CRUISE REPORT

R/V Aranda

Cruise 09/2022

MAAMERI5

5.- 10. September 2022

This report is based on preliminary data and is subject to changes.

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Chief Scientist: Laura Tuomi /Finnish Meteorological Institute

1. MAAMERI5 research cruise

The RV Aranda was on MAAMERI5 research cruise on 5.-10.9. 2022. The study area was the Archipelago Sea. The overall purpose of the measurement campaign was to collect hydrographic data in this area and maintain, recover and deploy instruments measuring waves and currents.

Hydrography measurements were made along the deeper channels crossing the Archipelago Sea and in the northern and southern edge of the area. During the cruise measurements from 53 stations were collected (Fig. 1). Some of the stations were visited twice during the cruise.

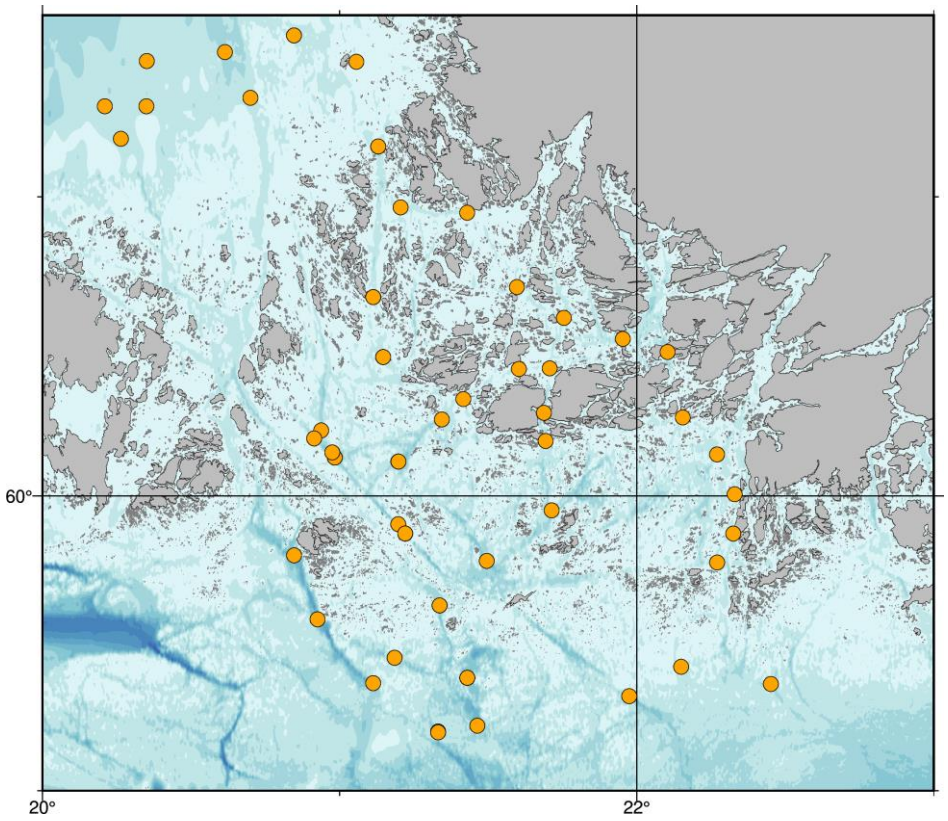

Figure 1. Stations visited during the MAAMERI5 cruise shown with orange dots. Bathymetry source: EMODnet Bathymetry (www.emodnet-bathymetry.eu).

Finnish Environment Institute
Latokartanonkaari 11
FI-00790 Helsinki
Finland

http://www.syke.fi/en

Finnish Meteorological Institute
Erik Palménin aukio 1
P.O. Box 503
FI-00101 Helsinki
Finland
http://en.ilmatieteenlaitos.fi

During the cruise one ADCP was recovered and three were anchored in the Archipelago Sea. In addition maintenance to FMI's wave buoy was performed.

The list of stations visited in the MAAMERI5 research cruise can be found in Appendix 1.

