



Baltic Operational  
Oceanographic System

# Report 2012

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## BOOS members and associated members

- Germany – BSH, IOW, HZG (AM);
- Lithuania – CMR, KU (AM);
- Denmark – DMI, DCOO, NERI;
- Estonia – MSI;
- Finland – FMI, SYKE;
- Poland – IOPAS, UG, MIG, IMWM;
- Latvia – LEGMA, UL;
- Sweden – SMHI;
- Russia – NWRAHEM, RSHU (AM)

## **Changes in membership**

- **New members of BOOS:**
  - **Estonian Marine Institute, University of Tartu, Estonia**
  - **St. Petersburg Branch of the State Oceanographic Institute, Russia**

## **HIROMB members**

- Denmark – DCOO, DMI, NERI
- Estonia – MSI
- Finland – FMI, SYKE
- Germany – BSH
- Latvia – LEGMA
- Lithuania – KU
- Poland – MIG
- Russia – RSHU
- Sweden – SMHI

# Background

- HIROMB agreement since 1995 – main aim at the beginning was to secure marine forecasts in case of oil pollution; request from HELCOM, partners are approved by country authorities – have to be the institutes responsible for marine forecasting and monitoring
- BOOS – Baltic Operational Oceanographic System, 1999; basis is MoU, no real commitments defined; operational systems in countries are relying on joint observations and HIROMB model (although several countries have their own models; HBM operational in MyOcean)
- HIROMB and BOOS both have steering groups, own structure, e.g. working groups etc; members are mostly the same institutions

