



RV Aranda

CRUISE PLAN

COMBINE 2 2019, 1/2019 27.5. - 7.6.2019

Description of the cruise

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. Water and sediment samples are taken for the monitoring of radioactive substances (HELCOM MORS programme). In addition a wave buoy will be deployed, and to study the underwater soundscape two hydrophones will be deployed. The monitoring activities are related to the requirements of EU directives.

Scientific staff:

Chief scientist:	Henrik Nygård	SYKE	
		SYKE	27.05.2019 - 07.06.2019
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		STUK	27.05.2019 - 07.06.2019
		SPBU	27.05.2019 - 07.06.2019
		SPBU	27.05.2019 - 07.06.2019
		-	27.05.2019 - 07.06.2019

Altogether 19 persons in scientific staff.

Departure from: HELSINKI
Departure time: Monday 27.05.2019 at 10:00

Cruising speed: 10,0 knots
 Average station time: 2 h 30 min.

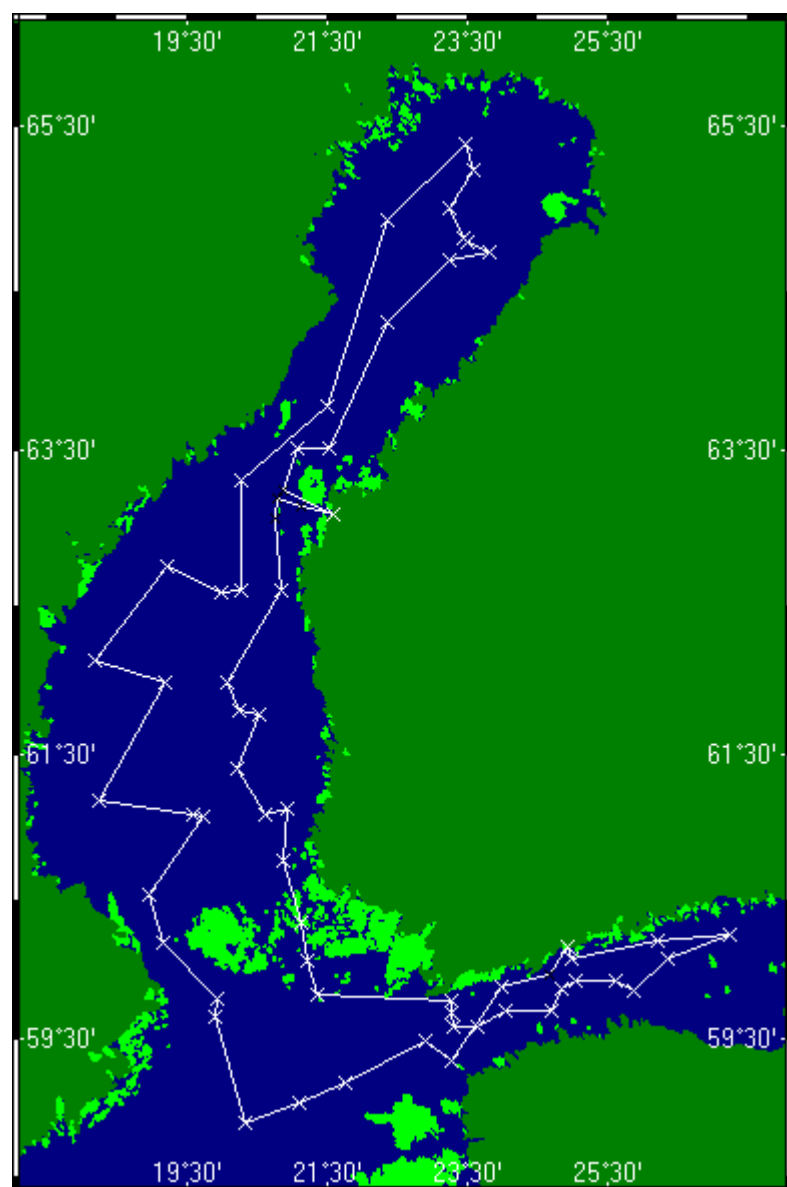
Arrival to: HELSINKI
Arrival time: Friday 07.06.2019 at 15:56

Duration of the cruise: 11 days 5 h 56 min
 Length of the cruise: 1469,35 nautical miles
 Number of stations 51. Points with name "P" are just route points without observations.

