

NRA presentation

Sea Area Monitoring regarding ALPS treated water

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Sea Area Monitoring regarding ALPS treated water

- Sea Area Monitoring was conducted by MOE, NRA, FAJ, Fukushima Pref and TEPCO, and they independently collected seawater/marine biota samples, respectively and analyzed their samples.
- The latest analytical results as of 22 Oct are as follows:
- Tritium concentration in Sea Area Monitoring has been confirmed to be sufficiently low level(*), and there is no impact on people and the environment.

*The maximum value after discharge was 22 Bq/L (collected on 21 Oct) at the TEPCO sampling point (T-0-1A) closest to discharge outlet (about 200m).

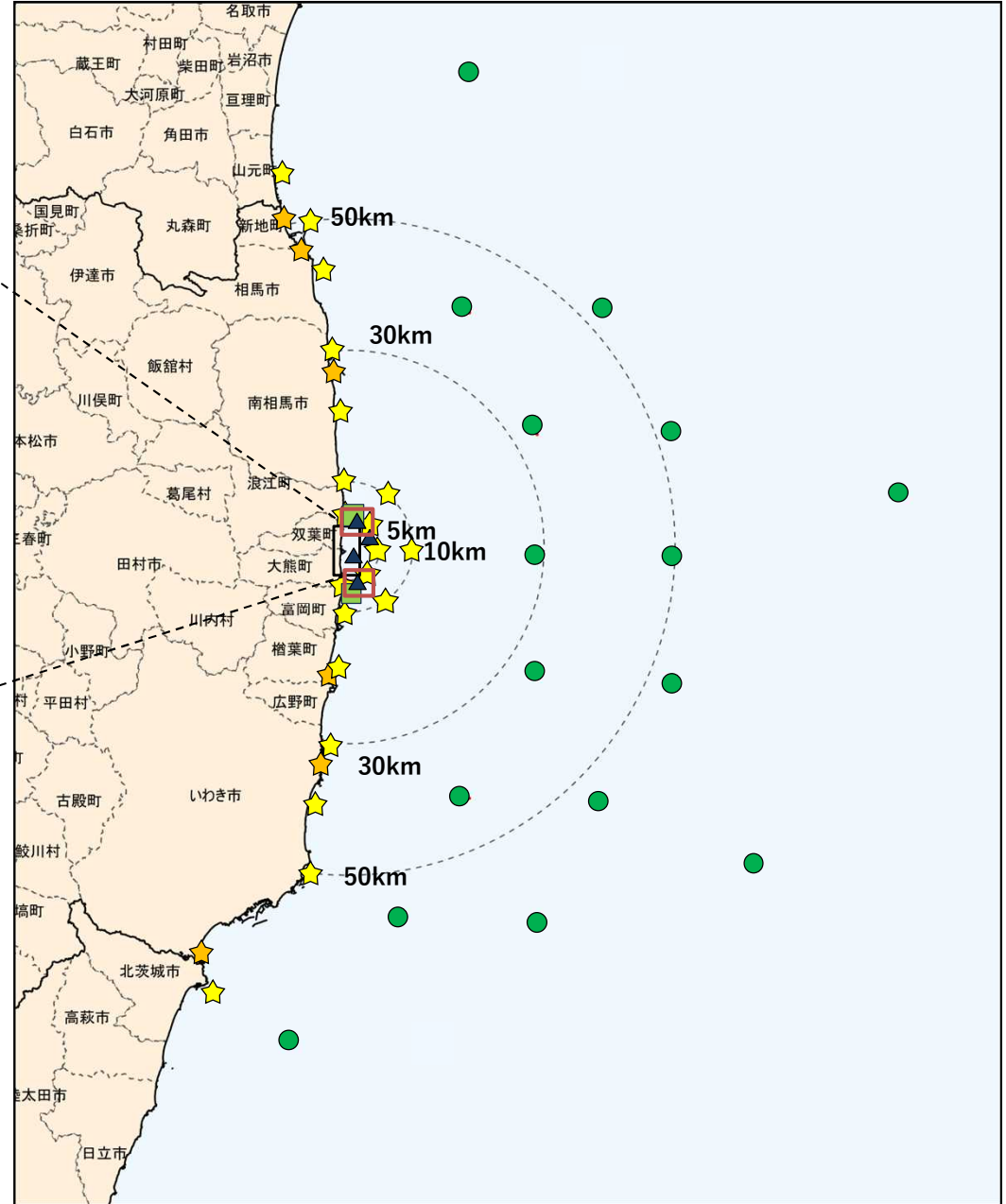
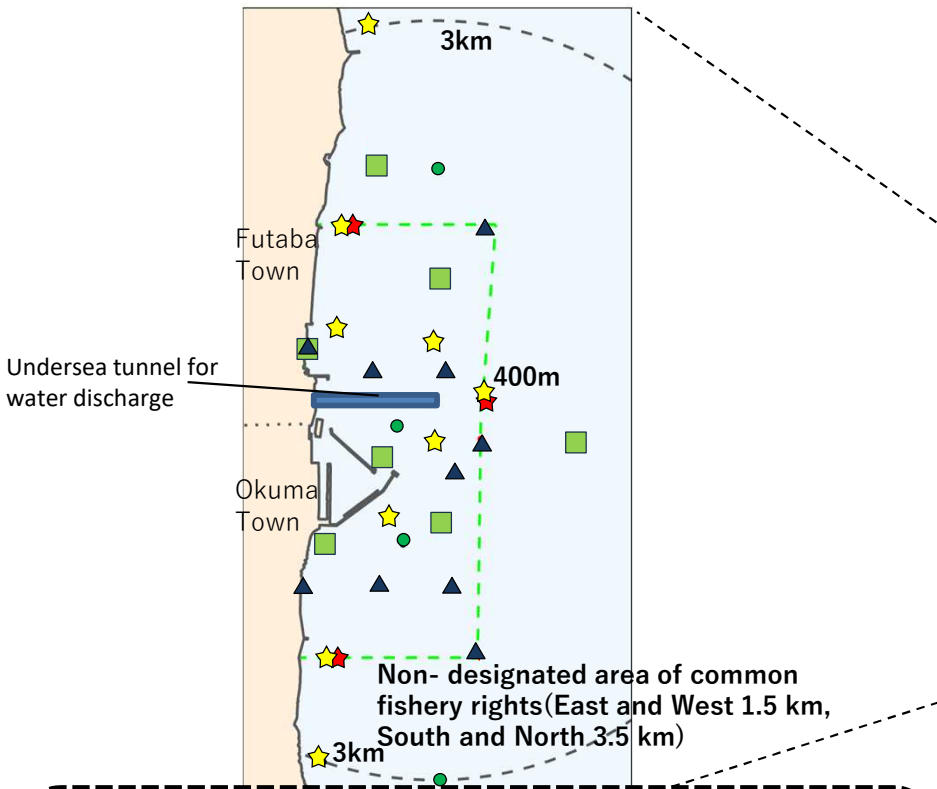
-The precise analysis (Detection Limit : 0.1 Bq/L) conducted by NRA has already been carried out on 1 Sep and 6 Oct at 4 points in the coastal sea area, and sampling at 16 offshore sites is planned for around this Nov.