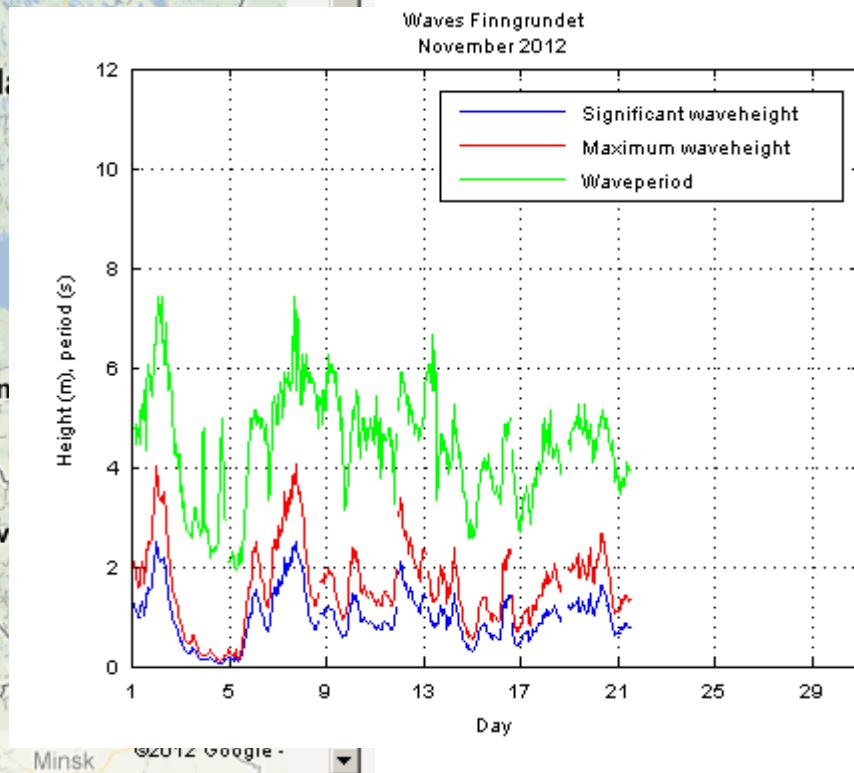
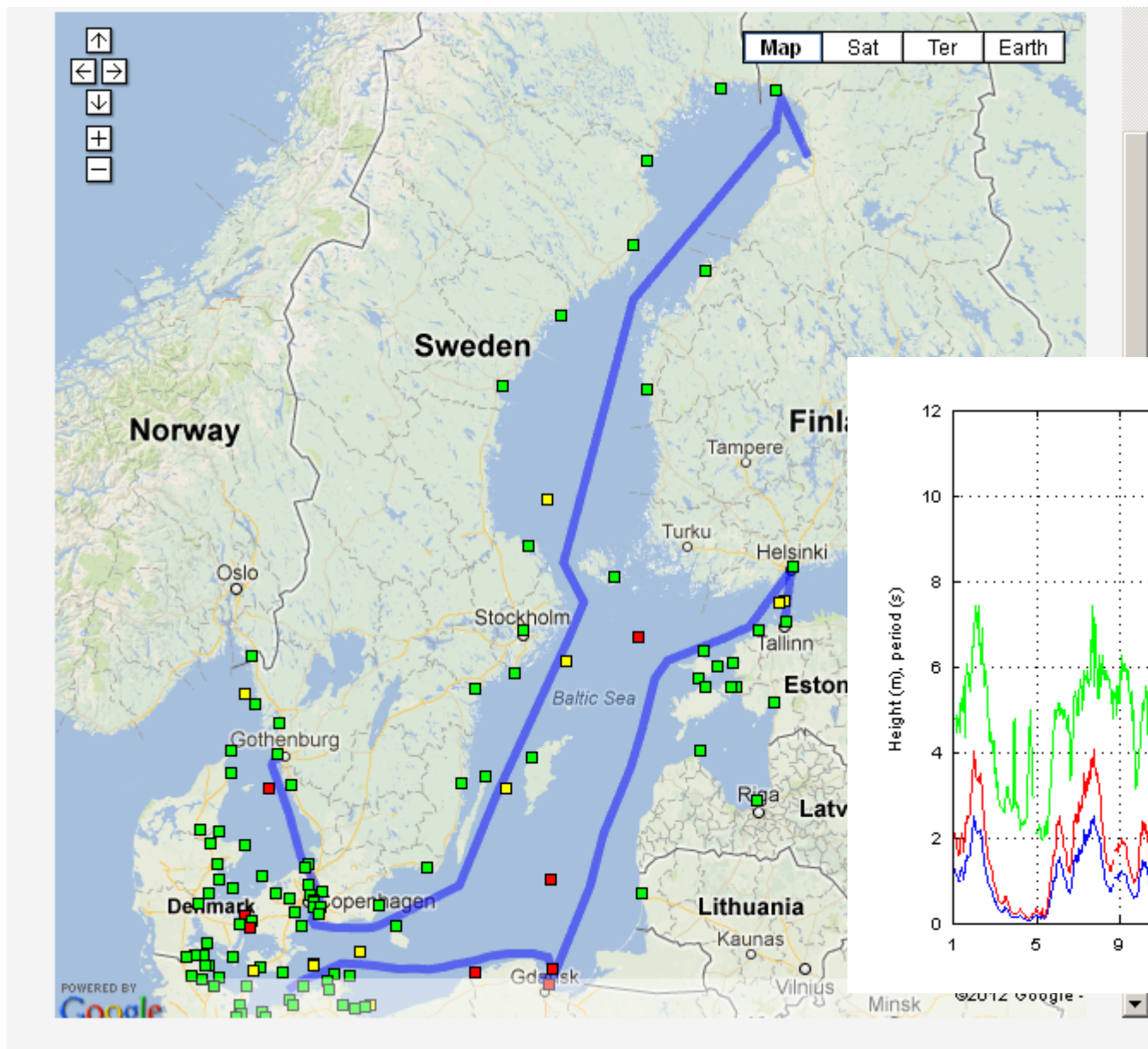
# Main changes and achievements during the last year

- Decisions made to merge BOOS and HIROMB consortia – there will be BOOS with core programmes, such as HIROMB; could be also a core programme on in situ observations
- MyOcean and MyOcean2:
  - real time forecasts for the physical and biogeo-chemical conditions in the Baltic Sea for 48 hours are provided via the MyOcean web portal
  - reanalysis products for physical parameters were calculated and are available for the 20 years period 1990 to 2009
- Jerico project – OSSE planned using HBM and repeated XBT transects (DMI)