Route:

Nro	Station	Lat.	Long.	Depth [m]	hh:mm	Arrival dy	dd.mm.yyyy	Durat. hh:mm	Speed knots
0	HELSINKI	60°09.55'	24°55.37'	0	10:00	Mo	27.05.2019	1:00	S 10,0
1	39A	60°04.01'	24°58.81'	41	11:34	Mo	27.05.2019	1:00	S 10,0
2	XIV3	60°12.19'	26°11.57'	77	16:17	Mo	27.05.2019	1:00	S 10,0
3	XV1	60°15.00'	27°14.82'	64	20:26	Mo	27.05.2019	3:00	S 10,0
4	LL3A	60°04.03'	26°20.80'	68	02:21	Tu	28.05.2019	3:30	S 10,0
5	GF2	59°50.31'	25°51.41'	84	07:51	Tu	28.05.2019	1:30	S 10,0
6	LL5	59°55.01'	25°35.82'	70	10:16	Tu	28.05.2019	1:30	S 10,0
7	LL6A	59°55.01'	25°01.81'	75	13:28	Tu	28.05.2019	1:30	S 10,0
8	LL7S	59°51.51'	24°50.30'	78	15:39	Tu	28.05.2019	2:30	S 10,0
9	GF1	59°42.30'	24°40.93'	84	19:11	Tu	28.05.2019	2:30	S 10,0
10	LL9	59°42.01'	24°01.81'	69	23:39	Tu	28.05.2019	2:30	S 10,0
11	JML	59°34.91'	23°37.61'	80	03:34	We	29.05.2019	2:30	S 10,0
12	LL11	59°35.01'	23°17.81'	68	07:04	We	29.05.2019	1:30	S 10,0
13	AMN	59°41.43'	23°15.43'	56	09:14	We	29.05.2019	1:30	S 10,0
14	LANGDEN	59°46.61'	23°15.77'	57	11:15	We	29.05.2019	2:30	S 10,0
15	IU7	59°48.91'	21°20.20'	92	19:34	We	29.05.2019	2:00	S 10,0
16	IU5	60°03.49'	21°11.90'	89	23:05	We	29.05.2019	2:00	S 10,0
17	IU3	60°20.00'	21°06.80'	48	02:45	Th	30.05.2019	2:30	S 10,0
18	IU1	60°46.01'	20°50.80'	33	07:58	Th	30.05.2019	1:30	S 10,0
19	SR8	61°07.59'	20°55.80'	46	11:38	Th	30.05.2019	1:00	S 10,0
20	SR7	61°05.01'	20°35.79'	78	13:38	Th	30.05.2019	1:30	S 10,0
21	ARGO_SM	61°24.08'	20°11.33'	0	17:23	Th	30.05.2019	1:00	S 10,0
22	MS9	61°46.01'	20°31.83'	101	20:47	Th	30.05.2019	2:00	S 10,0
23	AALTO_SM	61°48.00'	20°14.00'	0	23:39	Th	30.05.2019	1:00	S 10,0
24	F26	61°59.01'	20°03.78'	140	01:51	Fr	31.05.2019	2:00	S 10,0
25	US7	62°36.01'	20°49.78'	23	08:07	Fr	31.05.2019	1:00	S 10,0
26	P	63°03.90'	20°44.71'	-	11:55	Fr	31.05.2019	0:00	S 10,0
27	P	63°11.66'	20°46.43'	-	12:42	Fr	31.05.2019	0:00	S 10,0
28	P	63°08.56'	21°07.01'	-	13:41	Fr	31.05.2019	1:00	S 10,0
29	VAASA	63°05.21'	21°33.78'	0	15:56	Fr	31.05.2019	2:00	S 10,0
30	P	63°14.75'	20°51.57'	-	20:04	Fr	31.05.2019	0:00	S 10,0
31	F16	63°31.01'	21°03.77'	45	21:47	Fr	31.05.2019	2:00	S 10,0