	NRA	MOE	FAJ	Fukushima Pref	TEPCO	
Sample	Seawater	Seawater	Fish	Seawater	Seawater	
Frequency	Every month (nearby)	Every week	Daily from August to September/ 4 days a week from October	Every week	Daily	Every week
Number of samples per a time	4 points (nearby)	11 points	2 samples	9 points	10 points	10 points
Detection limit	0.1Bq/L	10Bq/L	10Bq/kg · Fresh	10Bq/L	10Bq/L	0.4Bq/L
Latest analytical result	○3 points : 0.066~0.097Bq/L ○Other 1 points : below DL (1 Sep, Sample collection)	All data: below DL (12,13 Oct, Sample collection)	All data: below DL (19 Oct, Sample collection)	All data: below DL (12 Oct, Sample collection)	○1 points : 16Bq/L ○Other 9 points : below DL (22 Oct, Sample collection)	○6 points : 0.68~1.1Bq/L ○Other 4 points : under analysis (4 Sep, Sample collection)
Official Website	https://radioactivity.nra.go.jp/en/list/205/list-1.html	https://shorisui-monitoring.env.go.jp/	https://www.jfa.aff.go.jp/j/housyanou/kekka.html	https://www.pref.fukushima.lg.jp/site/portal/monik.html	https://www.tepco.co.jp/decommission/progress/watertreatment/	

Sea Area Monitoring regarding ALPS treated water

【Enlarged map (3 km radius)】

【Broader area map】



< Legend >

【MOE】

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

Rapid analysis is conducted at 11 points selected from ★
(The 11 points are selected and analyzed in rotation.)

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

【TEPCO】

- ▲ : Main sampling points for tritium in seawater

【Fukushima Pref】

- : Sampling points for tritium in seawater

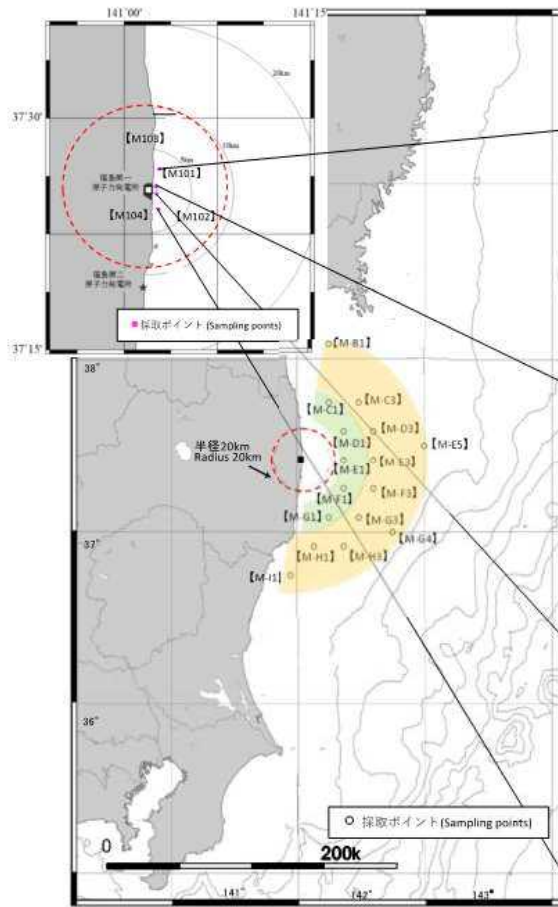
【FAJ】

- : Sampling points for tritium rapid analysis in fishery products

海水中トリチウム濃度の推移

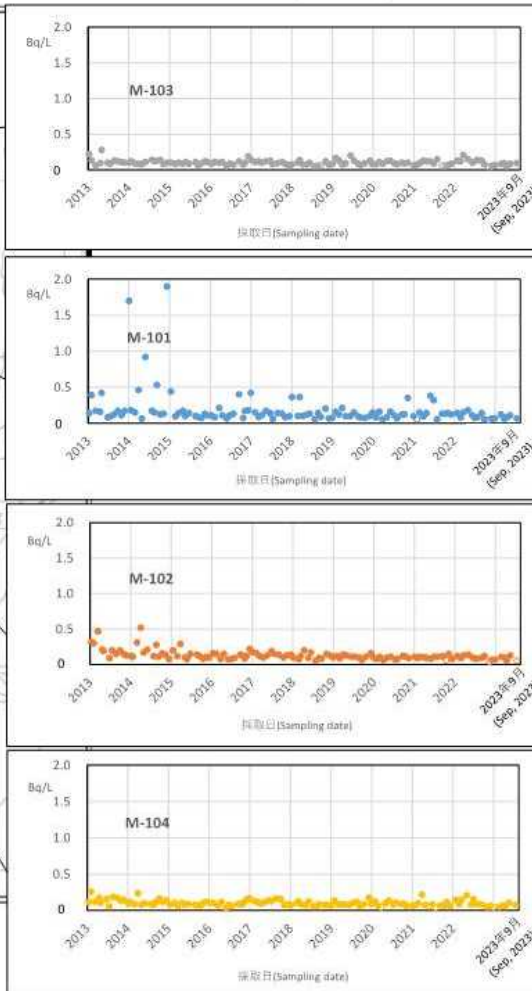
Concentration ranges of Tritium in sea-water near of Fukushima Daiichi NPP

