Baltic Marine Environment Protection Commission

Expert Group on Monitoring of Radioactive Substances in the Baltic Sea

MORS EG 9-2019

Roskilde, Denmark, 21-23 May 2019

Document title	Results of radiological monitoring in the Lithuanian part of the Baltic Sea during 2018
Code	3-2
Category	INF
Agenda Item	3 – Scientific reports by the Contracting Parties and IAEA
Submission date	25.04.2019
Submitted by	Lithuania
Reference	

Background

This document contains the results of radiological monitoring in the Lithuanian part of the Baltic Sea during 2018.

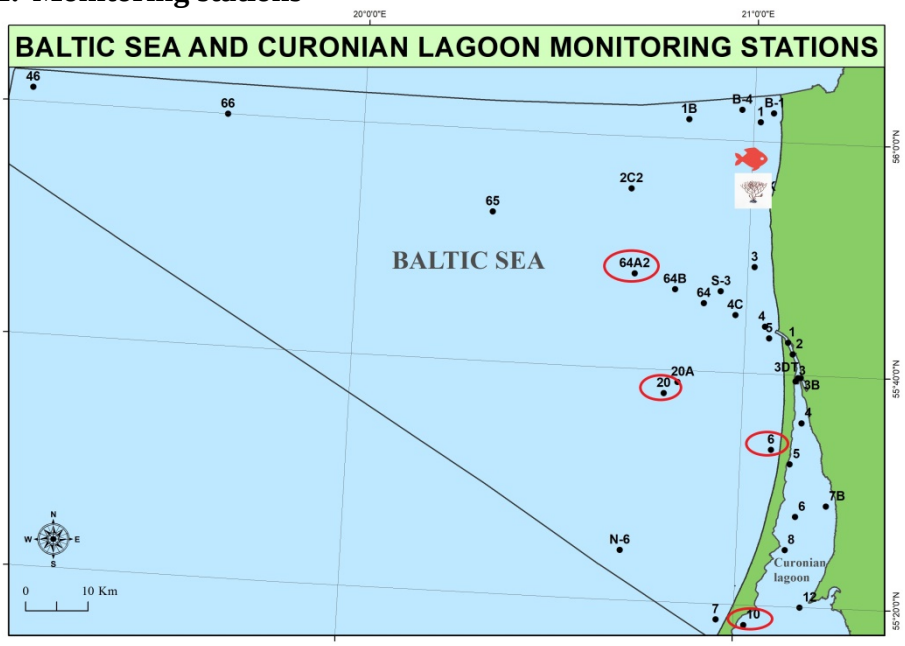
Action

The Meeting is invited to take note of the information.

RESULTS OF RADIOLOGICAL MONITORING IN THE LITHUANIAN PART OF THE BALTIC SEA DURING 2018

LITHUANIA
Environment Protection Agency
Environment Research Department
Sampling and Expeditious Measurements Division
Rasa Morkuniene

1. Monitoring stations

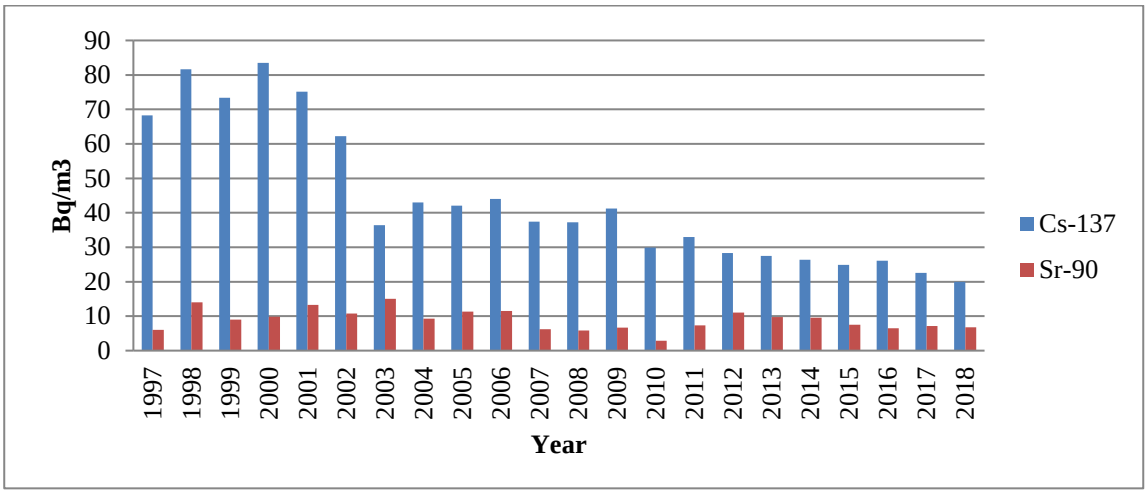


- sampling stations for water and bottom sediments
- sampling station for plants
- sampling places for fishes

