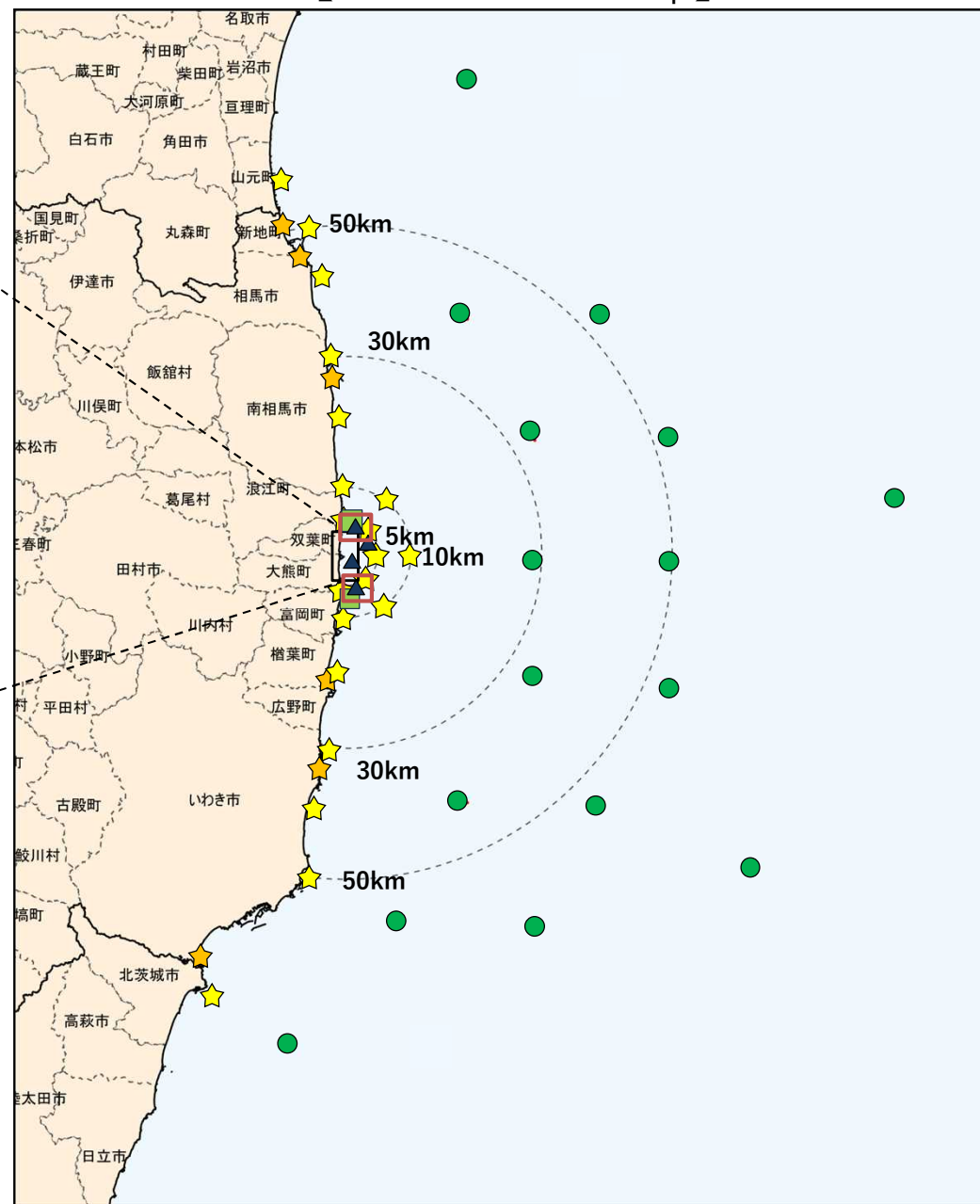
26 April 2024

Sea Area Monitoring (Map)

【Enlarged map (3 km radius)】



【Broader area map】



< Legend >

【MOE】

- ★ : Sampling points for tritium in seawater
- ★ : Sampling points for 7 major radionuclides, other related radionuclides
- ★ : Sampling points for tritium at beaches

Rapid analysis is conducted at some points of

In addition, monitoring of fish (on the boundary of common fishery rights area) and seaweed (at Ukedo and Tomioka fishing ports) are also conducted.

