



RV Aranda

## CRUISE PLAN

### COMBINE2 2015, 6/2015 25.5. - 9.6.2015

#### Description of the cruise

The r/v *Aranda* COMBINE2 expedition heads first to the Gulf of Bothnia wherefrom it continues via the Åland Sea towards the southern parts of the Gotland Basin. The main purposes of the expedition are investigations of the state of soft-bottom macrozoobenthos and observations on bottom water oxygen levels and general hydrography in Baltic Sea open-sea areas. The work plan contributes to the HELCOM Baltic Sea monitoring programme as well as to the SYKE Marine Research Centre's long-term monitoring study on macrozoobenthic communities. Sediment and water samples are also collected for the monitoring of radioactive substances (HELCOM-MORS and Finnish Radiation and Nuclear Safety Authority). Also other studies are carried out during the cruise, including observations on the progress and effects of the major saltwater inflow that occurred in the southern Baltic Sea in December 2014.

#### Scientific staff:

<b>Chief scientist:</b>	Kari Lehtonen	SYKE	25.05. - 09.06.2015
<b>CTD/ICT chiefs:</b>		SYKE	25.05. - 09.06.2015
		FMI	25.05. - 29.05.2015
<b>Chief chemists:</b>		SYKE	01.06. - 09.06.2015
		SYKE	01.06. - 09.06.2015
		SYKE	25.05. - 29.05.2015
		SYKE	25.05. - 09.06.2015
		SYKE	25.05. - 09.06.2015
		FMI	25.05. - 09.06.2015
		SYKE	01.06. - 09.06.2015
		SYKE	25.05. - 29.05.2015
		FMI	25.05. - 29.05.2015
		SYKE	25.05. - 29.05.2015
		FMI	01.06. - 09.06.2015
		FMI	25.05. - 09.06.2015
		SYKE	25.05. - 09.06.2015
		SYKE	25.05. - 09.06.2015
		UH	01.06. - 09.06.2015
		UH	01.06. - 09.06.2015

Altogether 19 persons in scientific staff.

**Departure from:** HELSINKI  
**Departure time:** Monday 25.05.2015 at 11:00

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

**Arrival to:** HELSINKI  
**Arrival time:** Tuesday 09.06.2015 at 04:00

Duration of the cruise: 14 days 17 h 0 min

Length of the cruise: 1725,08 nautical miles

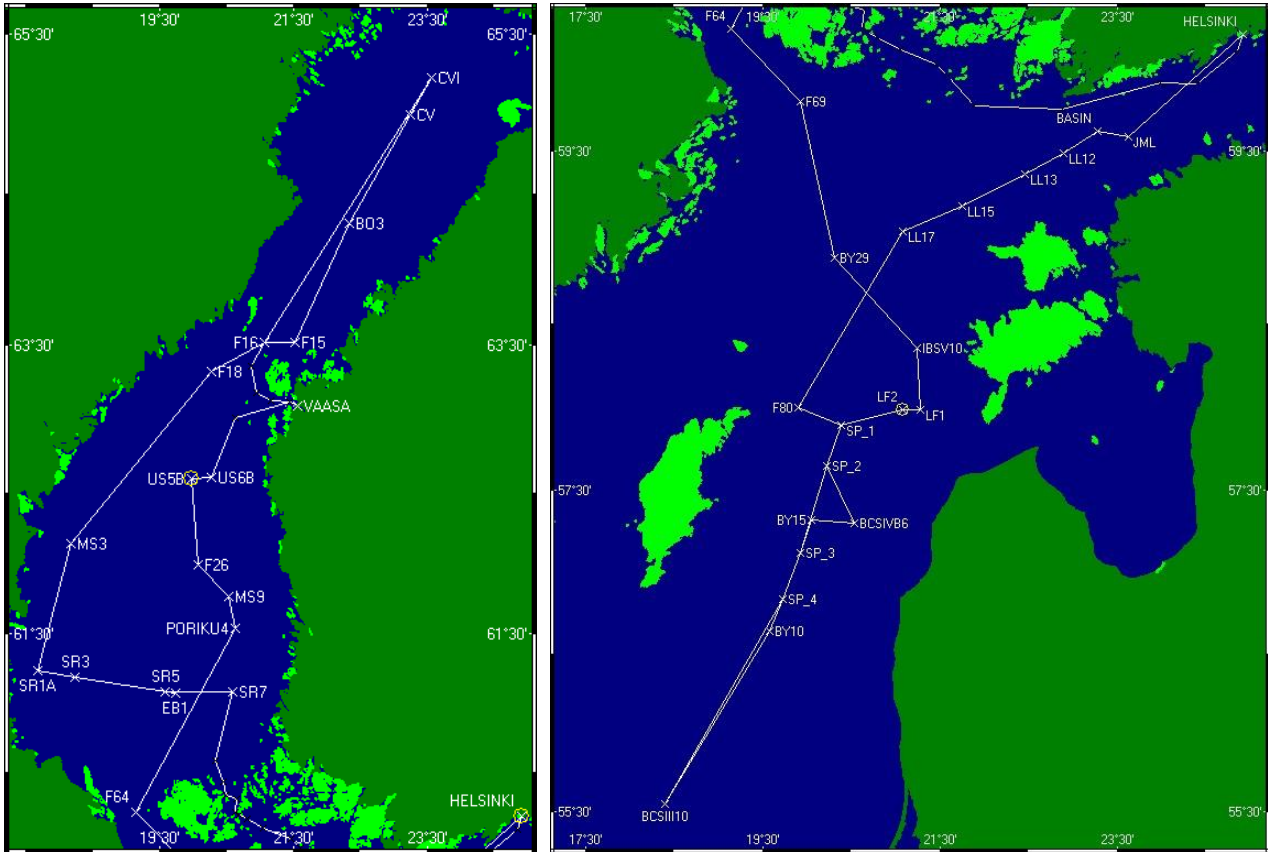
Number of stations 43. Points with name "P" are just route points without observations.

