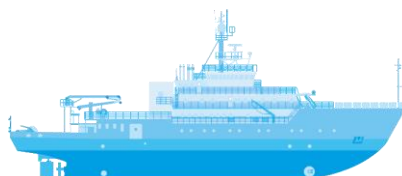


21.05.2024



ILMATIETEEN LAITOS



COMBINE 2/2024

23/039

Description of the Research Project

The COMBINE 2 cruise contributes to the HELCOM Baltic Sea integrated physical, chemical, and biological monitoring programme, focusing especially on long-term macrozoobenthos monitoring and near-bottom water oxygen levels in the open sea area. It also contributes to the long-term monitoring of zooplankton communities and monitoring of marine microlitter. Water and sediment samples are taken for the monitoring of radioactive substances (HELCOM MORS programme). In addition, a wave buoy and drifting floats will be serviced and deployed. The monitoring activities are part of the Finnish marine management plan. During the cruise sampling will also be carried out for plankton research and to study benthic-pelagic coupling in zooplankton. The benthic lander, sediment trap and the passive sampler of hazardous substances that were deployed during the spring monitoring cruise will be retrieved.

Departure: 28.05.2024 at 10.00

Arrival: 09.06.2024 at 16.00

Cruise Speed: 10

Duration of the Cruise: 12Days 6h 0min

Number of observation stations 79. Route points named as "P" are transit points only.

Nro	Name	Lat.	Long.	DepthArrival			Duration Speed			
		[WGS-84]	[m]	hh:mm	pv	pp.kk.vvvv	hh	mm	knots	
1	39A	60° 04.01' N	024° 58.81' E	43	10.00	tiistai	28.05.2024	1	0	10
2	LL7D	59° 50.79' N	024° 50.27' E	103	12.23	tiistai	28.05.2024	1	0	10
3	LL7S	59° 51.01' N	024° 49.81' E	73	13.27	tiistai	28.05.2024	3	30	10
4	LL6A	59° 55.01' N	025° 01.81' E	75	17.41	tiistai	28.05.2024	2	0	10
5	LL5	59° 55.01' N	025° 35.82' E	70	21.23	tiistai	28.05.2024	1	30	10
6	LL4A	60° 01.01' N	026° 04.81' E	37	00.27	keskiviikko	29.05.2024	1	30	10
7	XIV3	60° 12.19' N	026° 11.57' E	77	03.07	keskiviikko	29.05.2024	1	0	10
8	XV1_KYVY11	60° 15.00' N	027° 14.82' E	64	07.17	keskiviikko	29.05.2024	3	0	10
9	LL3A	60° 04.03' N	026° 20.80' E	68	13.11	keskiviikko	29.05.2024	4	30	10
10	GF2	59° 50.31' N	025° 51.41' E	84	19.42	keskiviikko	29.05.2024	1	30	10
11	GF1	59° 42.30' N	024° 40.93' E	84	00.50	torstai	30.05.2024	2	30	10
12	LL9	59° 42.01' N	024° 01.81' E	69	05.19	torstai	30.05.2024	2	30	10
13	XII3	59° 51.85' N	023° 59.14' E	33	08.51	torstai	30.05.2024	1	0	10
14	JML	59° 34.91' N	023° 37.61' E	80	11.52	torstai	30.05.2024	2	30	10
15	LL12	59° 29.01' N	022° 53.81' E	82	16.40	torstai	30.05.2024	3	0	10
16	F62	59° 20.01' N	023° 15.81' E	95	21.06	torstai	30.05.2024	1	0	10
17	LL11	59° 35.01' N	023° 17.81' E	68	23.37	torstai	30.05.2024	1	30	10
18	AMN	59° 41.43' N	023° 15.43' E	54	01.46	perjantai	31.05.2024	1	30	10
19	LANGDEN	59° 46.61' N	023° 15.77' E	57	03.47	perjantai	31.05.2024	3	0	10
20	Hanko (Hango)	59° 48.96' N	022° 56.16' E		07.48	perjantai	31.05.2024	7	14	
21	Benthic_lander	59° 46.28' N	021° 25.25' E	63	19.37	perjantai	31.05.2024	2	0	10
22	UTO_ADCP	59° 45.33' N	021° 21.43' E	75	21.50	perjantai	31.05.2024	1	0	10