【NRA】

- : Sampling points for tritium in seawater

【FAJ】

- : Sampling points for tritium rapid analysis in fishery products

【Fukushima Pref】

- : Sampling points for tritium in seawater

【TEPCO】

- ▲ : Main sampling points for tritium in seawater

Sea Area Monitoring (As of 17th, April 2024)



水産庁



TEPCO

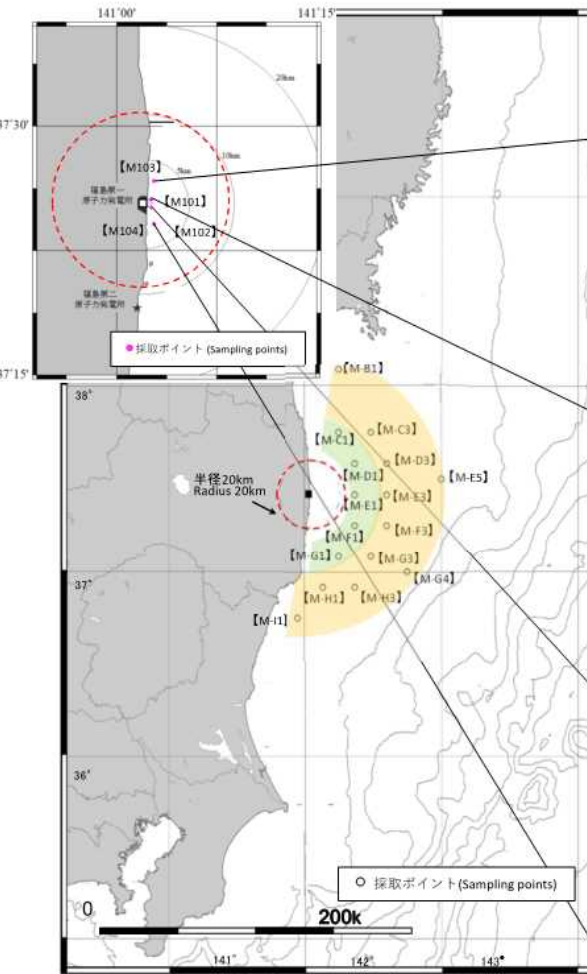
	MOE (Ministry of the Environment)	NRA (Nuclear Regulation Authority)	FAJ (Fisheries Agency, Japan)	Fukushima Pref	TEPCO (Tokyo Electric Power Company Holdings)
Sample	Seawater	Seawater	Fish	Seawater	Seawater
Frequency	○ One time during the discharge/ Twice during the discharge— One time a month during the suspension ● Every 3 months	● Every month - Every 3 months	○ Four times a week during the discharge— One time a week during the suspension ● 200 samples / year	○ Every week during the discharge/ One time a month during the suspension ● Every month	○ Daily - Every month △ Three times a month ● Every month
Number of sampling points	○ 20 points / 3 points ● 29 points	● 20 points	○ 2 points ● Pacific side of the eastern Japan	○ 9 points ● 9 points	○ 14 points △ 16 points ● 36 points
Detection limit	○ 10 Bq/L ● 0.1 Bq/L	● 0.1 Bq/L	○ 10 Bq/kg fresh ● 0.4 Bq/kg fresh	○ 10 Bq/L ● 0.1 Bq/L	○ 10 Bq/L △ 0.4 Bq/L ● 0.1 Bq/L
Analytical result	○ below DL ● below DL - 5.0Bq/L	● below DL - 1.1Bq/L	○ below DL ● below DL	○ below DL ● below DL-1.6 Bq/L	○ below DL-22 Bq/L △ below DL-14 Bq/L ● below DL-12 Bq/L
Official Website	https://shorisui-monitoring.env.go.jp/en/	https://radioactivity.nra.go.jp/en/results#sec-10	https://www.jfa.maff.go.jp/e/inspection/index.html	https://www.pref.fukushima.lg.jp/site/port-al/moni-k.html	https://www.tepco.co.jp/decommission/progress/watertreatment/

In addition, tritium and some other nuclides in seawater, sea sediment and marine biota are measured regularly. 3

