

BOOS News relevant for CDWCWG

1st CDWCWG Meeting


27 March 2024

Helsinki, Finland







Thomas Hammarklint



BOOS Water Level products



BOOS
Baltic Operational
Oceanographic System

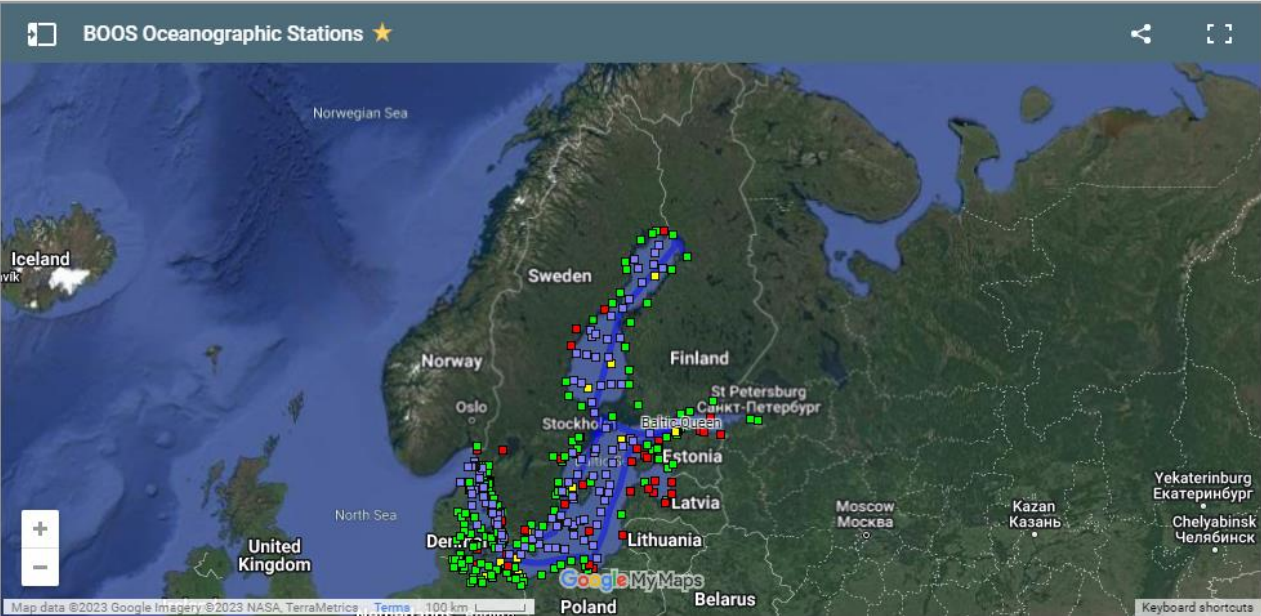


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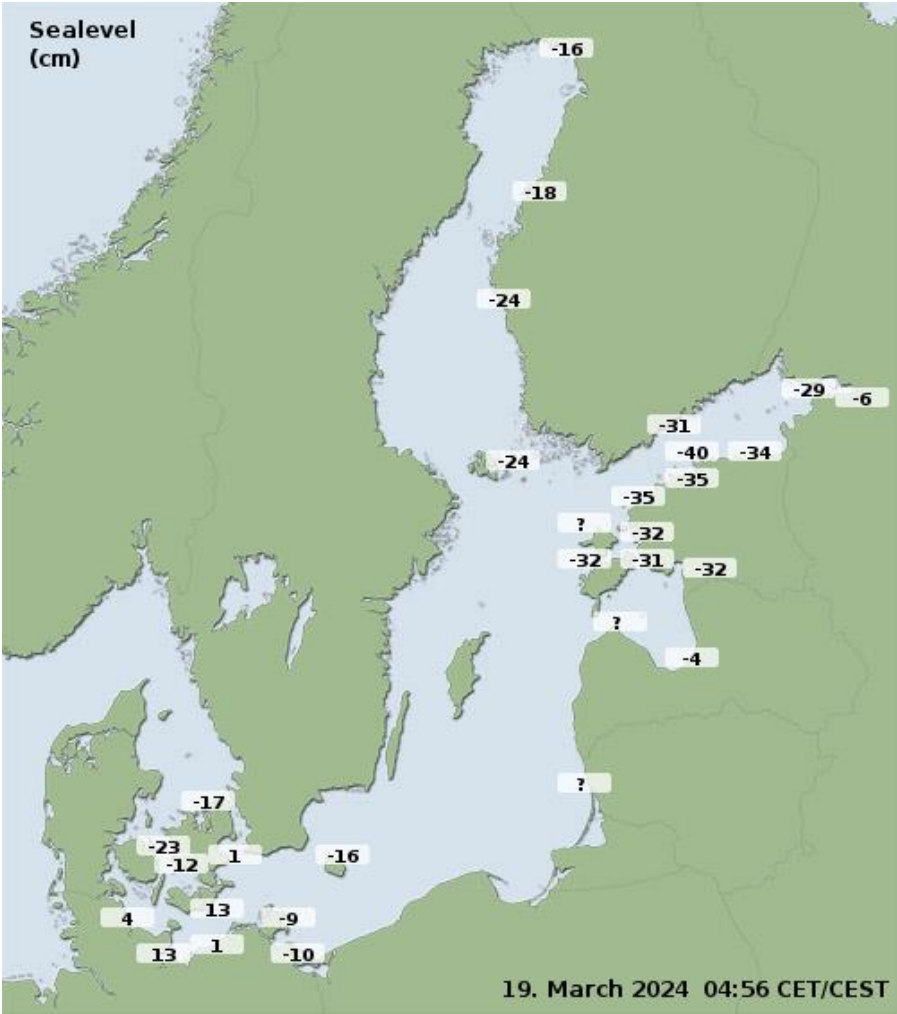
BOOS > BOOS Stations

