



RV Aranda

## CRUISE PLAN

### Combine 1 Leg 2, 1/2017 26.1. - 3.2.2017

#### Description of the cruise

Monitoring of physical parameters (temperature, salinity, dissolved oxygen), general hydrography, nutrients and zooplankton of the Baltic Sea according to HELCOM MONAS program. This cruise is partly cooperation with SMHI Sweden, and thus also carries out Swedish Monitoring activities in Bay of Bothnia, Åland Sea and North-Eastern Baltic Proper.

#### Scientific staff:

<b>Chief scientist:</b>	Juha Flinkman	SYKE	26.01.2017-03.02.2017
CTD chief:		SYKE	26.01.2017-03.02.2017
Chief chemist:		SYKE	26.01.2017-03.02.2017
IT chief:		SYKE	26.01.2017-03.02.2017
		FMI	26.01.2017-03.02.2017
		SYKE	26.01.2017-03.02.2017
		SYKE	26.01.2017-03.02.2017
		SYKE	26.01.2017-03.02.2017
		SYKE	26.01.2017-03.02.2017
		FMI	26.01.2017-03.02.2017
		SYKE	26.01.2017-03.02.2017
		FMI	26.01.2017-03.02.2017
		FMI	26.01.2017-03.02.2017

Altogether 12 persons in scientific staff.

**Departure from:** HELSINKI  
**Departure time:** Thursday 26.01.2017 at 09:00

Cruising speed: 10,0 knots  
 Average station time: 1 h 30 min.

**Arrival to:** HELSINKI  
**Arrival time:** Friday 03.02.2017 at 05:31

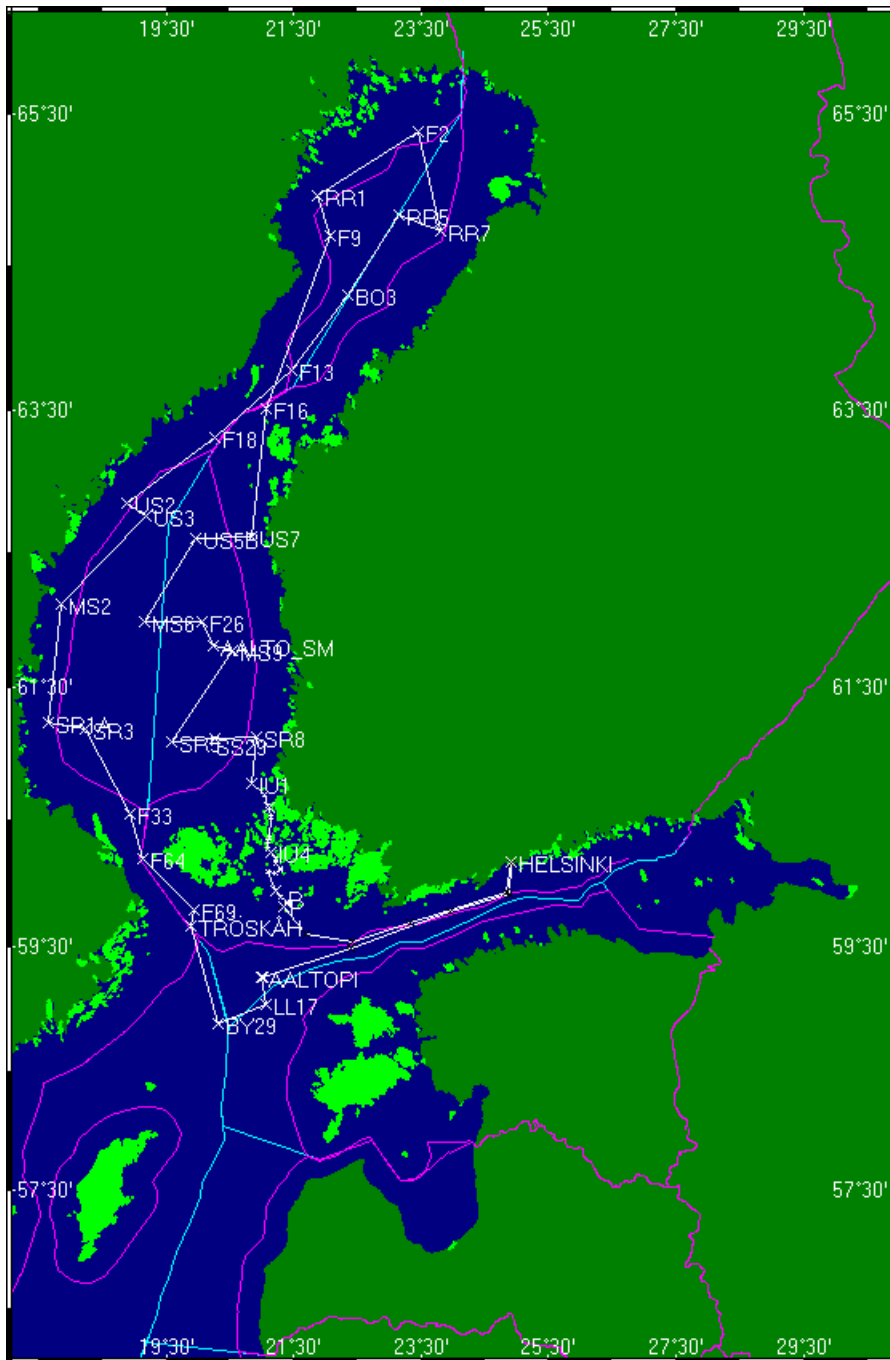
Duration of the cruise: 7 days 20 h 31 min  
 Length of the cruise: 1315,21 nautical miles  
 Number of stations 36. Points with name "P" are just route points without observations.