海水中トリチウム濃度の推移

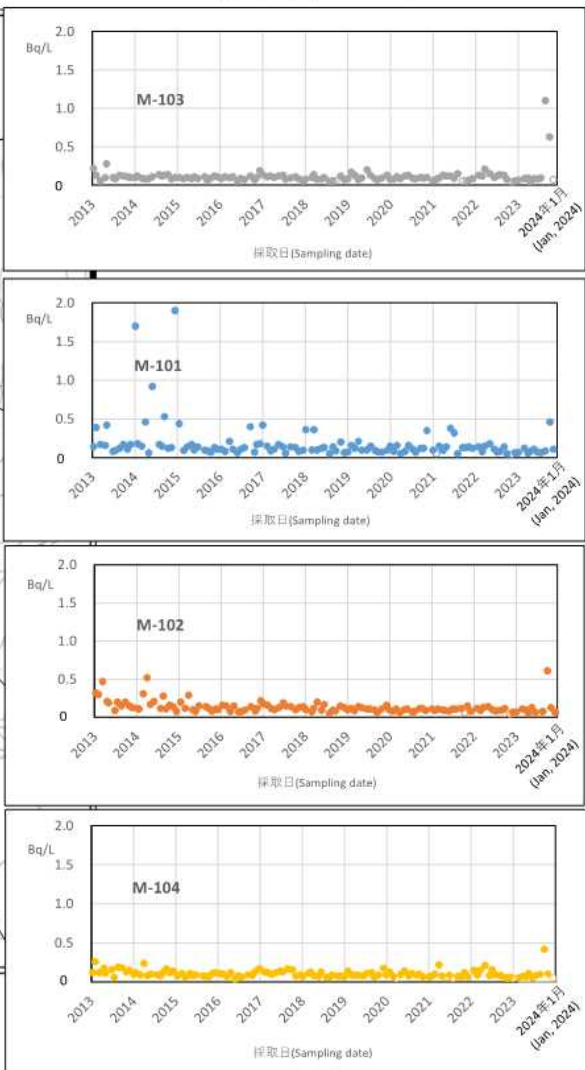
Concentration ranges of Tritium in sea-water near of Fukushima Daiichi NPP

近傍海域 (～3km)



福島第一発電所近傍における海水採取場所
Seawater sampling points near of Fukushima Dai-ichi NPP

* 図中の■は東京電力ホールディングス株式会社福島第一原子力発電所を示す。
* The mark ■ indicates the location of Fukushima Dai-ichi NPP.

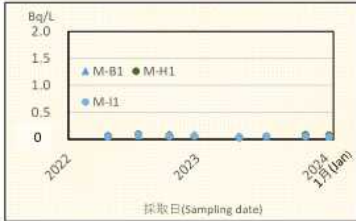
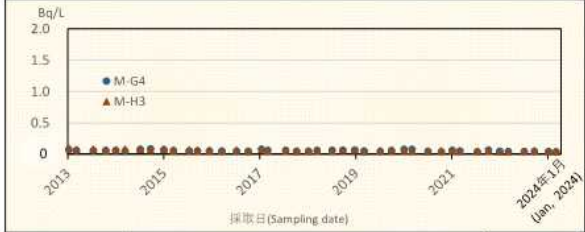
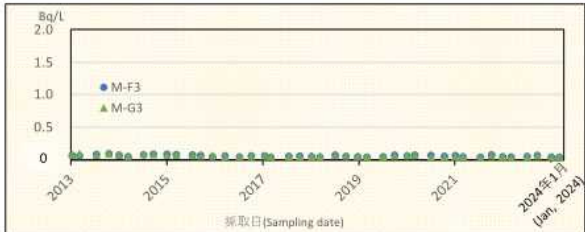
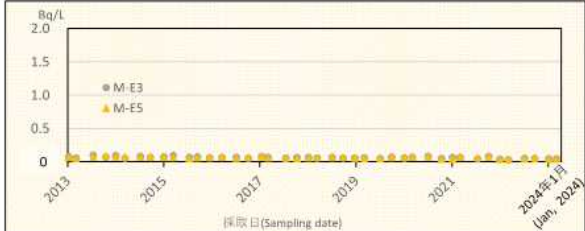
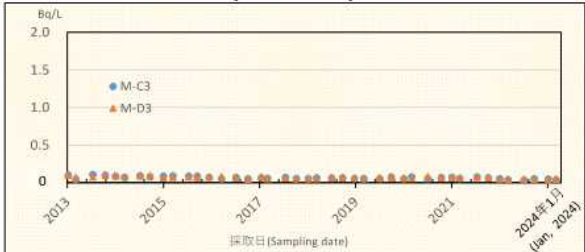
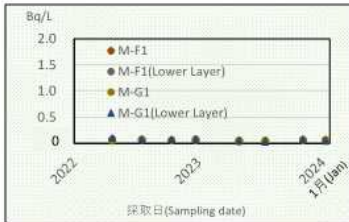
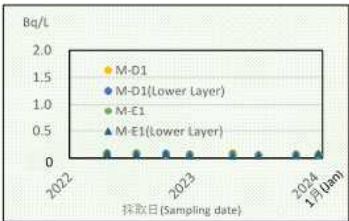
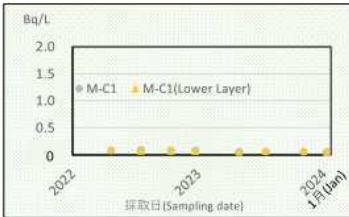


