The Global Ocean Observing System

First GOOS National Focal Points (NFP) Forum

25 October 2023

Session 2 Reflections on National observing system by NFPs

Ocean observing activities in Poland – status and challenges

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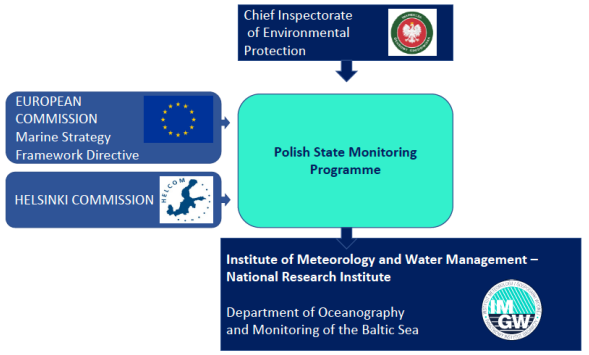
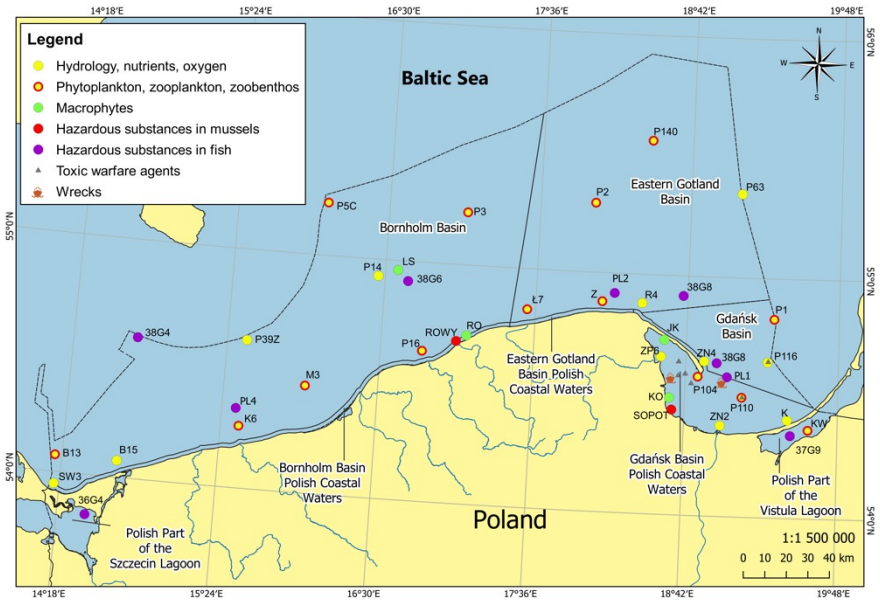
Poland

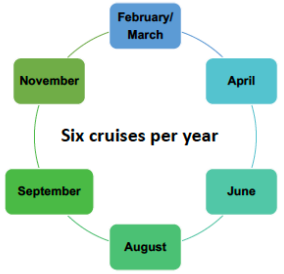
Current status of the National Ocean observing programme



Monitoring of the Baltic marine environment as a part of the State Environmental Monitoring:

- carried out under the EU Directives MSFD (Marine Strategy Framework Directive) and HELCOM (Helsinki Convention) by the authority of the Environmental Protection Inspection
- data for environmental monitoring collected by the Institute of Meteorology and Water Management during repeated ship-based field campaigns in the Polish waters with 6 cruises per year
- no operational observations from NRT platforms
- results (data products) published in the cruise reports and annual and 6-year environmental assessments, some data submitted to HELCOM/ICES





- physical and chemical parameters (temperature, salinity, DO, pCO2,...)
- hydrodynamical parameters (waves, currents)
- nutrients
- biological parameters (chl a, phytoplankton, zooplankton, zoobenthos, phytobenthic plants)
- hazardous substances in seawater, biota, and sediments
- marine litter (in the water column and on the shore)
- underwater noise