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.



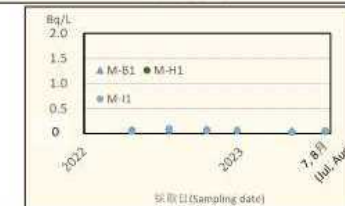
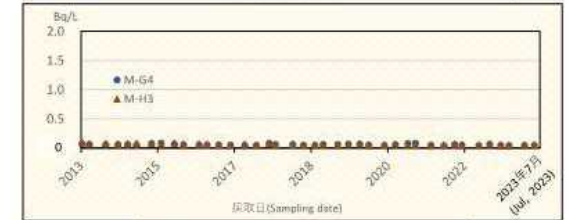
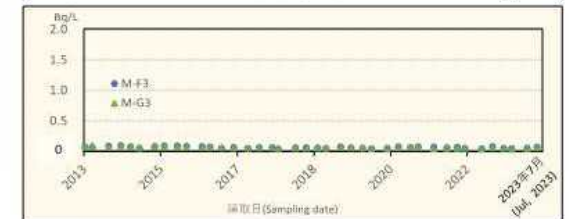
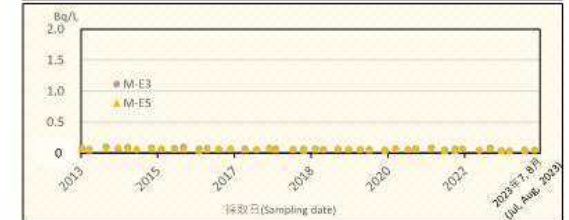
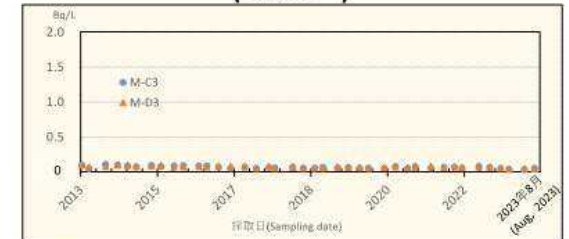
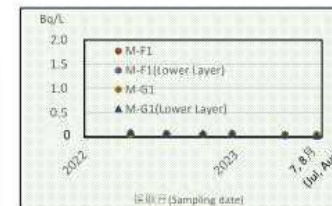
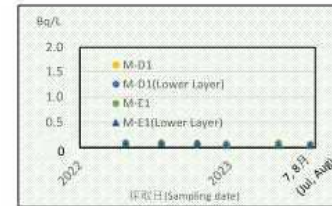
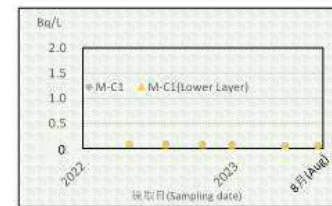
※ NDは白抜きとし検出下限値を表示

※ 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)



Confirmation of Japan's marine samples collection by 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-) . In the IAEA report published in June 2022, **the IAEA highly evaluated the continued high accuracy and competence of Japanese analytical laboratories that have been participating in the Comprehensive Radiation Monitoring Plan.**
- 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.
- 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 (8th Nov, 2022)

