

July 14, 2023

**Results of ALPS Treated Water Marine Monitoring:  
Marine biota survey (carbon-14 in fish) (November-December, 2022)**

**1. Outline of survey**

(1) Date of sampling

November 9-December 16, 2022

(2) Sampling points

3 sampling points on the 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

The measurements of radioactive material concentration (carbon-14) in marine biota (fish)

**2. Outline of results**

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

Concentrations of carbon-14 in the marine biota (fish) (with a target lower limit of detection of 2 Bq/kg-fresh) range from 22 Bq/kg-fresh to 27 Bq/kg-fresh.

\*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)

## Analysis results for carbon-14 in marine biota (fish)

Sampling point	Sampling date (yyyy/mm/dd)	Species	Sampling depth (m)	Nuclide	Radioactivity Concentration <sup>*1,*2</sup>	Unit
E-SF1	2022/12/16	<i>Paralichthys olivaceus</i>	-	C-14	23 ± 0.60	Bq/kg-fresh
E-SF1	2022/12/16	<i>Squatina japonica</i>	-	C-14	25 ± 0.64	Bq/kg-fresh
E-SF1	2022/12/16	<i>Hemitrygon akajei</i>	-	C-14	22 ± 0.58	Bq/kg-fresh
E-SF2	2022/12/16	<i>Paralichthys olivaceus</i>	-	C-14	23 ± 0.60	Bq/kg-fresh
E-SF2	2022/12/16	<i>Squatina japonica</i>	-	C-14	25 ± 0.64	Bq/kg-fresh
E-SF2	2022/12/16	<i>Chelidonichthys spinosus</i>	-	C-14	26 ± 0.69	Bq/kg-fresh
E-SF3	2022/11/09	<i>Paralichthys olivaceus</i>	-	C-14	27 ± 0.70	Bq/kg-fresh
E-SF3	2022/11/09	<i>Okamejei schmidtii</i>	-	C-14	22 ± 0.57	Bq/kg-fresh
E-SF3	2022/11/09	<i>Squatina japonica</i>	-	C-14	24 ± 0.62	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/ kg-fresh” indicates a value lower than 10 Bq/ kg-fresh).

(Attachment)

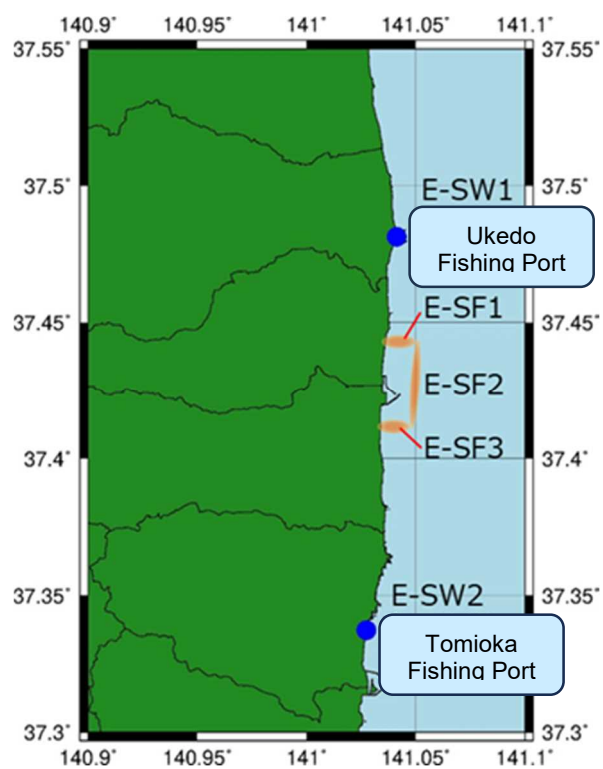


Fig. 1 Sampling points of marine biota (fish and seaweed)