2. Observations

Measurements of temperature and salinity were done with R/V Aranda CTD in the Archipelago Sea. The aim of these measurement was to define the overall hydrographic conditions in the area. The CTD measurements showed that the temperature in the surface layer varied between 10 - 18 ºC (Fig. 2). Surface layer temperatures were lower in the northern part of the Archipelago Sea than in the southern part (Fig. 3). The surface salinity varied between 5.6 and 6.6 psu being lower in the northern part of the domain (Fig 2 and 3). In the lower layer salinities there were large differences with lowest values ~ 6 psu in the northernmost part of the measurement area and highest ~10.8 psu in the southernmost part of the measurement area (Fig. 3).

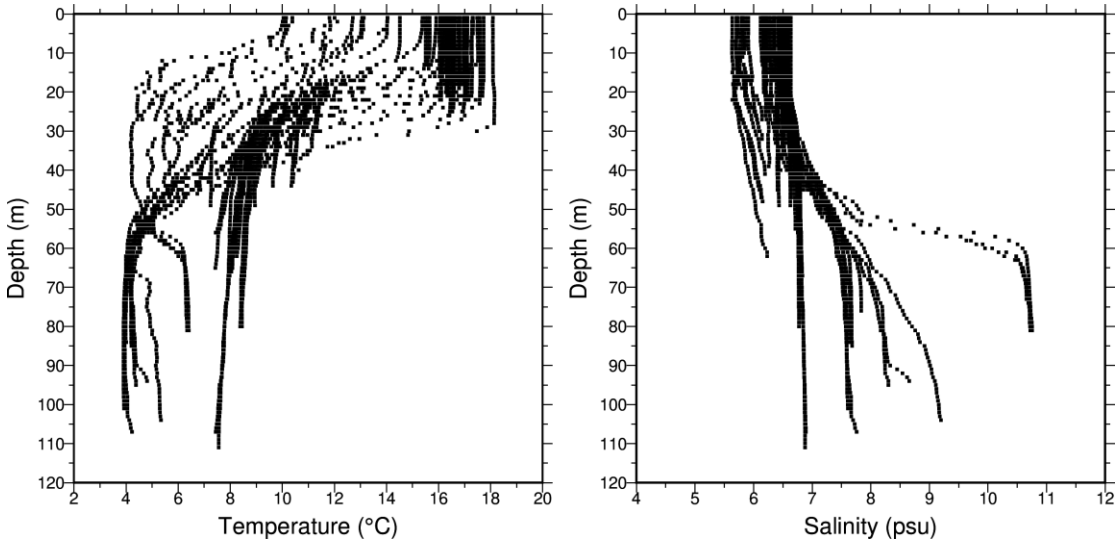

Figure 2. Temperature and salinity profiles measured during the cruise.