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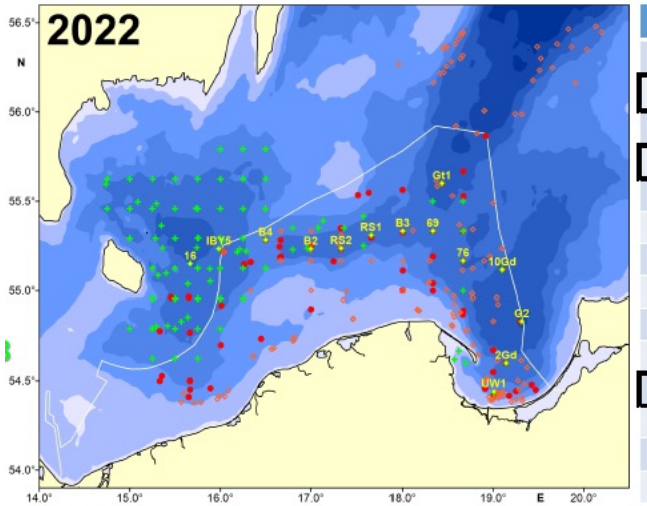
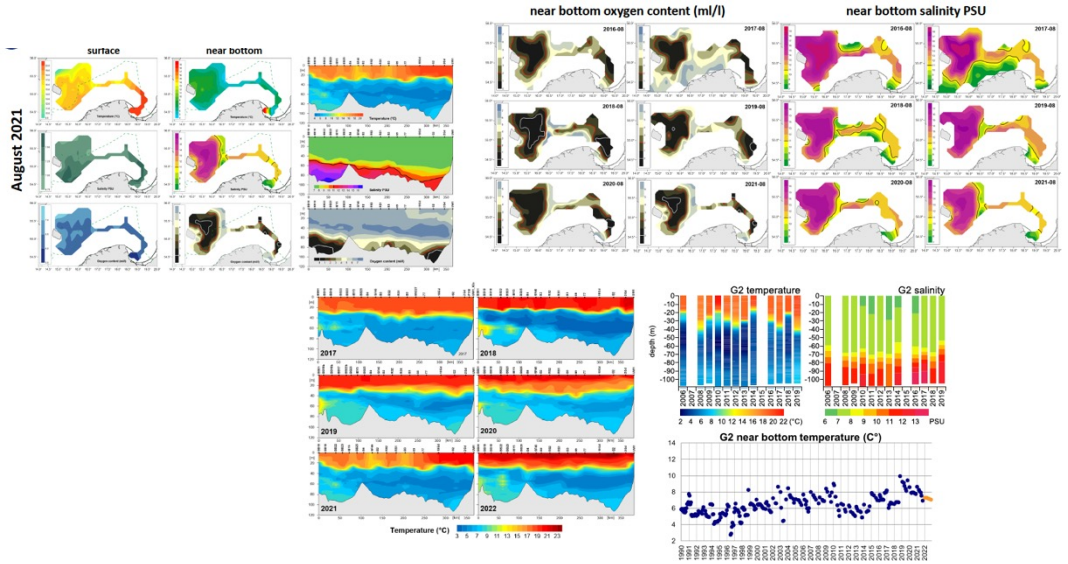
- no operational observations from NRT platforms
- results (data products) published in the cruise reports and annual and 6-year environmental assessments, some data submitted to HELCOM/ICES
- additional environmental (physical and chemical) data collected by the National Marine Fisheries Research Institute during fishery observations (Multiannual Fisheries Data Collection Programme) by ship surveys

Polish Multiannual Fisheries Data Collection Programme; Joint DTU-NMFRI ichthyoplankton survey (June)



Station	Depth (m)
16	92
IBY5	87
B4	61
B2	83
RS2	88
RS1	77
B3	73
69	77
76	86
10Gd	91
G2	105
2Gd	79
UW1	50
Gt1	89

Bottom trawls: 02, 11 (ICES trawls draw)
Pelagic trawls: 05, 09 (echosounder)
Ichthyoplankton: 06, 08 (fixed stations)
Fixed measuring stations (CTD + O_2)



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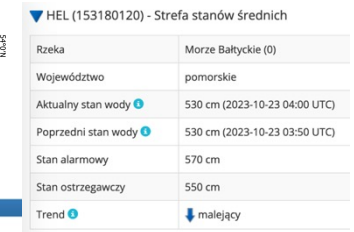
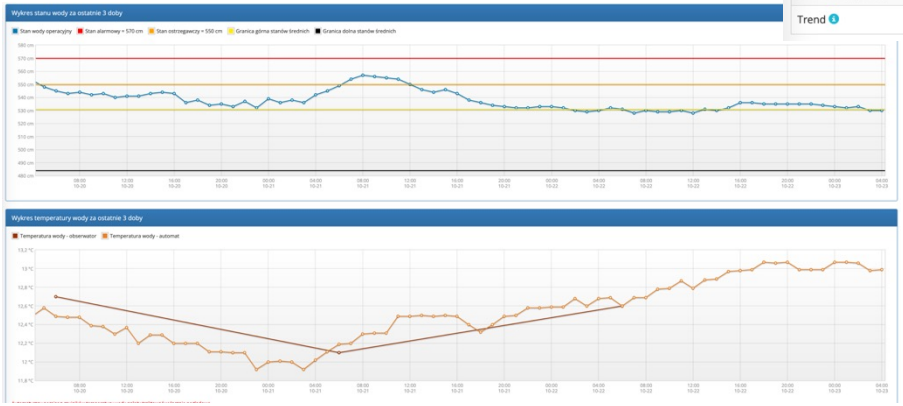
Tide gauges network operated by the Institute of Meteorology and Water Management for the State Hydrological and Meteorological Service (providing hydrological assessment, forecast and warnings)