# Main changes and achievements during the last year

- In-situ observations: SMHI tested profiling floats in the Baltic, will be operational soon
- Swedish coastal profilers – 1 deployed in Kostenfjorden, altogether 6 are planned
- FMI is testing ARGO profilers in the Baltic Sea
- MARNET stations, FINO platform operational (Germany)
- Autonomous profiler in the Gulf of Finland operational for the fourth year (April-November)

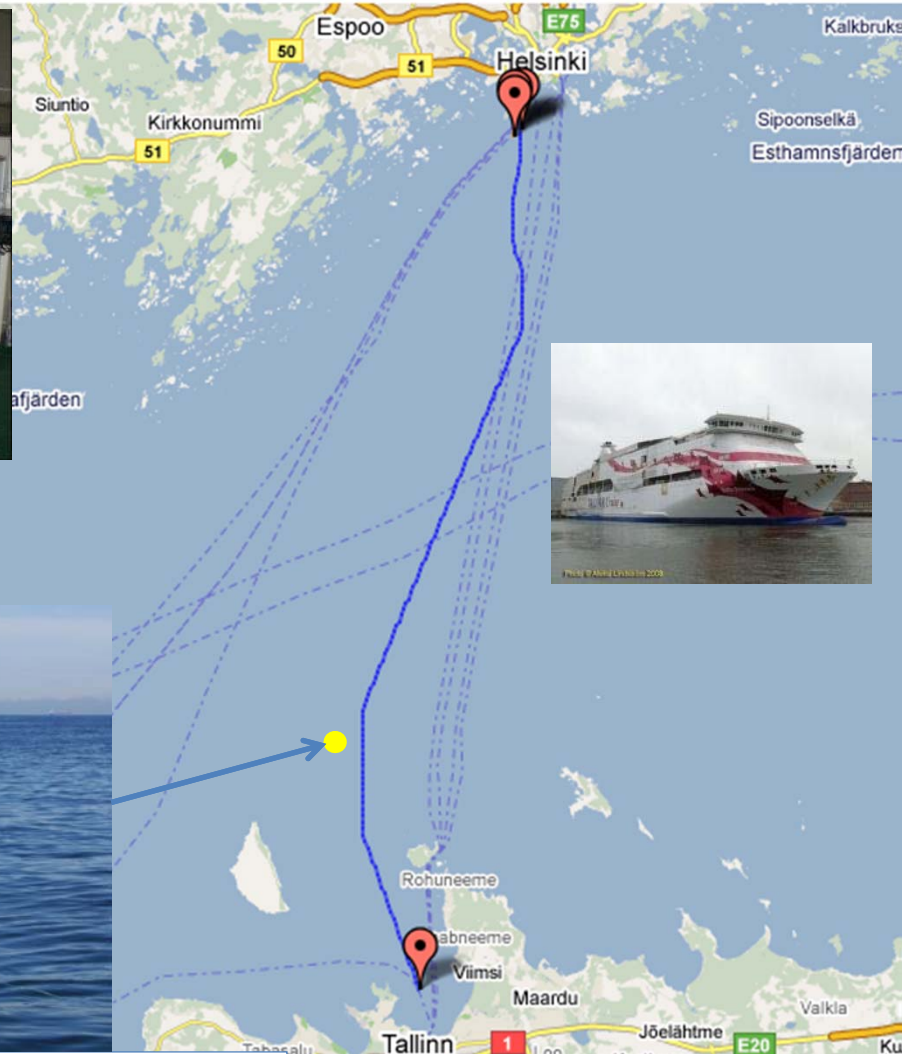
# In-situ network





# Ship-of-Opportunity Network

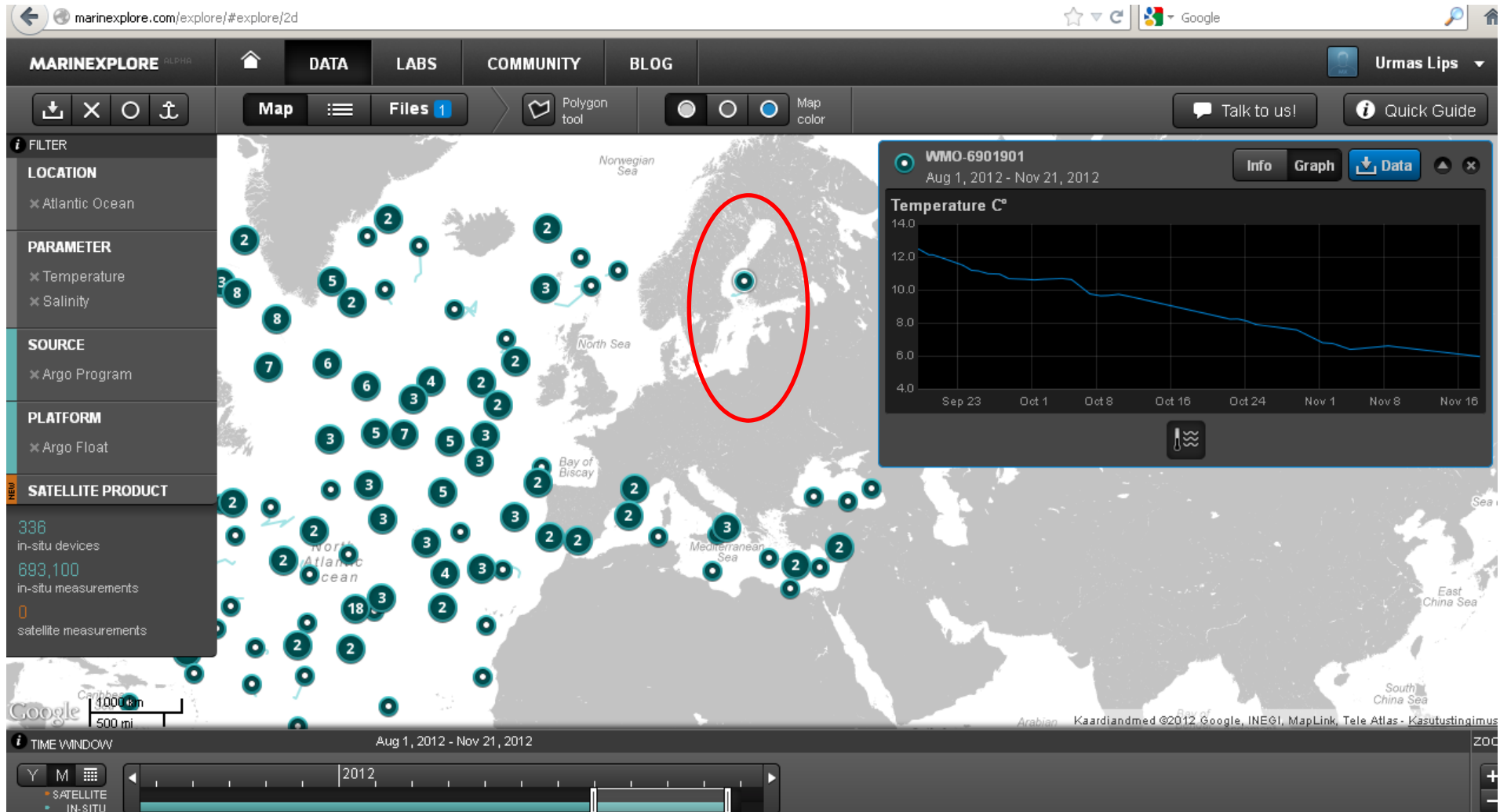
Horizontal profiles of T, S, Chl  $\alpha$ , cyanobacterial pigments, water samples: *nutrients*, *species composition*



