



Baltic Marine Environment Protection Commission

Expert Group on Monitoring of Radioactive Substances
in the Baltic Sea

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Background

This document contains the results on monitoring of radionuclides in the Baltic Sea 2018 from Estonia.

Action

The Meeting is invited to take note of the information.

MONITORING OF RADIONUCLIDES IN THE BALTIC SEA 2018

ESTONIA

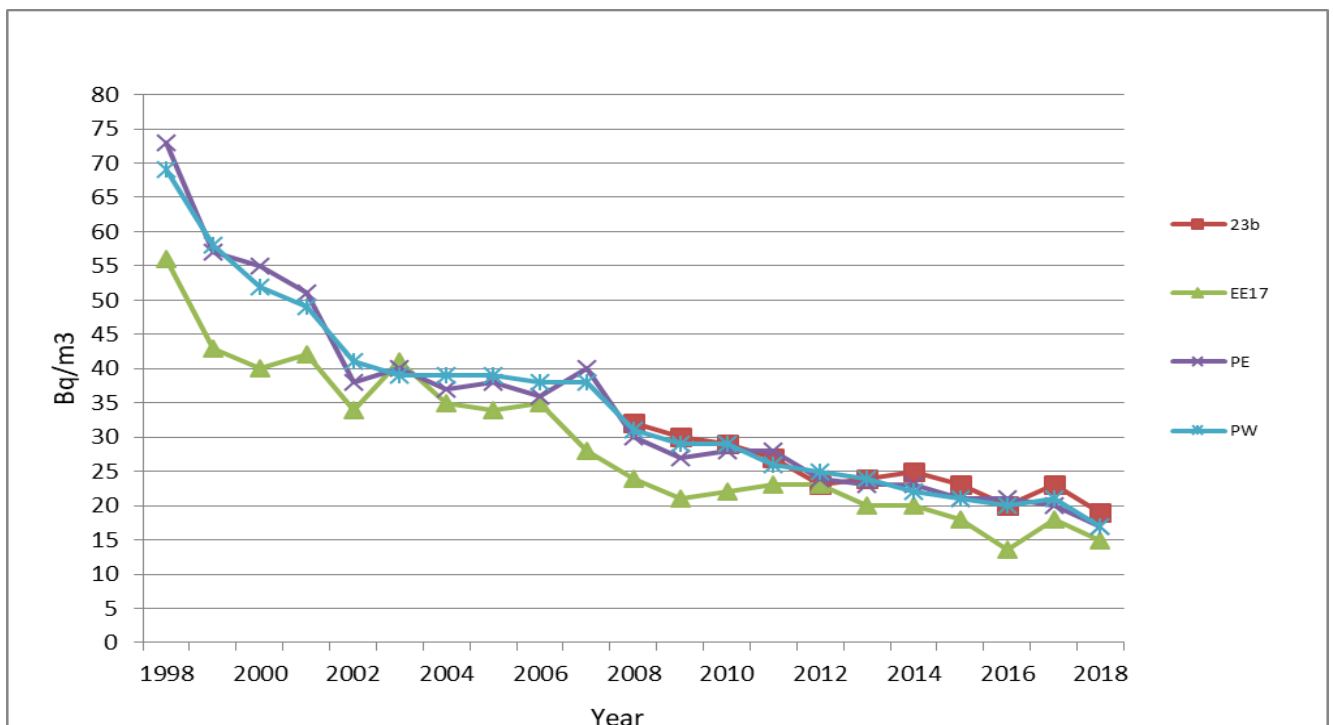
Environmental Board, Radiation Safety Department

Eia Jakobson

1. Surface sea water

Year	Sampling station	Sampling date	Total depth (m)	Temp (°C)	Salinity (‰)	Cs-137 (Bq m ⁻³)	K-40 (Bq m ⁻³)
2018	23 b 59°18,3'N 23°17,3' E	27.08.2018	88	17,9	5,3	19±2	2380±170
	EE17 59°43,0'N 25°01,1' E	22.08.2018	106	18,5	5,4	15,0±1,5	1970±140
	PE 59°22,8'N 24°09,3' E	24.08.2018	21	18,9	5,0	17±2	2160±150
	PW 59°20,1'N 24°02,0' E	24.08.2018	24	18,9	5,0	17±2	2100±150
	N8 59°28,5'N 27°58,6' E	23.08.2018	18	18,1	3,7	11,0±1,5	1530±110

