



## **BOOS News (relevant for CDWG)**

Thomas Hammarklint

[Thomas.Hammarklint@sjofartsverket.se](mailto:Thomas.Hammarklint@sjofartsverket.se)

CDWG10 Arkö 2018-02-08



SWEDISH MARITIME  
ADMINISTRATION

# Bullet points



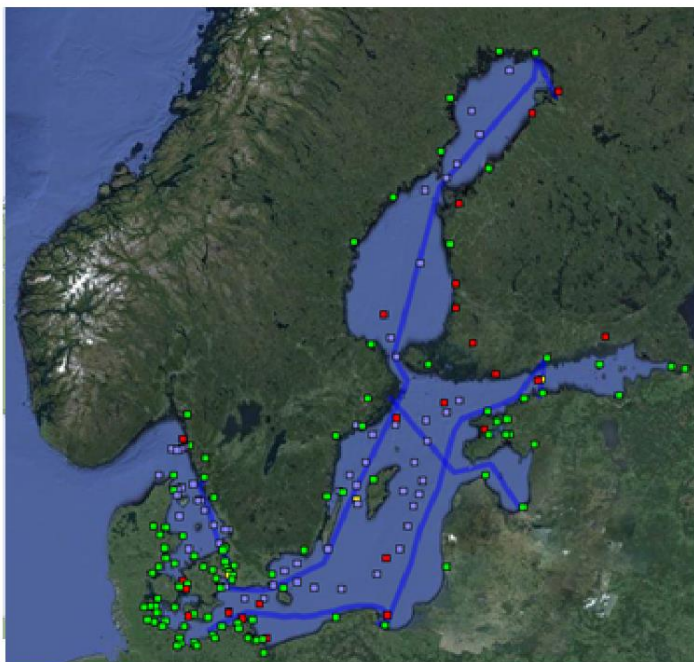
- Swedish Maritime Administration (SMA) - partner in BOOS since May 2017!
- All SMA oceanographic data will be available in real-time, for example sea level data from 36 tide gauges (the new Swedish Sea Level network)
- BOOS Products
  - BOOS Stations
  - BOOS Sealevels
- CMEMS
  - INSTAC, EMODNET
  - BOOS Data Portal
  - Schematic data flow
  - Cooperation with EuroGOOS Tide Gauge Task Team (TGTT)
- Cooperation between BOOS and BSHC
  - A Memorandum of Understanding (MoU) is signed in 2014
  - Implementation of Baltic Sea Chart Datum 2000
  - Inventory of tide gauge operators in the Baltic

# BOOS Products



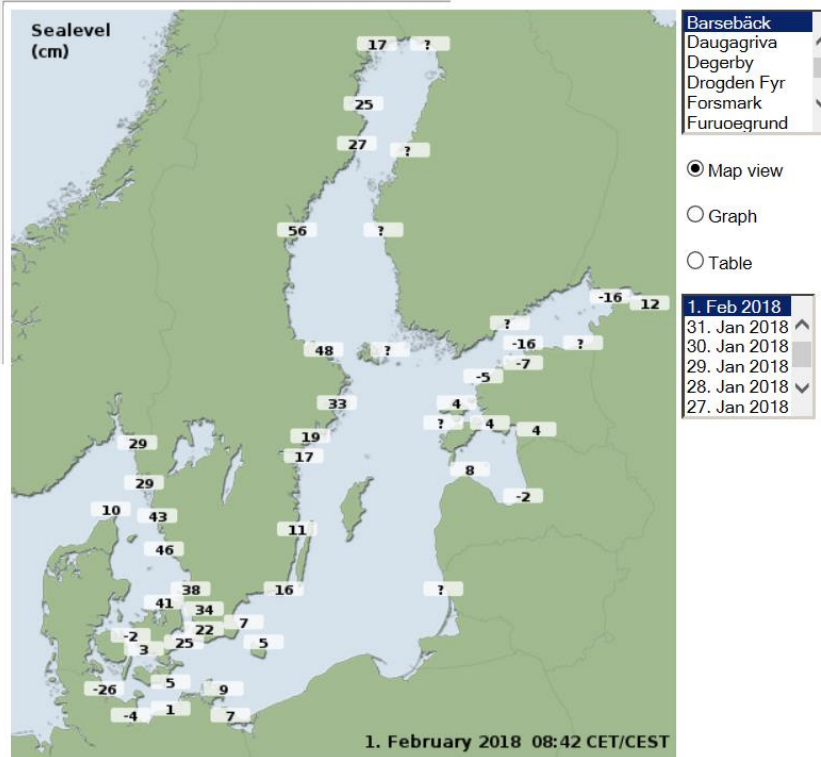
HOME	PRODUCTS	REPORTS	HIROMB	PROJECTS	BACKGRND	EVENTS	DATA	LINKS	NEWSLETTER
Observations	Forecasts	Models	Member prod.						
BOOS Stations	Currents	Waves	Sealevels	SST	Vertical profiles	Algae	ICE		