BOOS Stations

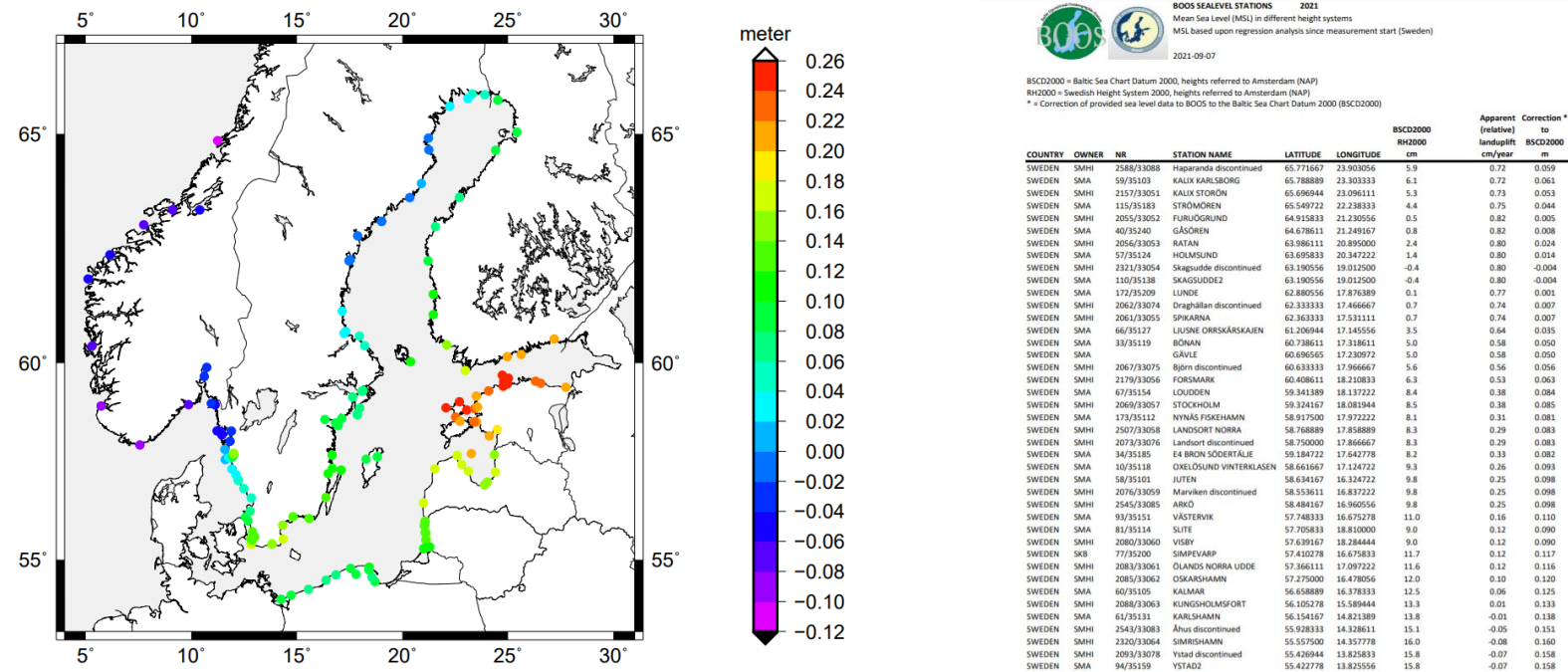


BOOS Oceanographic Stations ★

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Mean Sea Level



BOOS SEALEVEL STATIONS 2021
Mean Sea Level (MSL) in different height systems
MSL based upon regression analysis since measurement start (Sweden)
2021-09-07

BSCD2000 = Baltic Sea Chart Datum 2000, heights referred to Amsterdam (NAAP)
RH2000 = Swedish Height System 2000, heights referred to Amsterdam (NAAP)
* = Correction of provided sea level data to BOOS to the Baltic Sea Chart Datum 2000 (BSCD2000)

COUNTRY	OWNER	NR	STATION NAME	LATITUDE	LONGITUDE	BSCD2000 RH2000 cm	Apparent (relative) to landuplift cm/year	Correction * to BSCD2000 m
SWEDEN	SMHI	2588/33088	Haparanda discontinued	65.771667	23.903056	5.9	0.72	0.059
SWEDEN	SMA	59/35103	KALIX KARLSBORG	65.788889	23.303333	6.1	0.72	0.061
SWEDEN	SMHI	2157/33051	KALIX STORÖN	65.696944	23.096111	5.3	0.73	0.053
SWEDEN	SMA	115/35189	STRÖMÖREN	65.549722	22.238333	4.4	0.75	0.044
SWEDEN	SMHI	2055/33052	FURUÖGRUND	64.915833	21.230556	0.5	0.82	0.005
SWEDEN	SMA	40/35240	GÄSÖREN	64.678611	21.249167	0.8	0.82	0.008
SWEDEN	SMHI	2056/33053	RATAN	63.986111	20.895000	2.4	0.80	0.024
SWEDEN	SMA	57/35124	HOLMSUND	63.695833	20.347222	1.4	0.80	0.014
SWEDEN	SMHI	2321/33054	Skagvudde discontinued	63.190556	19.012500	-0.4	0.80	-0.004
SWEDEN	SMA	110/35138	SKAGSUDEE2	63.190556	19.012500	-0.4	0.80	-0.004
SWEDEN	SMA	172/35209	LUNDE	62.880556	17.876889	0.1	0.77	0.001
SWEDEN	SMHI	2062/33074	Dräghallen discontinued	62.333333	17.466667	0.7	0.74	0.007
SWEDEN	SMHI	2063/33055	SPARNA	62.363333	17.511111	0.7	0.74	0.007
SWEDEN	SMA	66/35127	LJUSNE ÖRSKÄRSKAJEN	61.206944	17.145556	3.5	0.64	0.035
SWEDEN	SMA	33/35119	BÖNAN	60.738611	17.318611	5.0	0.58	0.050
SWEDEN	SMA	173/35112	GÄVLE	60.696565	17.230972	5.0	0.58	0.050