- 11 coastal (marine) tide gauges as a part of the water level monitoring network operate by the IMGW-PIB Hydrological Forecast Office Gdynia
- operational data available in real-time (as plots) from web service, in some cases together with metocean data, daily and weakly hydrological bulletins published, data archived in IMGW-PIB data base
- Polish sea level stations are not included in IOC Sea Level Station Monitoring Facility and are not a part of GLOSS network (only some historical data included in PSMSL)

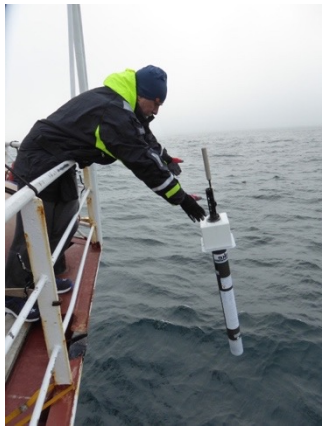


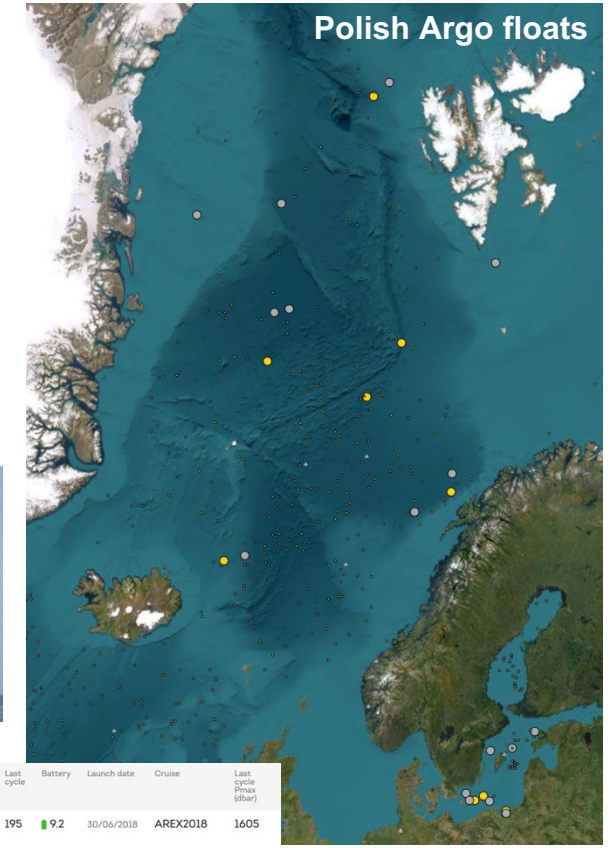


Current status of the National Ocean observing programme

ArgoPoland - Polish contribution to Argo network under EuroArgo ERIC

- Since 2011 on the Polish Research Infrastructure Roadmap, 38 Argo floats deployed since 2009 in the Norwegian/Greenland Sea and in the Baltic Sea by IOPAN, 9 floats currently active, sustained national funding
- Data available in near-real-time via Coriolis data center (Argo floats dashboard)