Vertical profiles of T, S, Chl  $\alpha$



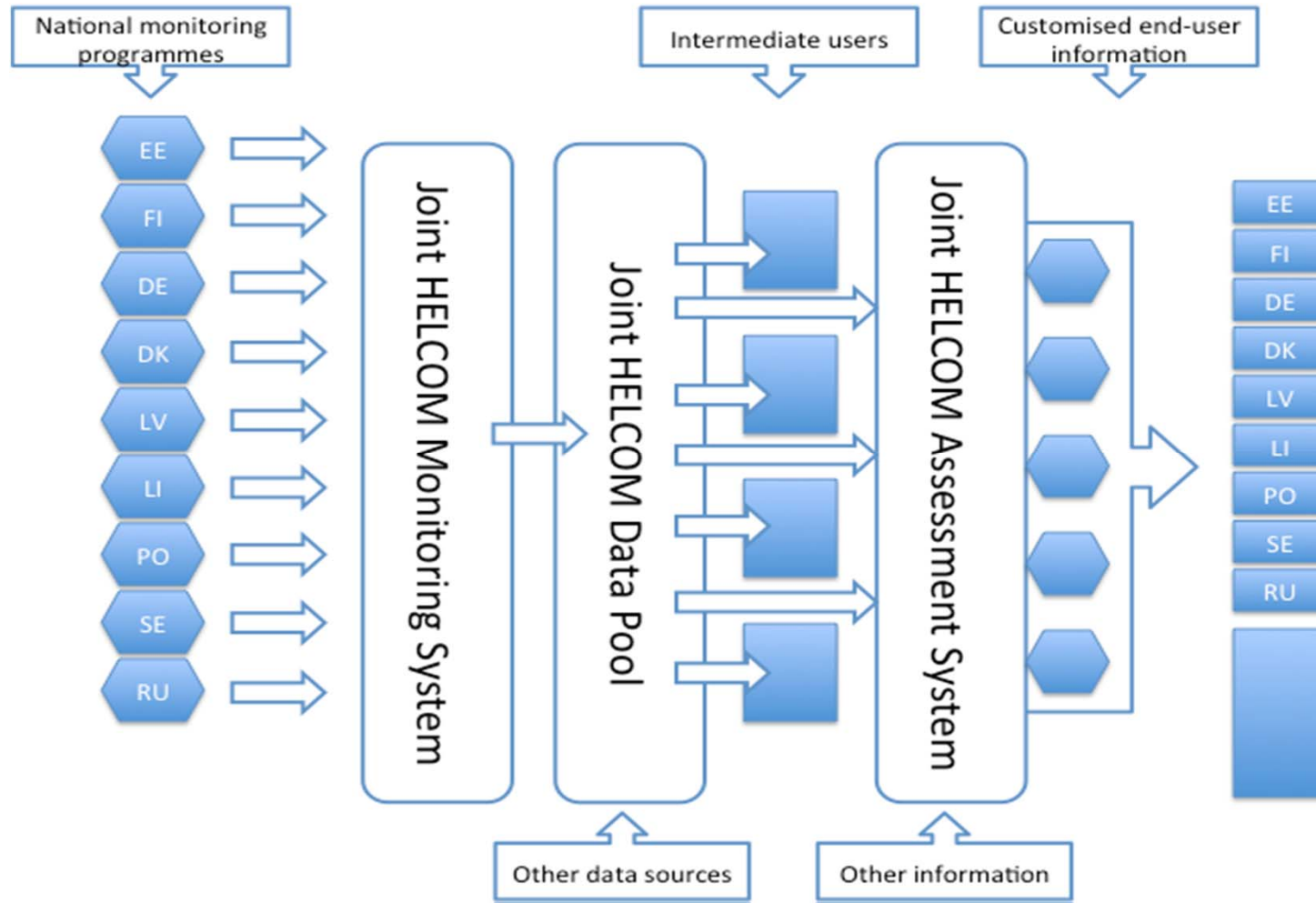
# In-situ network



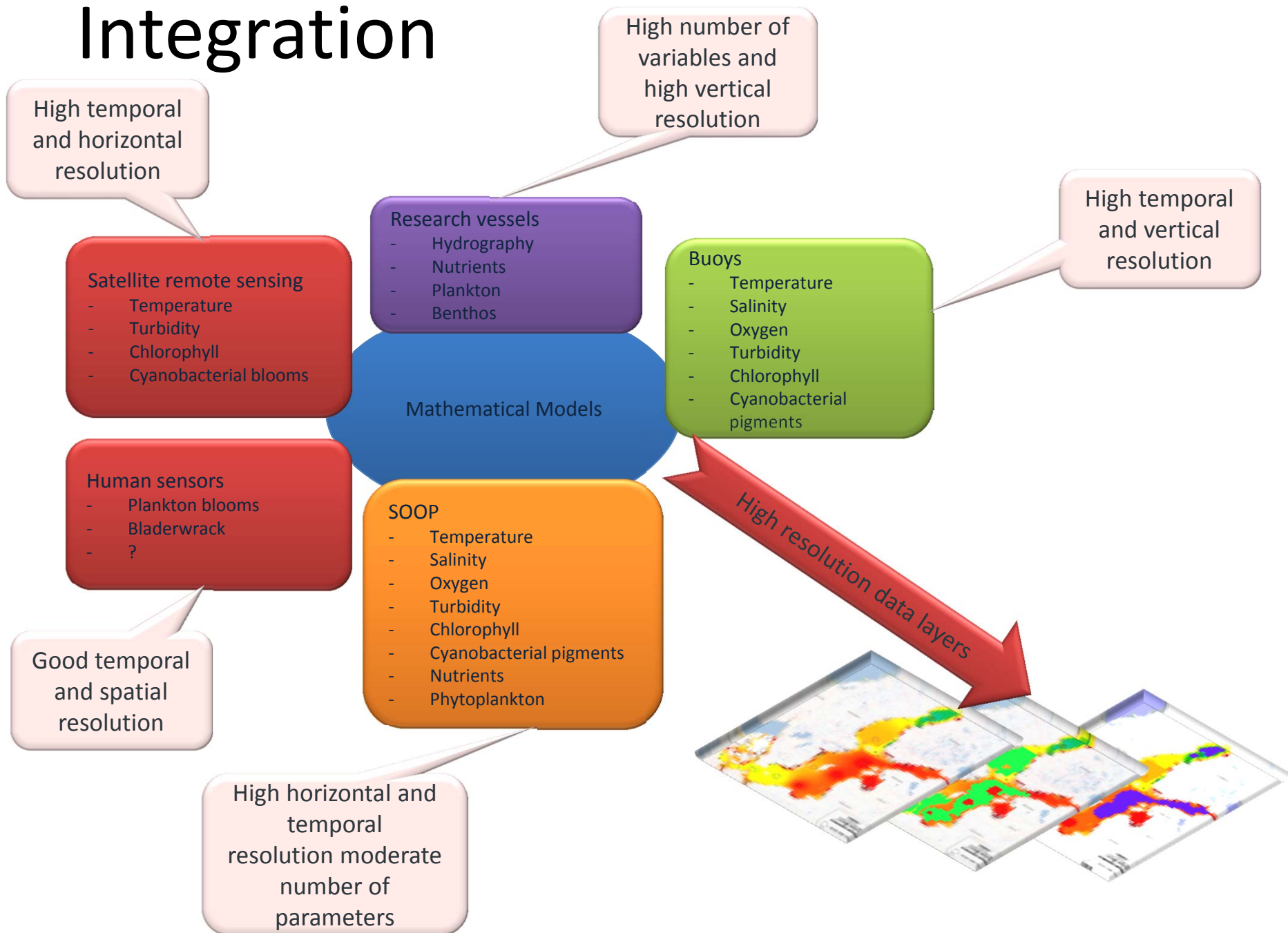
# Monitoring revision

- HELCOM MORE project established for revision of the marine monitoring program to meet the requirements of MSFD, Baltic Sea Action Plan etc
- Interreg IVA project GES-REG running; an aim is to develop a joint monitoring and assessment scheme in the sub-region
- New monitoring and assessment strategy developed, including:
  - Increasing joint initiatives such as surveys, campaigns and cruises,
  - Using remote sensing and autonomous measuring devices to complement ship cruise data and thereby enhance data coverage
  - Using modelling to combine data and produce optimised data layers
  - Sharing infrastructure

# Monitoring system proposed by GES-REG project



# Integration



# Challenges and problems

- Available resources and sustainability – major part of funding is coming from national budgets, development of the system is depending on different levels of resources available in countries or on the funding from EU projects;
- Data availability. To secure both that the observations are performed (e.g. when instruments fail, how to replace them in a quick way) and access to the data is arranged in real time
- Outcomes of the projects are not disseminated to the BOOS members in a proper way; those who are not partners in the projects have feeling that they are left out; specific outputs related to the Baltic Sea area should be disseminated, feedback from members should be requested



# Main changes and achievements during the last year

- Two issues of newsletter “News from BOOS” published - a step forward to disseminate the information on operational oceanography in the Baltic Sea area