※ NDは白抜きとし検出下限値を表示 ※ An open circle shows the detection limit for the case where tritium was not detected.

沖合海域(概ね30km～90km)

(50 km～)

(～50 km)



Interlaboratory Comparison conducted jointly with the IAEA

- The IAEA has conducted **Inter-Laboratory Comparison (ILC)** as an effort **to improve the international credibility and transparency of Sea Area Monitoring data**.
ILC: The IAEA and Japan have organized annual joint sampling, and each analytical laboratory has individually conducted analyses to compare and evaluate the results.
- IAEA Marine Environment Laboratories and the Government of Japan (and related organizations) have also collaborated on monitoring of the surrounding seas around the TEPCO's Fukushima Daiichi NPS, focusing on the ILC. (Phase 1: 2014-2016, Phase 2: 2017-June 2021, Phase 3: July 2021-June 2023, Phase 4: July 2023-June 2024).
- The IAEA has also conducted a separate ILC since 2022 to corroborate the results of Sea Area Monitoring in Japan **as part of the IAEA Review of Safety Related Aspects of Handling ALPS Treated Water** at TEPCO's FDNPS.
- From 7 - 14 Nov, 2022, in addition to experts from the IAEA Marine Environment Laboratories, ones from analytical laboratories in Finland and Republic of Korea, which are members of ALMERA (Analytical Laboratories for the Measurement of Environmental Radioactivity), also visited Japan to confirm sample collection and pretreatment from the viewpoint of further improving transparency in this project.
In the IAEA report 2022 published in January 2024, **the IAEA highly evaluated the continued high accuracy and competence of Japanese analytical laboratories that have been participating in the Comprehensive Radiation Monitoring Plan**.
- ※ **IAEA ILC Report : https://www.iaea.org/sites/default/files/1st_ilc_marine_monitoring.pdf**
- From 16 -23 Oct, 2023, experts from the IAEA Marine Environment Laboratories as well as ones from analytical laboratories in Canada, China, and Republic of Korea also visited Japan to conduct marine samples collection and confirmation of pretreatment.

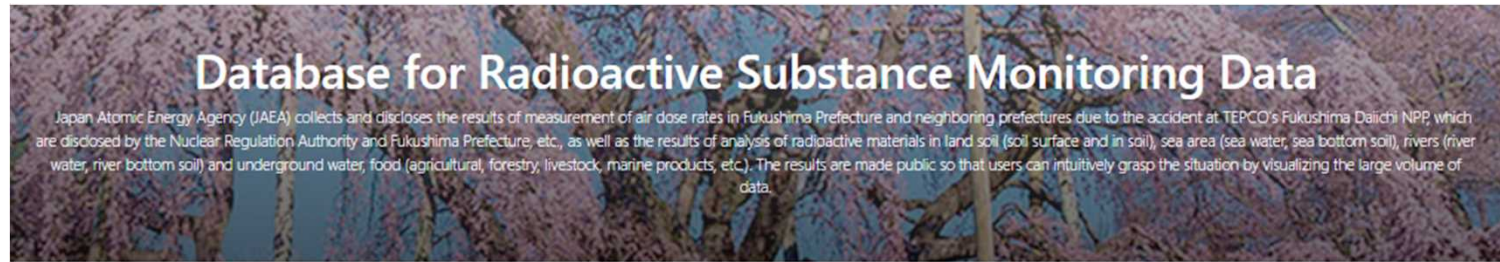
Seawater sampling



Members (16th Oct, 2023)



