July 14, 2023

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

1. Outline of survey

(1) Date of sampling
January 13, 2023

(2) Sampling points
3 sampling points on coastal waters in the Fukushima Prefecture (within 3 km of the proposed location of the ALPS treated water discharge outlet)

(3) Detail of the survey
Measurements of radioactive material concentration (tritium) in marine biota (fish)

2. Outline of results

(1) Marine biota survey (3 sampling points [9 samples] in coastal waters in the Fukushima Prefecture)
Concentrations of TFWT in the marine biota (fish) (with a target lower limit of detection of 0.1 Bq/L) range from below the lower limit of detection to 0.10 Bq/L.
Concentrations of OBT in the marine biota (fish) (with a target lower limit of detection of 0.5 Bq/L) correspond to below the lower limit of detection in all samples.

*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.

(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	2023/1/13	*Paralichthys olivaceus*	-	H-3(TFWT)	0.055 ± 0.017	Bq/L
					0.042 ± 0.013	Bq/kg-fresh
				H-3(OBT)	<0.4	Bq/L
					<0.05	Bq/kg-fresh
E-SF1	2023/1/13	*Squatina japonica*	-	H-3(TFWT)	0.059 ± 0.019	Bq/L
					0.046 ± 0.015	Bq/kg-fresh
				H-3(OBT)	<0.4	Bq/L
					<0.05	Bq/kg-fresh
E-SF1	2023/1/13	*Hemitrygon akajei*	-	H-3(TFWT)	0.084 ± 0.019	Bq/L
					0.066 ± 0.015	Bq/kg-fresh
				H-3(OBT)	<0.4	Bq/L
					<0.05	Bq/kg-fresh
E-SF2	2023/1/13	*Paralichthys olivaceus*	-	H-3(TFWT)	0.061 ± 0.017	Bq/L
					0.048 ± 0.013	Bq/kg-fresh
				H-3(OBT)	<0.4	Bq/L
					<0.05	Bq/kg-fresh
E-SF2	2023/1/13	*Squatina japonica*	-	H-3(TFWT)	0.10 ± 0.018	Bq/L
					0.078 ± 0.014	Bq/kg-fresh
				H-3(OBT)	<0.4	Bq/L
					<0.06	Bq/kg-fresh
E-SF2	2023/1/13	*Lophiomus setigerus*	-	H-3(TFWT)	0.071 ± 0.019	Bq/L
					0.060 ± 0.016	Bq/kg-fresh
				H-3(OBT)	<0.4	Bq/L
					<0.04	Bq/kg-fresh
E-SF3	2023/1/13	*Paralichthys olivaceus*	-	H-3(TFWT)	<0.06	Bq/L
					<0.05	Bq/kg-fresh
				H-3(OBT)	<0.4	Bq/L
					<0.05	Bq/kg-fresh
E-SF3	2023/1/13	*Squatina japonica*	-	H-3(TFWT)	<0.05	Bq/L
					<0.04	Bq/kg-fresh
				H-3(OBT)	<0.4	Bq/L
					<0.05	Bq/kg-fresh
E-SF3	2023/1/13	*Okamejei schmidti*	-	H-3(TFWT)	<0.05	Bq/L
					<0.04	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)

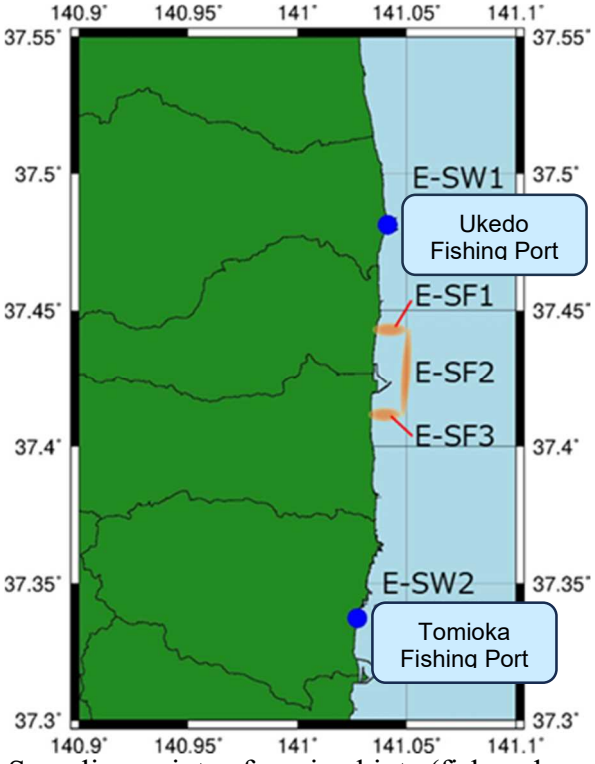

Fig. 1 Sampling points of marine biota (fish and seaweed)