#### Route:

Nro	Station	Lat.	Long.	Depth		Arrival		Durat. hh:mm	Speed knots
				[m]	hh:mm	dy	dd.mm.yyyy		
0	HELSINKI	60°09.55'	24°55.37'	0	09:00	Th	26.01.2017	0:00	S 10,0
1	P	59°55.16'	24°50.48'	-	10:27	Th	26.01.2017	0:00	S 10,0
2	P	59°40.89'	23°20.39'	-	15:12	Th	26.01.2017	0:00	S 10,0
3	P	59°31.60'	22°25.33'	-	18:08	Th	26.01.2017	0:00	S 10,0
4	P	59°35.83'	21°41.95'	-	20:23	Th	26.01.2017	0:00	S 10,0
5	P	59°49.29'	21°18.60'	-	22:10	Th	26.01.2017	0:00	S 10,0
6	IU7	59°48.91'	21°20.20'	92	22:15	Th	26.01.2017	1:00	S 10,0
7	P	59°50.50'	21°24.00'	-	23:30	Th	26.01.2017	0:00	S 10,0

8	P	59°51.00'	21°24.20'	-	23:33	Th	26.01.2017	0:00	S	10,0
9	P	59°53.50'	21°18.00'	-	23:57	Th	26.01.2017	0:00	S	10,0
10	IU6	59°56.21'	21°13.26'	120	00:19	Fr	27.01.2017	1:00	S	10,0
11	P	60°05.00'	21°05.10'	-	02:17	Fr	27.01.2017	0:00	S	10,0
12	P	60°04.55'	21°12.80'	-	02:40	Fr	27.01.2017	0:00	S	10,0
13	P	60°06.25'	21°17.20'	-	02:57	Fr	27.01.2017	0:00	S	10,0
14	P	60°07.00'	21°18.00'	-	03:02	Fr	27.01.2017	0:00	S	10,0
15	P	60°09.40'	21°13.75'	-	03:21	Fr	27.01.2017	0:00	S	10,0
16	P	60°09.20'	21°12.75'	-	03:24	Fr	27.01.2017	0:00	S	10,0
17	P	60°11.10'	21°13.80'	-	03:36	Fr	27.01.2017	0:00	S	10,0
18	P	60°11.30'	21°12.40'	-	03:40	Fr	27.01.2017	0:00	S	10,0
19	IU4	60°14.00'	21°08.80'	51	04:00	Fr	27.01.2017	1:00	S	10,0
20	P	60°15.60'	21°05.50'	-	05:14	Fr	27.01.2017	0:00	S	10,0
21	P	60°19.20'	21°06.25'	-	05:35	Fr	27.01.2017	0:00	S	10,0
22	P	60°19.40'	21°05.50'	-	05:38	Fr	27.01.2017	0:00	S	10,0
23	P	60°20.80'	21°06.50'	-	05:47	Fr	27.01.2017	0:00	S	10,0
24	P	60°30.80'	21°08.60'	-	06:47	Fr	27.01.2017	0:00	S	10,0
25	IU2	60°35.01'	21°07.80'	54	07:12	Fr	27.01.2017	1:00	S	10,0
26	P	60°35.90'	21°05.60'	-	08:21	Fr	27.01.2017	0:00	S	10,0
27	P	60°41.00'	21°02.25'	-	08:53	Fr	27.01.2017	0:00	S	10,0
28	IU1	60°46.01'	20°50.80'	33	09:38	Fr	27.01.2017	1:00	S	10,0
29	SR8	61°07.59'	20°55.80'	46	12:48	Fr	27.01.2017	1:30	S	10,0
30	SS29	61°06.50'	20°16.00'	111	16:14	Fr	27.01.2017	1:30	S	10,0
31	SR5	61°05.00'	19°34.78'	126	19:44	Fr	27.01.2017	1:30	S	10,0
32	MS9	61°46.01'	20°31.83'	101	02:09	Sa	28.01.2017	1:30	S	10,0