## BOOS Stations



HOME	PRODUCTS	REPORTS	HIROMB	PROJECTS	BACKGRND	EVENTS	DATA	LINKS	NEWSLETTER
Observations	Forecasts	Models	Member prod.						
BOOS Stations	Currents	Waves	Sealevels	SST	Vertical profiles	Algae	ICE		

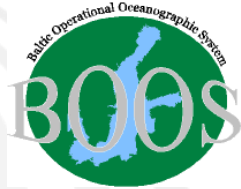
## BOOS Sealevels



# CMEMS

## Copernicus Marine Environmental Monitoring Service

### INSTAC



### INSTAC objectives

- Provide oceanographic in-situ observations from European Seas
  - Both real-time and delayed mode data
  - Sealevel data from ~ 200 tide gauges is provided from the Baltic Sea
- Harmonized data format (NetCDF) and vocabularies (CF)
  - Implement routines for quality control (QC) on the data
  - Cooperation with EuroGOOS Tide Gauge Task Team (TGTT), where SMA is active, especially on vertical reference datums.

# BOOS Data Portal



■ 200 Tide gauges (TG)



■ 20 Fixed platforms (FP)



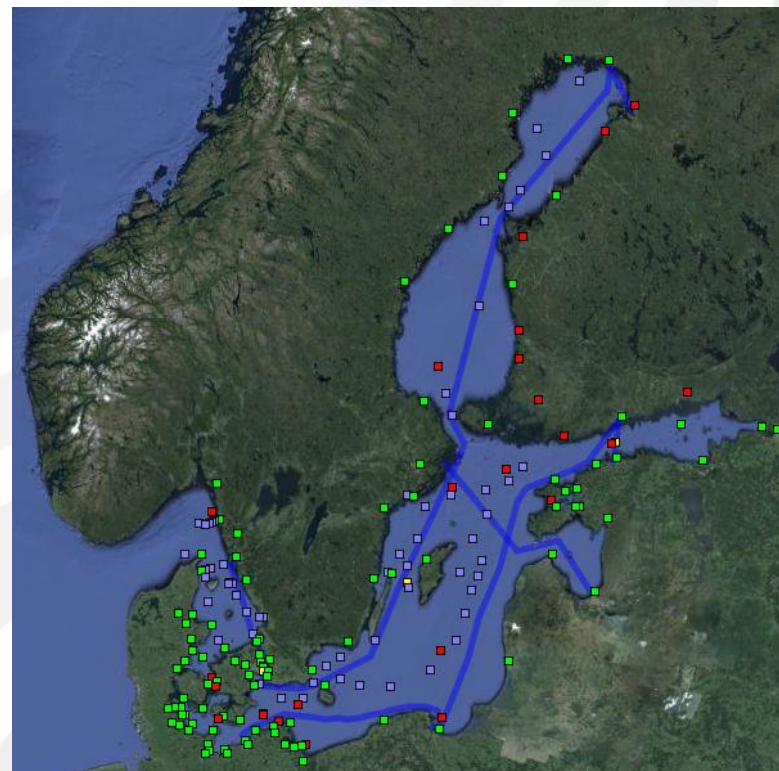
■ 20 Moored buoys (MB)



■ 10 Ferryboxes (FB)