**Route:**

Nro	Station	Lat.	Long.	Depth [m]	Arrival		Durat. hh:mm	Speed knots	
					hh:mm	dy dd.mm.yyyy			
0	HELSINKI	60°09.55'	24°55.37'	0	11:00	Mo	25.05.2015	0:00	S 10,0
1	P	60°04.09'	24°51.45'	-	11:34	Mo	25.05.2015	0:00	S 10,0
2	P	59°52.77'	24°23.89'	-	13:21	Mo	25.05.2015	0:00	S 10,0
3	P	59°53.19'	23°59.21'	-	14:36	Mo	25.05.2015	0:00	S 10,0
4	P	59°44.29'	22°52.98'	-	18:03	Mo	25.05.2015	0:00	S 10,0
5	P	59°45.54'	21°53.34'	-	21:03	Mo	25.05.2015	0:00	S 10,0
6	P	59°55.45'	21°35.65'	-	22:23	Mo	25.05.2015	0:00	S 10,0
7	P	59°59.57'	21°27.43'	-	22:58	Mo	25.05.2015	0:00	S 10,0
8	P	60°04.30'	21°03.16'	-	00:16	Tu	26.05.2015	0:00	S 10,0
9	P	60°08.60'	20°47.94'	-	01:08	Tu	26.05.2015	0:00	S 10,0
10	P	60°10.45'	20°41.36'	-	01:31	Tu	26.05.2015	0:00	S 10,0
11	P	60°11.88'	20°37.24'	-	01:46	Tu	26.05.2015	0:00	S 10,0
12	P	60°17.80'	20°38.48'	-	02:21	Tu	26.05.2015	0:00	S 10,0
13	P	60°19.43'	20°29.43'	-	02:50	Tu	26.05.2015	0:00	S 10,0
14	P	60°24.92'	20°26.55'	-	03:24	Tu	26.05.2015	0:00	S 10,0
15	P	60°34.64'	20°19.97'	-	04:26	Tu	26.05.2015	0:00	S 10,0
16	SR7	61°05.01'	20°35.79'	78	07:34	Tu	26.05.2015	3:00	S 10,0
17	SR5	61°05.00'	19°34.78'	126	13:31	Tu	26.05.2015	4:00	S 10,0
18	EB1	61°04.00'	19°43.79'	128	17:57	Tu	26.05.2015	1:00	S 10,0
19	SR3	61°11.00'	18°13.80'	72	23:21	Tu	26.05.2015	2:00	S 10,0
20	SR1A	61°14.00'	17°39.79'	61	03:01	We	27.05.2015	2:00	S 10,0
21	MS3	62°08.07'	18°09.78'	84	10:37	We	27.05.2015	2:00	S 10,0
22	F18	63°18.86'	20°16.36'	105	21:46	We	27.05.2015	2:00	S 10,0
23	F16	63°31.01'	21°03.77'	45	02:13	Th	28.05.2015	2:00	S 10,0
24	F15	63°31.01'	21°30.78'	49	05:25	Th	28.05.2015	2:00	S 10,0
25	BO3	64°18.12'	22°20.59'	109	12:37	Th	28.05.2015	2:00	S 10,0
26	CV	65°00.02'	23°14.77'	89	19:24	Th	28.05.2015	2:00	S 10,0
27	CVI	65°14.02'	23°33.77'	71	23:01	Th	28.05.2015	2:00	S 10,0
28	F16	63°31.01'	21°03.77'	45	13:11	Fr	29.05.2015	0:00	S 10,0
29	P	63°21.42'	20°52.22'	-	14:16	Fr	29.05.2015	0:00	S 10,0
30	P	63°10.56'	20°56.51'	-	15:22	Fr	29.05.2015	0:00	S 10,0
31	P	63°07.16'	21°09.92'	-	16:04	Fr	29.05.2015	0:00	S 10,0
32	P	63°06.56'	21°26.82'	-	16:50	Fr	29.05.2015	0:00	S 10,0
33	VAASA	63°05.21'	21°33.78'	0	17:11	Fr	29.05.2015	66:00	S 10,0