SWEDEN	SMHI	2067/33075	Björn discontinued	60.633333	17.966667	5.6	0.56	0.056
SWEDEN	SMHI	2179/33056	FORSÅRE	60.408611	18.210833	6.3	0.53	0.063
SWEDEN	SMA	67/35154	LOUDDEN	59.341389	18.137222	8.4	0.38	0.084
SWEDEN	SMHI	2069/33057	STOCKHOLM	59.324167	18.081944	8.5	0.38	0.085
SWEDEN	SMA	173/35112	NYNÄS Fiskehamn	58.917500	17.972222	8.1	0.31	0.081
SWEDEN	SMHI	2507/33058	LANDSÖRT NORRA	58.766889	17.838889	8.3	0.29	0.083
SWEDEN	SMHI	2073/33076	Landsort discontinued	58.750000	17.866667	8.3	0.29	0.083
SWEDEN	SMA	34/35185	E4 BRON SÖDERTÄLJE	58.184722	17.642778	8.2	0.33	0.082
SWEDEN	SMA	10/35118	OXELÖSUND VINTERKLASSEN	58.661667	17.124722	9.3	0.26	0.093
SWEDEN	SMA	58/35101	JÜTEN	58.634167	16.324722	9.8	0.25	0.098
SWEDEN	SMHI	2076/33059	Naviken discontinued	58.553611	16.837222	9.8	0.25	0.098
SWEDEN	SMHI	2545/33085	ARKO	58.484167	16.960556	9.8	0.25	0.098
SWEDEN	SMA	93/35151	VÄSTERVIK	57.748333	16.675278	11.0	0.16	0.110
SWEDEN	SMA	81/35114	SÄTTE	57.709833	18.810000	9.0	0.12	0.090
SWEDEN	SMHI	2080/33060	VISBY	57.639167	18.284444	9.0	0.12	0.090
SWEDEN	SMHI	77/35200	SNÄPPEVARP	57.410278	16.675833	11.7	0.12	0.117
SWEDEN	SMHI	2083/33061	ÖLANDS NORRA UDDE	57.366111	17.097222	11.6	0.12	0.116
SWEDEN	SMHI	2085/33062	ÖSKARSHAMN	57.275000	16.478056	12.0	0.10	0.120
SWEDEN	SMA	60/35105	KALMAR	56.658889	16.378333	12.5	0.06	0.125
SWEDEN	SMHI	2086/33063	KUNGSBOLMSFÖRT	56.105278	15.589444	13.3	0.01	0.133
SWEDEN	SMA	61/35131	KARLSHAMN	56.154167	14.821389	13.8	-0.01	0.138
SWEDEN	SMHI	2543/33083	Åhus discontinued	55.928333	14.328611	15.1	-0.05	0.151
SWEDEN	SMHI	2320/33064	SIMRISHAMN	55.557500	14.357778	16.0	-0.08	0.160
SWEDEN	SMHI	2093/33078	Vistad discontinued	55.426944	13.825833	15.8	-0.07	0.158
SWEDEN	SMA	94/35159	YSTAD2	55.422778	13.825556	15.8	-0.07	0.158