Cs-137 concentrations (Bq m⁻³) in surface water in Gulf of Finland 1998-2018

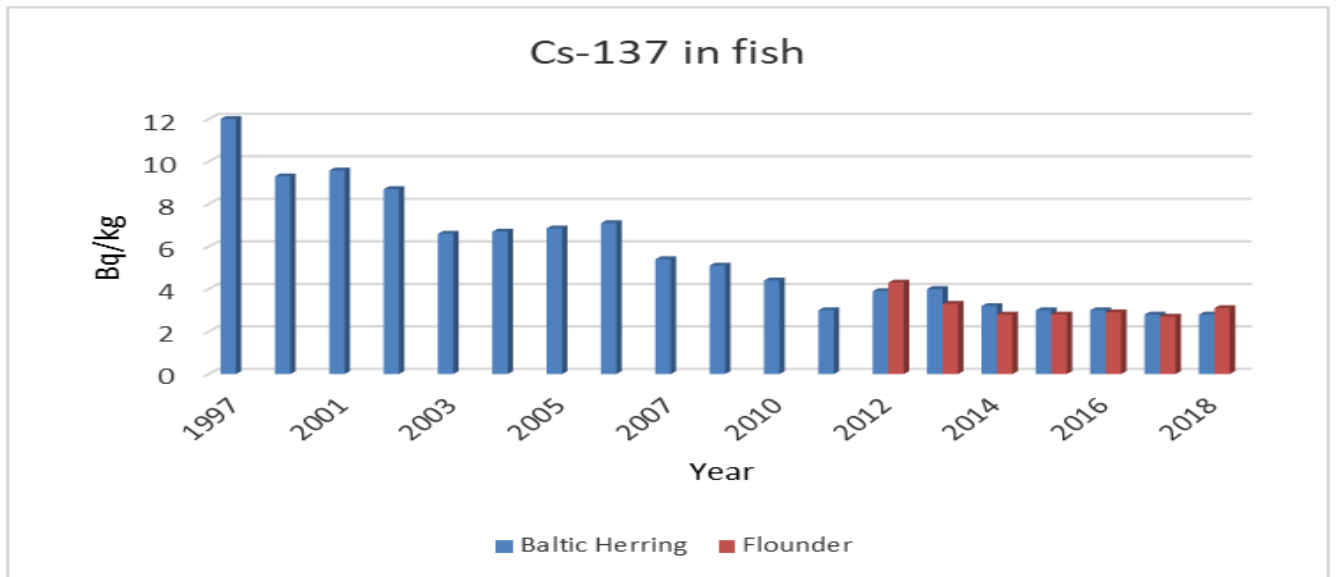


2. Aquatic plants: *Fucus vesiculosus*

Year	Sampling station	Sampling date	Dry weight (kg)	Cs-137 (Bq/kg)	K-40 (Bq/kg)
2018	Paldiski 59°21,63' N 24°02,33' E	29.09.2018	0,29	8,3±0,7	644±46
	Sillamäe (Kunda) 59°32,77' N 26°38,97' E	18.09.2018	0,23	10,8±0,9	823±60

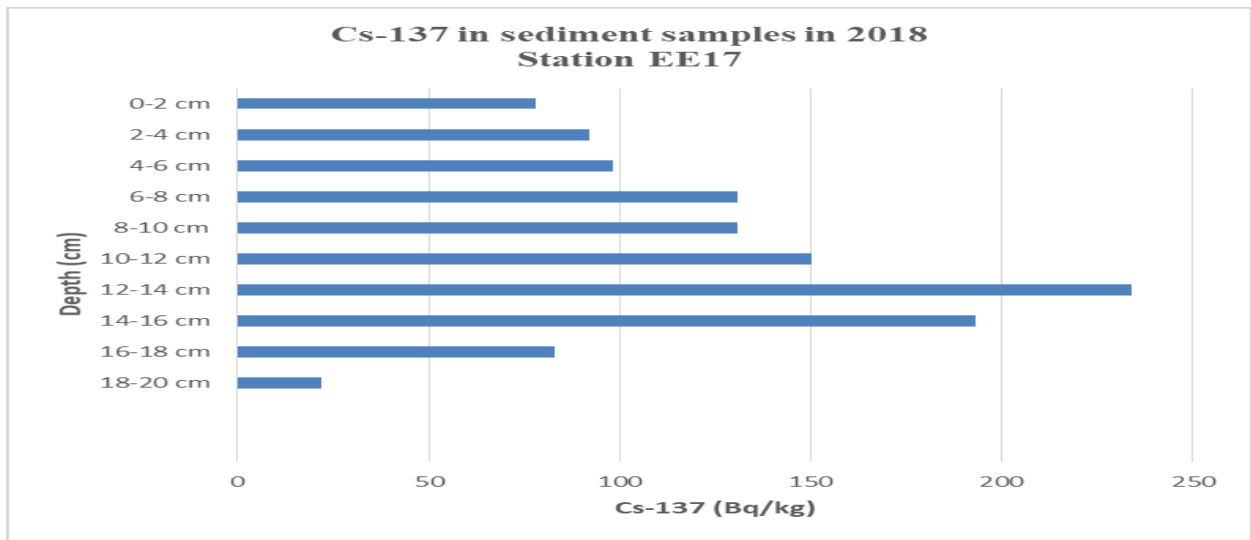
3. Fish:

Year	Sampling area	Sampling date	Fish	Wet weight (kg)	Cs-137 (Bq/kg)	K-40 (Bq/kg)
2018	Aseri 59°28,88' N 26°53,33' E	01.10.2018	Baltic herring	1,3	2,8±0,2	103±8
	Paldiski 59°20,18' N 24°01,93' E	08.08.2018	Flounder	1,8	3,1±0,3	102±8



4. Bottom sediments:

Year	Sampling station	Sampling date	Total depth (m)	Core slice depth from surface (cm)	Cs-137 (Bq/kg)	K-40 (Bq/kg)
2018	EE17 59°43,0' N 25°01, 1' E	22.08.2018	106	0-2 cm	78±9	570±100
				2-4 cm	92±8	650±75
				4-6 cm	98±8	640±60
				6-8 cm	131±11	740±75
				8-10 cm	131±11	690±65
				10-12 cm	150±12	650±65
				12-14 cm	234±19	970±95
				14-16 cm	193±15	940±75
				16-18 cm	83±7	1090±80
				18-20 cm	22±2	1110±85



Year	Sampling station	Sampling date	Total depth (m)	Core slice depth from surface (cm)	Cs-137 (Bq/kg)	K-40 (Bq/kg)
2018	23b 59°18,3' N 23°17,3' E	27.08.2018	88	0-2 cm	137±11	930±75
				2-4 cm	145±12	850±80
				4-6 cm	160±12	900±70
				6-8 cm	213±17	1090±95
				8-10 cm	201±15	1050±85
				10-12 cm	221±17	1050±80
				12-14 cm	232±19	990±90
				14-16 cm	237±18	1010±80
				16-18 cm	242±19	1000±90
				18-20 cm	213±16	970±75