32	F15	63°31.01'	21°30.78'	49	00:59	Sa	01.06.2019	1:30	S 10,0
33	BO3	64°18.12'	22°20.59'	109	07:41	Sa	01.06.2019	3:00	S 10,0
34	AALTOPM	64°41.05'	23°14.35'	0	13:56	Sa	01.06.2019	1:30	S 10,0
35	RR7	64°44.02'	23°48.77'	39	16:56	Sa	01.06.2019	1:30	S 10,0
36	RR6	64°48.02'	23°28.77'	86	19:23	Sa	01.06.2019	1:30	S 10,0
37	ARGO_PM	64°49.69'	23°26.22'	0	21:05	Sa	01.06.2019	0:30	S 10,0
38	CV	65°00.02'	23°14.77'	89	22:43	Sa	01.06.2019	2:00	S 10,0
39	CVI	65°14.02'	23°33.77'	71	02:20	Su	02.06.2019	3:00	S 10,0
40	F2	65°23.02'	23°27.76'	91	06:16	Su	02.06.2019	2:30	S 10,0
41	RR3	64°56.02'	22°20.76'	96	12:40	Su	02.06.2019	10:00	S 10,0
42	F13	63°47.01'	21°28.77'	65	05:56	Mo	03.06.2019	1:00	S 10,0
43	F18	63°18.86'	20°16.36'	105	11:12	Mo	03.06.2019	2:00	S 10,0
44	US6B	62°36.01'	20°15.78'	83	17:30	Mo	03.06.2019	2:00	S 10,0
45	US5B	62°35.17'	19°58.13'	214	20:19	Mo	03.06.2019	4:00	S 10,0
46	US3	62°45.53'	19°11.74'	182	02:41	Tu	04.06.2019	2:30	S 10,0
47	MS3	62°08.07'	18°09.78'	84	09:54	Tu	04.06.2019	2:00	S 10,0
48	MS6	61°59.02'	19°09.81'	72	14:51	Tu	04.06.2019	2:00	S 10,0
49	SR3	61°11.00'	18°13.80'	72	22:20	Tu	04.06.2019	2:00	S 10,0
50	SR5	61°05.00'	19°34.78'	126	04:18	We	05.06.2019	4:00	S 10,0
51	EB1	61°04.00'	19°43.79'	128	08:45	We	05.06.2019	2:00	S 10,0
52	F33	60°31.99'	18°56.26'	135	14:42	We	05.06.2019	1:00	S 10,0
53	F64	60°11.34'	19°08.55'	285	17:51	We	05.06.2019	4:00	S 10,0
54	F69	59°47.00'	19°55.80'	189	01:14	Th	06.06.2019	3:00	S 10,0
55	TROSKAH	59°39.60'	19°53.00'	0	05:00	Th	06.06.2019	1:00	S 10,0
56	BY29	58°53.00'	20°19.00'	170	10:50	Th	06.06.2019	2:00	S 10,0
57	LL17	59°02.00'	21°04.77'	171	15:22	Th	06.06.2019	3:00	S 10,0
58	LL15	59°11.00'	21°44.81'	126	20:37	Th	06.06.2019	2:00	S 10,0
59	LL12	59°29.01'	22°53.81'	82	02:34	Fr	07.06.2019	2:00	S 10,0
60	F62	59°20.01'	23°15.81'	95	06:00	Fr	07.06.2019	1:30	S 10,0
61	XII3	59°52.01'	23°58.81'	38	11:22	Fr	07.06.2019	1:00	S 10,0
62	P	59°57.53'	24°39.72'	-	14:30	Fr	07.06.2019	0:00	S 10,0
63	HELSINKI	60°09.55'	24°55.37'	0	15:56	Fr	07.06.2019	0:00	S 10,0

Route map:



Cruise plan is printed at 06.05.2019 a 20:34.