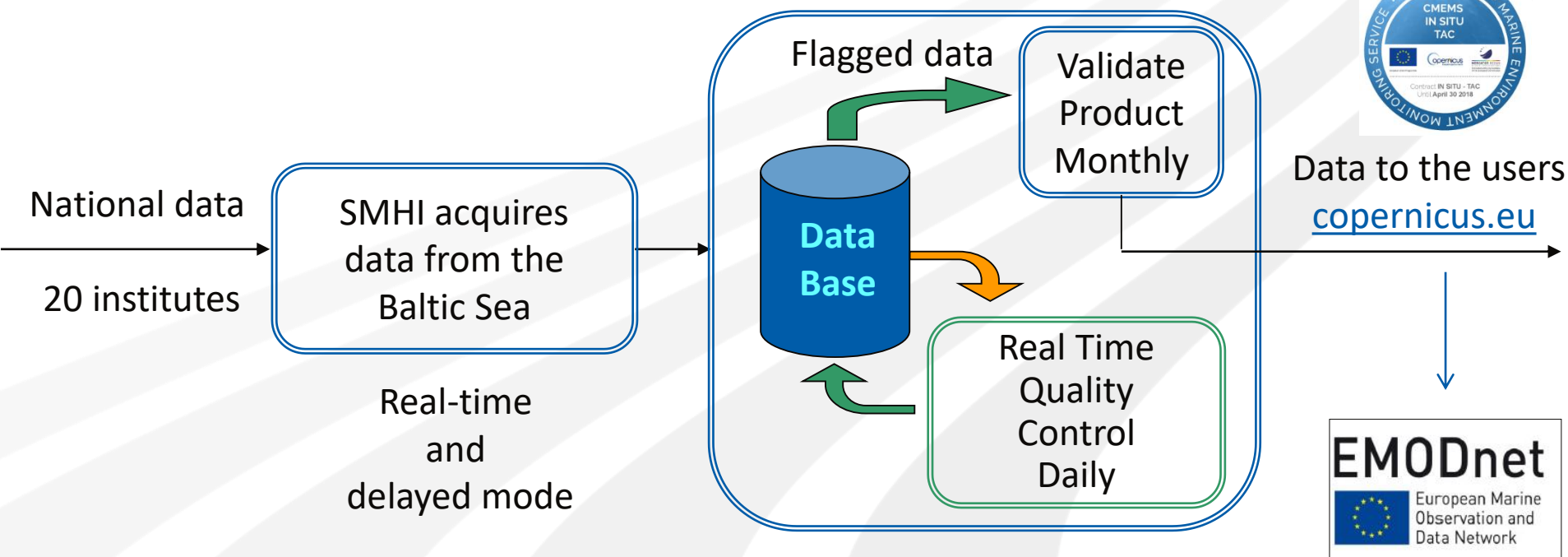
■ 5 Ice-breakers (FB)

■ >1000 Monitoring stations (CT)





# Schematic data flow



# Cooperation between BSHC and BOOS



- MoU signed in 2014

## **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



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## Cooperation between BSHC and BOOS

- Implementation of Baltic Sea Chart Datum 2000 (BSCD2000)
- Inventory of tide gauge (TG) operators in the Baltic Sea:

Country	Tide gauge operator (Number of stations)	BSCD2000 EVRS realisation	Mean offset to EVRF2007 (cm)	Tide gauge data provided to BOOS Datum	Mean offset to EVRF2007 (cm)
Sweden	SMHI* (27), SMA (36)	RH2000	-0.7	MSL	+6.8
Denmark	DMI* (33), KDI (15)	DVR90	+0.4	DVR90	+0.4
Germany	BSH* (0), WSA (26)	DHHN2016	+1.0	DHHN92/SNN76	+0.4/+14
Poland	IMWM* (9), MIG (1)	HNN55		Kronstadt2006	+17
Lithuania	EPA* (1)	LAS07		BHS77 (Kronstadt)	+12
Latvia	LEGMA* (9)	LAS-2000,5	+0.6	BAS-77 (Kronstadt)	+15
Estonia	MSI* (17), EMHI (8)	EH2000		BHS-77 (Kronstadt)	+19
Russia	NWAHEM* (2)	?		(Kronstadt)	<b>+22</b>
Finland	FMI* (14)	N2000	-1	MSL	+13.6
Norway	NHS* (24)	NN2000	-1	MSL	-9.7

\* Data provider to BOOS      MSL=Mean Sea Level

Source: *Coastal Mapping, Vertical Datums in the European zone (DRAFT 2016)*



**Thanks for your attention!**



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