December 21, 2023

Results of ALPS Treated Water Marine Monitoring:
Marine biota survey (tritium in fish) (September, 2023)

1. Outline of survey

(1) Date of sampling

September 12, 2023

(2) Sampling points

3 sampling points on coastal waters in the Fukushima Prefecture

(3) Detail of the survey

・The measurements of radioactive material concentration (tritium) in marine biota (fish).

TFWT: Analysis with target lower limit of detection of 0.1 Bq/L.

OBT: Analysis with target lower limit of detection of 0.5 Bq/L.

*A target lower limit of detection means a value that is set for quality control to assure at least the detection up to the value when analysis is conducted. Each actual lower limit of detection differs according to samples, and is equal to or lower than a target lower limit of detection.

2. Outline of results

(1) Marine biota survey (3 sampling points (9 samples))

Concentrations of TFWT in the marine biota (fish) range from 0.042 Bq/L to 0.097 Bq/L.

Concentrations of OBT in the marine biota (fish) correspond to below the lower limit of detection in all samples.

* In this survey, some of the samples collected in small quantities were mixed with multiple fish species (usually one fish species per sample).

(Detailed are attached)

(Maps attached)

Attachment

Analysis results for tritium in marine biota (fish)

Sampling point	Sampling date (yyyy/mm/dd)	Species	Sampling depth (m)	Nuclide	Radioactivity concentration※1,※2	Unit
E-SF1	2023/09/12	*Paralichthys olivaceus*	-	H-3(TFWT)	0.097 ± 0.020	Bq/L
					0.075 ± 0.015	Bq/kg-fresh
				H-3(OBT)	< 0.4	Bq/L
					< 0.05	Bq/kg-fresh
E-SF1	2023/09/12	*Hemitrygon akajei*	-	H-3(TFWT)	0.088 ± 0.0087	Bq/L
					0.071 ± 0.0070	Bq/kg-fresh
				H-3(OBT)	< 0.3	Bq/L
					< 0.04	Bq/kg-fresh
E-SF1	2023/09/12	Mixed fishes	-	H-3(TFWT)	0.078 ± 0.0097	Bq/L
					0.061 ± 0.0077	Bq/kg-fresh
				H-3(OBT)	< 0.3	Bq/L
					< 0.04	Bq/kg-fresh
E-SF2	2023/09/12	*Paralichthys olivaceus*	-	H-3(TFWT)	0.084 ± 0.020	Bq/L
					0.064 ± 0.016	Bq/kg-fresh
				H-3(OBT)	< 0.4	Bq/L
					< 0.06	Bq/kg-fresh
E-SF2	2023/09/12	*Hemitrygon akajei*	-	H-3(TFWT)	0.078 ± 0.0085	Bq/L
					0.061 ± 0.0067	Bq/kg-fresh
				H-3(OBT)	< 0.3	Bq/L
					< 0.04	Bq/kg-fresh
E-SF2	2023/09/12	Mixed fishes	-	H-3(TFWT)	0.063 ± 0.0083	Bq/L
					0.049 ± 0.0064	Bq/kg-fresh
				H-3(OBT)	< 0.3	Bq/L
					< 0.04	Bq/kg-fresh
E-SF3	2023/09/12	*Paralichthys olivaceus*	-	H-3(TFWT)	0.085 ± 0.020	Bq/L
					0.065 ± 0.015	Bq/kg-fresh
				H-3(OBT)	< 0.4	Bq/L
					< 0.05	Bq/kg-fresh
E-SF3	2023/09/12	*Hemitrygon akajei*	-	H-3(TFWT)	0.042 ± 0.014	Bq/L
					0.033 ± 0.011	Bq/kg-fresh
				H-3(OBT)	< 0.4	Bq/L
					< 0.05	Bq/kg-fresh
E-SF3	2023/09/12	Mixed fishes	-	H-3(TFWT)	0.097 ± 0.020	Bq/L
					0.076 ± 0.016	Bq/kg-fresh
				H-3(OBT)	< 0.4	Bq/L
					< 0.05	Bq/kg-fresh

*1 Radioactivity concentrations are presented as radioactivity concentration ± combined standard uncertainty.

*2 Values below detection limit are shown by lower limit of detection (e.g., "<10 Bq/L" indicates a value lower than 10 Bq/L).

(Attachment)

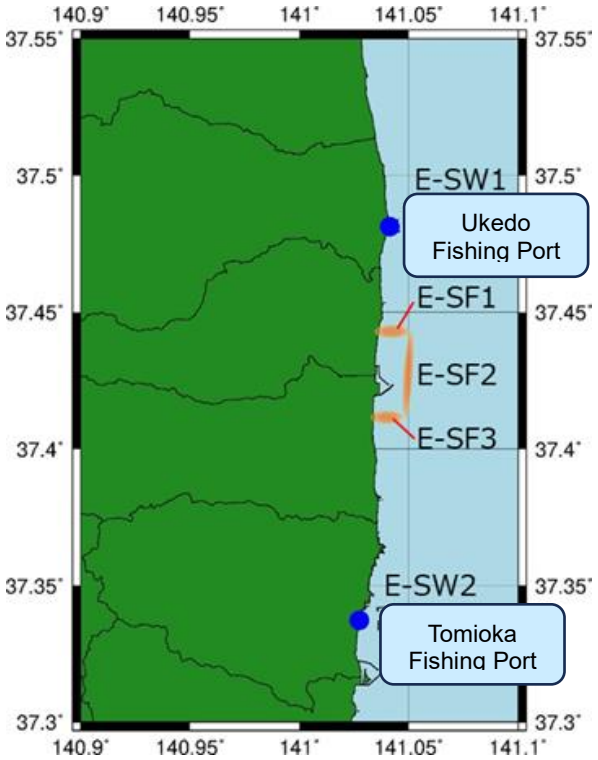

Fig. 1 Sampling points of marine biota (fish and seaweed)