34	P	63°06.56'	21°26.82'	-	11:31	Mo	01.06.2015	0:00	S 10,0
35	P	63°00.35'	20°37.41'	-	13:51	Mo	01.06.2015	0:00	S 10,0
36	US6B	62°36.01'	20°15.78'	83	16:28	Mo	01.06.2015	3:00	S 10,0
37	US5B	62°35.17'	19°58.13'	214	20:17	Mo	01.06.2015	3:00	S 10,0
38	F26	61°59.01'	20°03.78'	140	02:55	Tu	02.06.2015	2:00	S 10,0
39	MS9	61°46.01'	20°31.83'	101	06:46	Tu	02.06.2015	2:00	S 10,0
40	PORIKU4	61°32.41'	20°37.19'	106	10:09	Tu	02.06.2015	2:00	S 10,0
41	F64	60°11.34'	19°08.55'	285	21:20	Tu	02.06.2015	4:00	S 10,0
42	F69	59°47.00'	19°55.80'	189	04:44	We	03.06.2015	4:00	S 10,0
43	BY29	58°53.00'	20°19.00'	170	14:15	We	03.06.2015	2:00	S 10,0
44	IBSV10	58°21.00'	21°14.81'	78	20:35	We	03.06.2015	2:00	S 10,0
45	LF1	57°58.95'	21°16.84'	67	00:47	Th	04.06.2015	1:30	S 10,0
46	LF2	57°59.00'	21°05.00'	80	02:55	Th	04.06.2015	2:00	S 10,0
47	SP_1	57°53.33'	20°23.12'	?	07:13	Th	04.06.2015	2:00	S 10,0
48	SP_2	57°38.59'	20°13.46'	?	10:46	Th	04.06.2015	2:00	S 10,0
49	BCSIVB6	57°18.00'	20°32.00'	117	15:03	Th	04.06.2015	3:00	S 10,0
50	BY15	57°19.20'	20°03.00'	238	19:38	Th	04.06.2015	5:00	S 10,0
51	SP_3	57°07.08'	19°55.50'	?	01:54	Fr	05.06.2015	2:00	S 10,0
52	SP_4	56°49.77'	19°43.53'	?	05:45	Fr	05.06.2015	2:00	S 10,0
53	BY10	56°38.00'	19°35.00'	145	09:01	Fr	05.06.2015	5:00	S 10,0
54	BCSIII10	55°33.00'	18°24.00'	90	21:38	Fr	05.06.2015	3:00	S 10,0
55	SP_4	56°49.77'	19°43.53'	?	09:30	Sa	06.06.2015	2:00	S 10,0
56	SP_3	57°07.08'	19°55.50'	?	13:21	Sa	06.06.2015	2:00	S 10,0
57	SP_2	57°38.59'	20°13.46'	?	18:38	Sa	06.06.2015	2:00	S 10,0
58	SP_1	57°53.33'	20°23.12'	?	22:12	Sa	06.06.2015	2:00	S 10,0
59	F80	58°00.00'	19°53.81'	191	01:54	Su	07.06.2015	4:00	S 10,0
60	LL17	59°02.00'	21°04.77'	171	13:07	Su	07.06.2015	3:00	S 10,0

61	LL15	59°11.00'	21°44.81'	126	18:22	Su	07.06.2015	2:00	S	10,0
62	LL13	59°22.00'	22°27.81'	100	22:49	Su	07.06.2015	5:00	S	10,0
63	LL12	59°29.01'	22°53.81'	82	05:19	Mo	08.06.2015	5:00	S	10,0
64	BASIN	59°36.72'	23°16.95'	72	11:43	Mo	08.06.2015	5:00	S	10,0
65	JML	59°34.91'	23°37.61'	80	17:47	Mo	08.06.2015	5:00	S	10,0
66	HELSINKI	60°09.55'	24°55.37'	0	04:00	Tu	09.06.2015	0:00	S	10,0

**Route map:**



Cruise plan is printed at 22.05.2015 a 10:28.