23	UTO_Obscape	59° 44.31' N 021° 22.89' E	66	22.57	perjantai	31.05.2024	1	0	10
24	UTO_Waverider	59° 42.95' N 021° 22.10' E	71	00.06	lauantai	01.06.2024	1	0	10
25	LL15	59° 11.00' N 021° 44.81' E	126	04.30	lauantai	01.06.2024	1	30	10
26	LL17	59° 02.00' N 021° 04.77' E	171	08.15	lauantai	01.06.2024	3	30	10
27	IBSV10	58° 21.00' N 021° 14.81' E	78	15.53	lauantai	01.06.2024	1	30	10
28	IBSV9	58° 26.00' N 020° 56.81' E	88	18.27	lauantai	01.06.2024	1	30	10
29	IBSV8	58° 30.00' N 020° 37.81' E	96	21.01	lauantai	01.06.2024	1	30	10
30	LL19	58° 52.84' N 020° 18.65' E	178	01.01	sunnuntai	02.06.2024	2	0	10
31	F69	59° 47.00' N 019° 55.80' E	189	08.33	sunnuntai	02.06.2024	2	0	10
32	F64	60° 11.34' N 019° 08.55' E	285	13.57	sunnuntai	02.06.2024	5	0	10
33	SR5	61° 05.00' N 019° 34.78' E	126	00.28	maanantai	03.06.2024	5	0	10
34	SR3	61° 11.00' N 018° 13.80' E	70	09.26	maanantai	03.06.2024	1	30	10
35	MS6	61° 59.02' N 019° 09.81' E	68	16.26	maanantai	03.06.2024	1	30	10
36	MS3	62° 08.07' N 018° 09.78' E	84	20.53	maanantai	03.06.2024	1	30	10
37	US3	62° 45.53' N 019° 11.74' E	180	03.06	tiistai	04.06.2024	2	0	10
38	F18_SUOMI	63° 18.86' N 020° 24.00' E	105	09.47	tiistai	04.06.2024	2	30	10
39	F13	63° 47.01' N 021° 28.77' E	65	16.19	tiistai	04.06.2024	1	0	10
40	BO3	64° 18.12' N 022° 20.59' E	109	21.10	tiistai	04.06.2024	3	30	10
41	RR3	64° 56.02' N 022° 20.76' E	96	04.28	keskiviikko	05.06.2024	1	30	10
42	CV	65° 00.02' N 023° 14.77' E	89	08.17	keskiviikko	05.06.2024	1	30	10
43	CVI	65° 14.02' N 023° 33.77' E	70	11.24	keskiviikko	05.06.2024	3	0	10
44	HIEKKA2	65° 03.00' N 023° 50.00' E	20	15.41	keskiviikko	05.06.2024	1	30	10
45	RR7	64° 44.02' N 023° 48.77' E	39	19.05	keskiviikko	05.06.2024	1	0	10
46	RR6	64° 48.02' N 023° 28.77' E	86	21.02	keskiviikko	05.06.2024	1	30	10
47	Argo_Perämeri	64° 48.00' N 023° 28.80' E	83	22.32	keskiviikko	05.06.2024	0	30	10
48	AALTO_PM	64° 41.05' N 023° 14.35' E	69	23.58	keskiviikko	05.06.2024	1	0	10
49	Pietarinkanta	63° 59.04' N 022° 49.83' E	15	05.18	torstai	06.06.2024	1	0	10
50	F15	63° 31.00' N 021° 30.78' E	49	10.47	torstai	06.06.2024	1	30	10
51	F16	63° 31.01' N 021° 03.77' E	45	13.29	torstai	06.06.2024	2	30	10
53	US5B	62° 35.17' N 019° 58.13' E	222	22.20	torstai	06.06.2024	4	0	10
54	US6B	62° 36.01' N 020° 15.78' E	83	03.09	perjantai	07.06.2024	2	0	10
55	US7	62° 36.01' N 020° 49.78' E	23	06.42	perjantai	07.06.2024	1	0	10
56	Kristiinank_ADCP	62° 13.47' N 021° 06.43' E	22	10.06	perjantai	07.06.2024	0	30	10

57	Kristiinank_AALTO	62° 13.33' N 021° 06.51' E	22	10.36	perjantai	07.06.2024	0	30	10
58	F26	61° 59.01' N 020° 03.78' E	140	14.22	perjantai	07.06.2024	1	30	10
59	MS9	61° 46.01' N 020° 31.83' E	101	17.44	perjantai	07.06.2024	1	30	10
60	Argo_Selkämeri	61° 34.20' N 020° 16.80' E	126	20.37	perjantai	07.06.2024	0	30	10
61	SR8	61° 07.59' N 020° 55.80' E	46	00.22	lauantai	08.06.2024	1	0	10
62	SR7	61° 05.01' N 020° 35.79' E	78	02.22	lauantai	08.06.2024	1	30	10
63	IU1	60° 46.01' N 020° 50.80' E	33	05.54	lauantai	08.06.2024	1	0	10
64	Isokari_ADCP	60° 43.63' N 020° 52.90' E	39	07.10	lauantai	08.06.2024	1	0	10
68	IU3	60° 20.00' N 021° 06.80' E	48	10.51	lauantai	08.06.2024	1	30	10
71	IU5	60° 03.49' N 021° 11.90' E	89	14.39	lauantai	08.06.2024	1	30	10
75	IU7_UTO	59° 48.91' N 021° 20.20' E	92	18.10	lauantai	08.06.2024	2	0	10
76	LL13	59° 22.00' N 022° 27.81' E	100	00.31	sunnuntai	09.06.2024	1	30	10
77	LL12	59° 29.01' N 022° 53.81' E	82	03.31	sunnuntai	09.06.2024	2	0	10
78	LL9	59° 42.01' N 024° 01.81' E	62	09.12	sunnuntai	09.06.2024	2	0	10
79	LL7D	59° 50.79' N 024° 50.27' E	101	13.47	sunnuntai	09.06.2024	2	0	10
80	Passive_sampler	59° 53.05' N 024° 46.71' E	34	16.05	sunnuntai	09.06.2024	1	0	10