A	WMO	Float S/N PTT	Float	Last Tx	Last cycle	Battery	Launch date	Cruise	Last cycle Pmax (dbar)
	3902102	AI2600-17EU026 596222	ARVOR	20/10/2023 04:40:20	195	9.2	30/06/2018	AREX2018	1605
	3902118	AI2632-23EU001 400350	ARVOR	18/10/2023 09:57:33	12	9.7	30/06/2023	AREX23	1625
	3902117	AI2632-21EU012 055143	ARVOR	20/10/2023 09:21:00	208	10.1	22/02/2023	BALTIC2023	31
	3902116	AI2632-21EU011 055345	ARVOR	07/10/2023 19:40:00	45	9.2	26/07/2022	AREX2022	2006.6
	1902683	P53367-23EU001 eriuse001b	PROVOR_V	20/10/2023 11:01:12	27	10.1	24/09/2023	BALTIC	89.2
	1902682	AI2632-23EU003 400949	ARVOR	19/10/2023 07:25:00	15	10.5	22/09/2023	BALTIC	77
	3902114	AI2632-21EU010 055474	ARVOR	20/10/2023 18:11:30	84	9.3	07/07/2021	AREX2021	2026.7
	3902119	AI2632-23EU002 400452	ARVOR	16/10/2023 15:45:00	12	9.8	28/06/2023	AREX23	2039
	3901850	AI2600-16FR013 360010	ARVOR	12/10/2023 11:55:30	267	10.3	24/06/2016	AREX2016	1983

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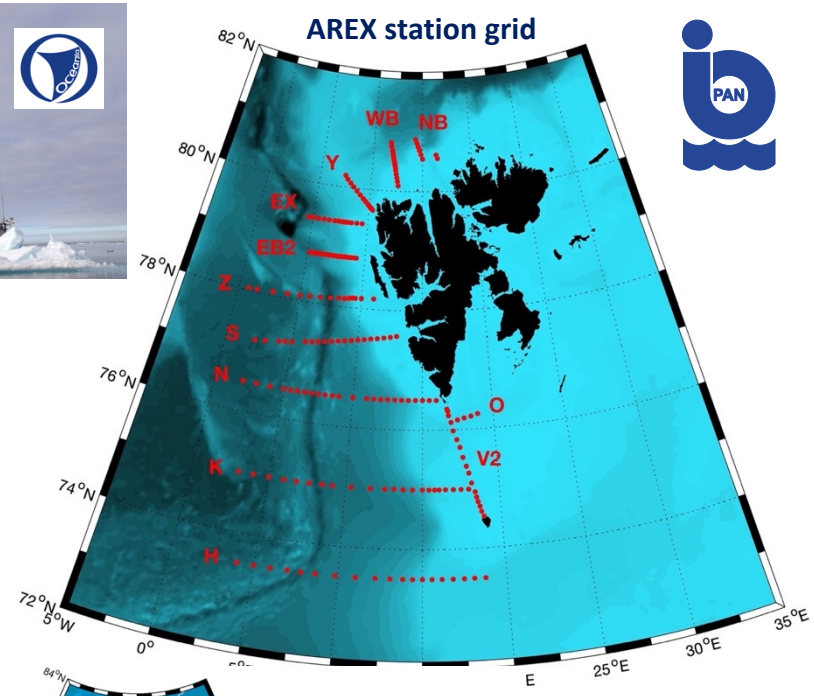

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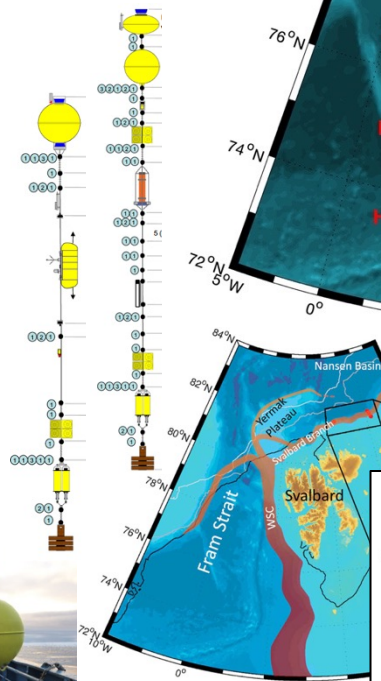
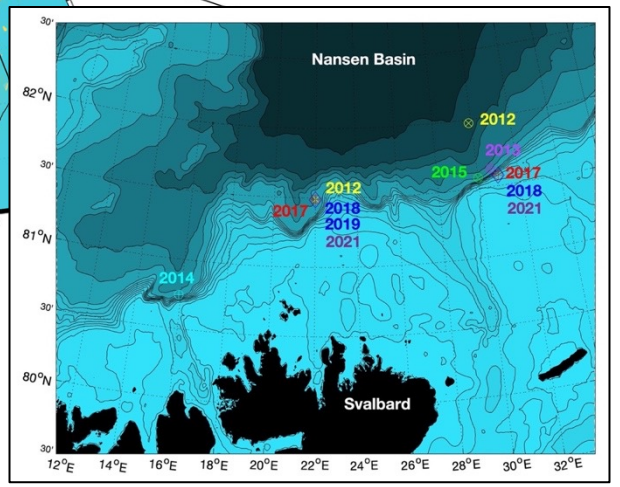
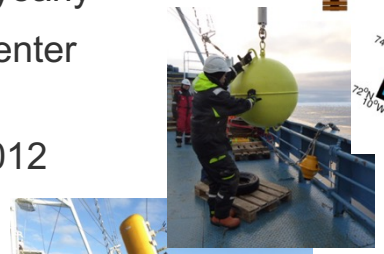
AREX Long-term large-scale Arctic monitoring programme