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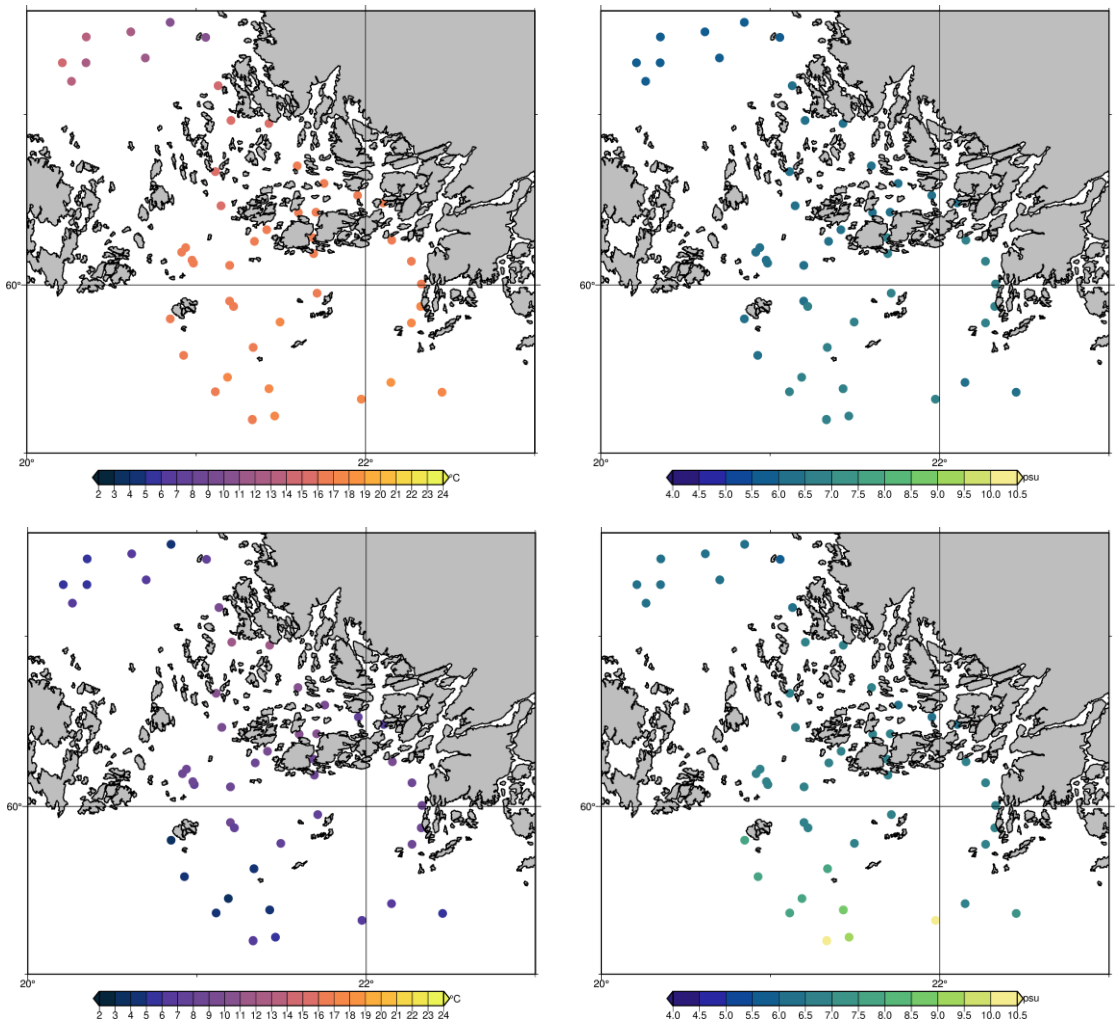

Figure 3. Surface (upper) and bottom (lower) temperature (on the left) and salinity (on the right) in the measurements points in the Archipelago Sea.

3. Participants

Scientific crew	Organistation	Contact details for data	Dataset
Laura Tuomi	Finnish Meteorological Institute (FMI)	firstname.lastname@fmi.fi	CTD data
Erkka Ilonen	FMI		
Anni Jokiniemi	FMI		
Hedi Kanarik	FMI		
Jani Särkkä	FMI		
Tuomo Roine	FMI		
Elina MIettunen	Finnish Environment Institute (SYKE)		