33	AALTO_SM	61°48.09'	20°14.11'	100	04:31	Sa	28.01.2017	1:30	S	10,0
34	F26	61°59.01'	20°03.78'	140	07:13	Sa	28.01.2017	1:30	S	10,0
35	MS6	61°59.02'	19°09.81'	72	11:15	Sa	28.01.2017	1:30	S	10,0
36	US5B	62°35.17'	19°58.13'	214	17:00	Sa	28.01.2017	2:30	S	10,0
37	US7	62°36.01'	20°49.78'	23	21:53	Sa	28.01.2017	1:30	S	10,0
38	F16	63°31.01'	21°03.77'	45	04:55	Su	29.01.2017	1:30	S	10,0
39	F9	64°42.02'	22°03.77'	120	13:59	Su	29.01.2017	1:30	S	10,0
40	RR1	64°58.02'	21°51.76'	84	17:10	Su	29.01.2017	1:00	S	10,0
41	F2	65°23.02'	23°27.76'	91	22:55	Su	29.01.2017	1:30	S	10,0
42	RR7	64°44.02'	23°48.77'	39	04:25	Mo	30.01.2017	1:30	S	10,0
43	RR5	64°50.02'	23°09.77'	69	07:41	Mo	30.01.2017	1:00	S	10,0
44	BO3	64°18.12'	22°20.59'	109	12:30	Mo	30.01.2017	1:30	S	10,0
45	F13	63°47.01'	21°28.77'	65	17:51	Mo	30.01.2017	1:30	S	10,0
46	F18	63°18.86'	20°16.36'	105	23:38	Mo	30.01.2017	1:30	S	10,0
47	US2	62°50.72'	18°53.32'	204	05:50	Tu	31.01.2017	1:30	S	10,0
48	US3	62°45.53'	19°11.74'	182	08:19	Tu	31.01.2017	2:30	S	10,0
49	MS2	62°07.00'	17°50.78'	72	16:12	Tu	31.01.2017	1:30	S	10,0
50	SR1A	61°14.00'	17°39.79'	61	23:01	Tu	31.01.2017	1:30	S	10,0
51	SR3	61°11.00'	18°13.80'	72	02:11	We	01.02.2017	1:30	S	10,0
52	F33	60°31.99'	18°56.26'	135	08:06	We	01.02.2017	1:30	S	10,0
53	F64	60°11.34'	19°08.55'	285	11:45	We	01.02.2017	2:30	S	10,0
54	F69	59°47.00'	19°55.80'	189	17:39	We	01.02.2017	2:30	S	10,0
55	TRÖSKÅH	59°39.60'	19°53.00'	60	20:54	We	01.02.2017	1:30	S	10,0
56	BY29	58°53.00'	20°19.00'	170	03:15	Th	02.02.2017	2:00	S	10,0
57	LL17	59°02.00'	21°04.77'	171	07:46	Th	02.02.2017	1:30	S	10,0
58	AALTOPI	59°15.00'	21°00.00'	98	10:36	Th	02.02.2017	3:30	S	10,0
59	TRIANGELn	59°15.00'	21°01.02'	95	14:09	Th	02.02.2017	1:30	S	10,0
60	P	59°28.84'	22°23.37'	-	20:04	Th	02.02.2017	0:00	S	10,0
61	P	59°46.09'	23°57.62'	-	01:08	Fr	03.02.2017	0:00	S	10,0
62	P	59°55.07'	24°52.87'	-	04:03	Fr	03.02.2017	0:00	S	10,0
63	P	60°08.87'	24°54.49'	-	05:26	Fr	03.02.2017	0:00	S	10,0
64	HELSINKI	60°09.55'	24°55.37'	0	05:31	Fr	03.02.2017	1:30	S	10,0

Route map:



Cruise plan is printed at 10.01.2017 a 09:39.