2. Activity concentration of radionuclides in surface sea water

Sampling station	Sampling date	Salinity, ‰	Temperature, °C	^{137}Cs, Bq/m^3	^{90}Sr, Bq/m^3
LT20	2018-03-26	7.10	2.26	20.3±3.47	7.35±0.88
LT20	2018-05-08	5.66	12.6	17.1±3.12	4.95±0.83
LT20	2018-08-30	7.15	20.32	20.8±4,37	8.11±0.99
LT20	2018-10-18	7.18	13.88	20.5±3.79	7.26±0.92
LT6	2018-03-26	6.93	2.71	16.7±3.02	6.94±0.87
LT6	2018-05-08	6.90	8.55	23.1±3.98	5.16±0.79
LT6	2018-08-30	7.10	21.45	20.5±3.64	7.16±0.92
LT6	2018-10-18	7.16	14.05	20.5±3.66	7.22±0.94
64A2	2018-09-06	7.15	20.04	20.7±2.35	6.81±0.99
LT10	2018-02-13	0.17	0.47	<4.44	3.44±0.72
LT10	2018-05-02	0.18	13.65	<4.30	4.88±0.91
LT10	2018-08-16	0.28	20.59	<0.914	3.70±0.94
LT10	2018-11-15	0.27	7.69	<1.09	7.43±0.98

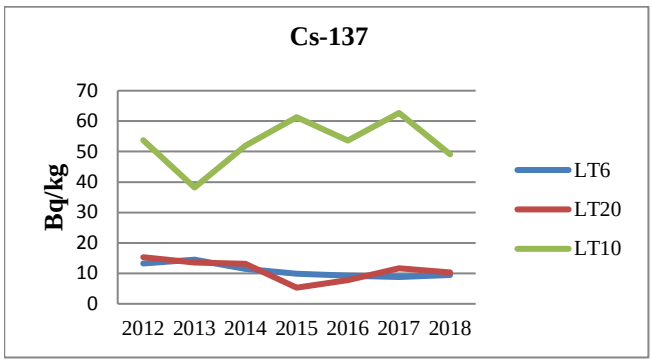
Annual averages of activities of ^{137}Cs and ^{90}Sr in surface water in the Lithuanian part of the Baltic Sea 1997-2018

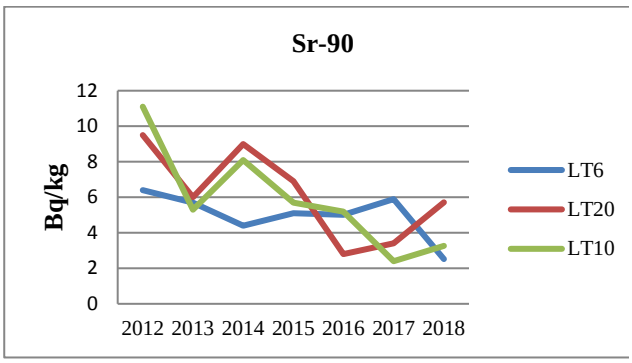


3. Specific activity of radionuclides in bottom sediments

Sampling stations	Total depth, m	Sampling date	^{137}Cs, Bq/kg	^{90}Sr, Bq/kg	^{40}K, Bq/kg
LT20	45	2018-05-08	8.49±0.898	<1.13	318±32.3
LT20	45	2018-08-30	11.4±1.19	2.25±0.59	442±44.8
LT20	45	2018-10-18	11.0±1.14	9.17±1.14	393±38.6
LT6	13	2018-05-08	10.6±1.18	<1.14	283±33.1
LT6	13	2018-08-30	8.64±0.907	1.61±0.6	274±27.8
LT6	13	2018-10-18	9.2±0.973	3.42±0.9	273±27.8
64A2	41	2018-09-06	22.5±1.69	4.92±0.82	455±46.1
LT10	3.9	2018-05-02	48.8±5.15	4.03±0.78	448±46.5
LT10	3.9	2018-08-16	52.7±5.51	2.16±0.65	474±48.4
LT10	3.9	2018-11-15	45.9±4.85	3.58±0.77	425±44.1

Annual averages of activities of ^{137}Cs and ^{90}Sr in the Baltic Sea and Curonian Lagoon bottom sediments 2012-2018





4. Specific activities of radionuclides in plants

Sampling station	Sampling date	^{137}Cs, Bq/kg (d.w.)	^{90}Sr, Bq/kg (d.w.)	^{40}K, Bq/kg (d.w.)
Furcellaria lumbricalis				
LT2K	2018-09-20	5.46±0.704	4.68±0.97	387±40.3

5. Specific activities of radionuclides in fish

Sampling square	Sampling date	^{137}Cs, Bq/kg (w.w.)	^{40}K, Bq/kg (w.w.)
Baltic herring			
439	2018-10-24	2.52±0.281	99.0±10.2
Flounder			
439	2018-10-24	2.49±0.281	56.2±5.97
Cod			
439	2018-10-24	2.39±0.275	71.7±7.54