Appendix 1: List of stations visited during MAAMERI5 cruise

IDX	Station	Latitude	Longitude	Depth	Date and time (UTC)
0284	39A	N60º 04.01’	E024º 58.81’	43	20220905 08.36
0285	MAME84	N59º 42.67’	E022º 08.97’	52	20220905 17.55
0286	MAME85	N59º 41.55’	E021º 25.80’	101	20220905 21.15
0287	MAME86	N59º 43.59’	E021º 11.12’	83	20220905 22.29
0288	UTO_SSE	N59º 36.07’	E021º 19.91’	88	20220905 23.54
0289	IU7	N59º 48.91’	E021º 20.20’	93	20220906 02.14
0290	IU6	N59º 56.21’	E021º 13.26’	118	20220906 03.06
0291	IU5	N60º 03.49’	E021º 11.90’	88	20220906 04.35
0292	IU4	N60º 14.00’	E021º 08.80’	49	20220906 06.47
0293	IU3	N60º 20.00’	E021º 06.81’	51	20220906 08.13
0294	IU2	N60º 35.01’	E021º 07.79’	49	20220906 10.18
0295	ISOKARI_E	N60º 43.40’	E021º 03.39’	24	20220906 12.37
0296	MAME87	N60º 42.16’	E020º 57.31’	38	20220906 12.50
0297	IU1	N60º 46.01’	E020º 50.80’	34	20220906 14.06
0298	S1-16	N60º 44.36’	E020º 36.85’	69	20220906 15.33
0299	SMVM2N	N60º 43.48’	E020º 21.07’	55	20220906 16.54
0300	SMVM2Nb	N60º 39.01’	E020º 20.99’	48	20220906 17.57
0301	SVM2N	N60º 39.00’	E020º 12.59’	54	20220906 18.56
0302	MAME88	N60º 35.78’	E020º 15.85’	37	20220906 19.56
0303	MAME89	N60º 39.84’	E020º 41.99’	38	20220906 21.53
0304	MAME90	N60º 06.62’	E020º 56.28’	73	20220907 04.12
0305	MAME91	N60º 05.81’	E020º 54.86’	71	20220907 05.00
0306	MAME82	N60º 03.89’	E020º 59.04’	74	20220907 05.57
0307	MAME82	N60º 03.89’	E020º 59.04’	74	20220907 07.06
0308	MAME82	N60º 03.89’	E020º 59.04’	74	20220907 08.00
0309	MAAMERI20	N60º 04.41’	E020º 58.53’	66	20220907 09.05
0310	SODERKOBB	N59º 57.15’	E021º 11.85’	69	20220907 12.05
0311	VIDSKAR_V	N59º 53.14’	E021º 29.29’	76	20220907 14.00
0312	VITHARU	N59º 53.44’	E021º 29.72’	73	20220907 15.36
0313	GRANHOLM	N59º 58.56’	E021º 42.84’	63	20220907 17.07
0314	HALLERS	N60º 05.56’	E021º 41.63’	48	20220907 18.18
0315	ANGESNAS	N60º 08.39’	E021º 41.28’	62	20220907 19.02
0316	LOVSKAR	N60º 12.87’	E021º 42.45’	33	20220907 20.02
0317	BJORNHOLM	N60º 12.81’	E021º 36.22’	43	20220907 20.58
0318	STENGRUND	N60º 09.77’	E021º 25.01’	34	20220907 22.20
0319	CO2RODSKAR	N60º 07.72’	E021º 20.65’	52	20220907 23.06
0320	JURMO_NW	N59º 41.55’	E021º 25.80’	96	20220908 04.19
0321	MAME85	N59º 41.55’	E021º 25.80’	104	20220908 04.19
0322	TEILI2	N59º 41.00’	E021º 06.80’	94	20220908 05.58
0323	SMVM2S	N59º 47.50’	E020º 55.56’	115	20220908 07.56
0324	KOKAR	N59º 54.00’	E020º 50.82’	110	20220908 09.39
0325	UTO_SSE	N59º 35.98’	E021º 19.91’	84	20220908 14.22
0326	MAME66	N59º 36.65’	E021º 27.84’	112	20220908 15.22
0327	MAME22	N59º 39.67’	E021º 58.50’	89	20220908 17.53
0328	LADERKLUBB	N59º 53.28’	E022º 16.26’	56	20220908 23.50
0329	HOGSARA	N59º 56.20’	E022º 19.50’	47	20220909 00.43
0330	ANGESKAR	N60º 00.18’	E022º 14.50’	51	20220909 01.47

0331	GULLKRO35	N60º 04.20’	E022º 16.24’	57	20220909 02.42
0332	MAME92	N60º 07.93’	E022º 09.31’	35	20220909 03.48
0333	TORRGRUND	N60º 14.50’	E022º 06.25’	54	20220909 05.01
0334	SEILI_N	N60º 15.82’	E021º 57.21’	57	20220909 06.13
0335	MAME93	N60º 17.93’	E021º 45.30’	43	20220909 07.34
0336	X1	N60º 21.01’	E021º 35.81’	36	20220909 08.35
0337	MAME94	N60º 28.43’	E021º 25.77’	39	20220909 09.55
0338	BEX12_N	N60º 28.96’	E021º 12.32’	37	20220909 11.00
0339	IU1	N60º 46.00’	E020º 50.81’	34	20220909 13.15
0340	IU2	N60º 35.01’	E021º 07.80’	47	20220909 15.09
0341	IU3	N60º 20.01’	E021º 06.80’	50	20220909 17.08
0342	IU4	N60º 14.00’	E021º 08.81’	49	20220909 18.16
0343	IU5	N60º 03.49’	E021º 11.90’	89	20220909 20.18
0344	IU6	N59º 56.21’	E021º 13.25’	122	20220909 21.43
0345	IU7	N59º 48.92’	E021º 20.20’	92	20220909 22.56
0346	MAME78	N59º 40.91’	E022º 27.10’	60	20220910 03.34

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