Fig. 4b: Differences between the reference levels of the old national chart datums with respect to Baltic Sea Chart Datum 2000 (BSCD2000). In Sweden and Finland, the old reference levels are equal to Mean Sea Level transferred to year 2023 (according to different national conventions). The values from Norway shows the Mean Sea Level over the period 1996-2014, relative to BSCD2000. In Estonia, Latvia and Lithuania, the Kronstadt reference level is used as old chart datum. In Poland, the local Polish Height System Amsterdam NN₅₅ is used as chart datum. Notice how postglacial rebound reduces the magnitude of the mean sea level in the Bay of Bothnia. The values are shown in this [Table](#).

Cooperation BSHC-BOOS

Memorandum of Understanding between BOOS and BSHC on transition to a harmonised vertical reference on the Baltic Sea

Noting that

- the IHO Baltic Sea Hydrographic Commission Conference (BSHCC19) has approved the goal to have a harmonised vertical reference on Baltic Sea for all water level and depth related information (e.g. tides, mareographs, interpolation and prediction of water levels, nautical charts). Chart datum Working Group was established to promote transition to the harmonised vertical reference which will be based on the European Vertical Reference System,
- the Baltic Oceanographic Observation System (BOOS) has a similar goal to have a harmonised vertical reference based on European Vertical Reference System on Baltic Sea,
- and both organisations expect that there will be many benefits with mutual co-operations and other relevant bodies

both organisations agree to co-operate on the transition to a common vertical reference for depth and water level information, with the aim to avoid duplication of work and to maximize mutual assistance.

Signatures

Tallinn, 30 June 2014



Urmas Lips
BOOS Chair

Riga, 12 June 2014



Taivo Kivimäe
BSHC Chair

Thank you!



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