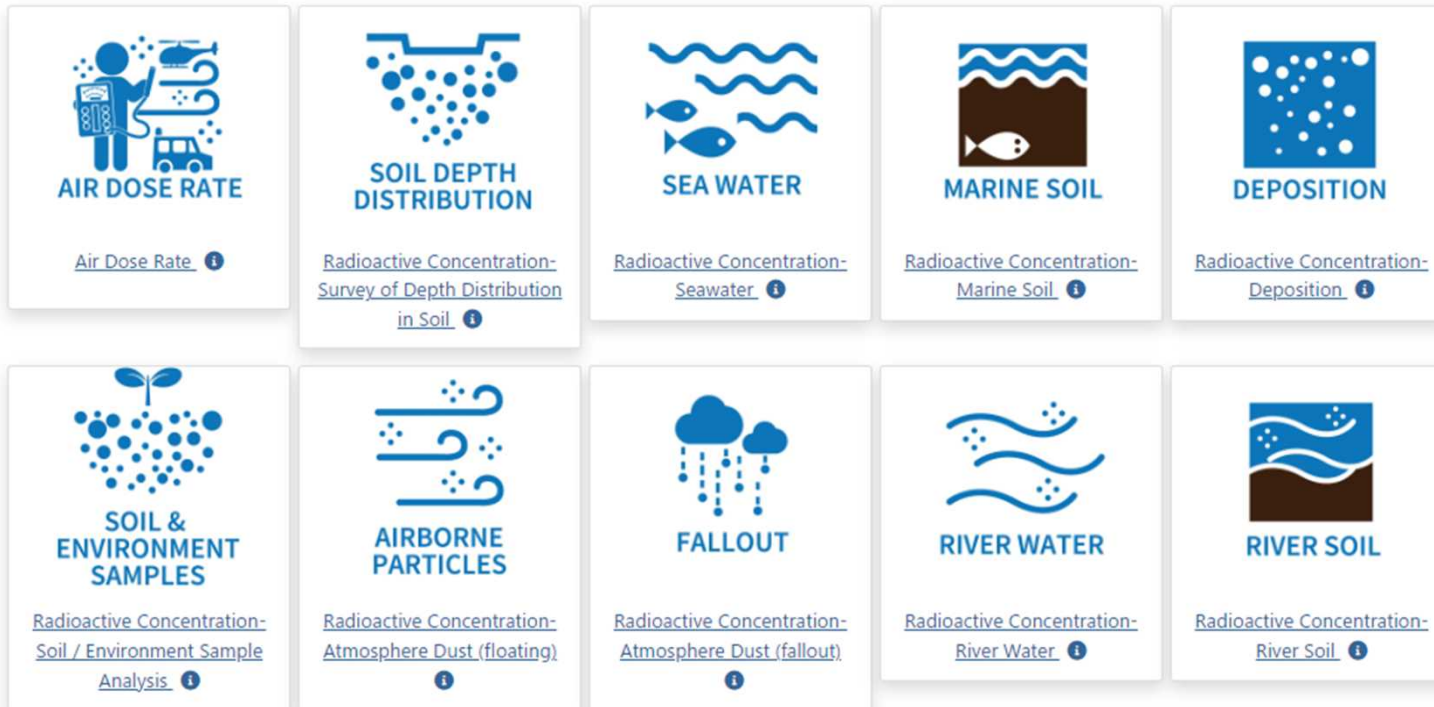
Database for Radioactive Substance Monitoring Data(EMDB)



Information:

We have maintained the system in 29 March. Please delete the cache of your browser and reload it.

It may take longer time to display airborne surveys due to the large number of the registered data.



URL: <https://emdb.jaea.go.jp/emdb/>