- Carried by IOPAN since 1987 with annual 3-month long summer field surveys in the Norwegian and Greenland seas, Barents Sea, Fram Strait, southern Nansen Basin and West Spitsbergen fjords with over 300 stations occupied yearly
- Data available in the eCUDO oceanographic data and information center in delayed mode
- Additionally two subsurface deep ocean moorings operated since 2012 north of Svalbard in the entrance to the Arctic Ocean (project-based funding)



Subsurface moorings north of Svalbard





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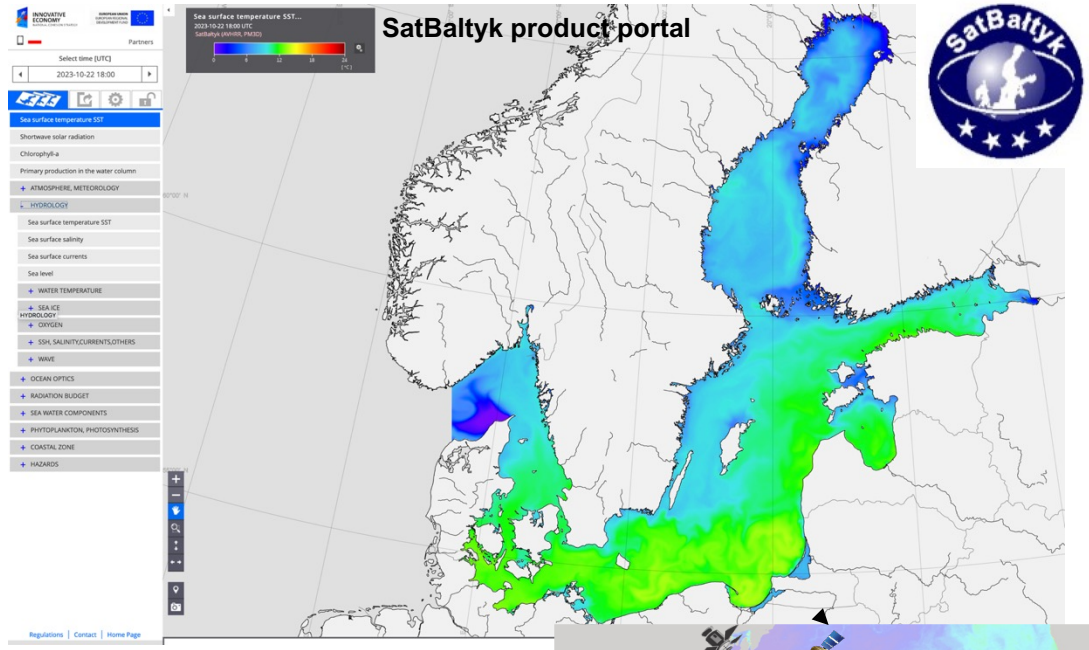
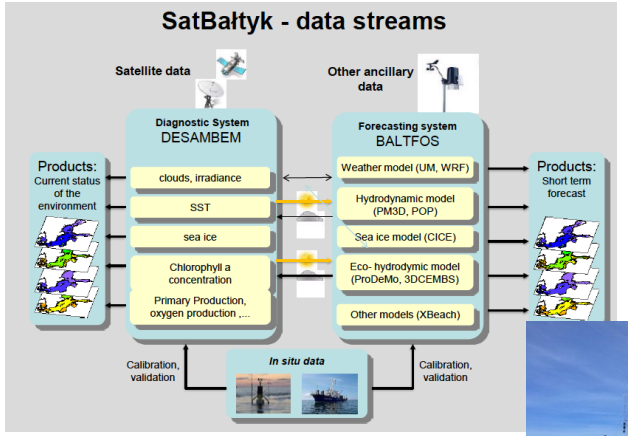
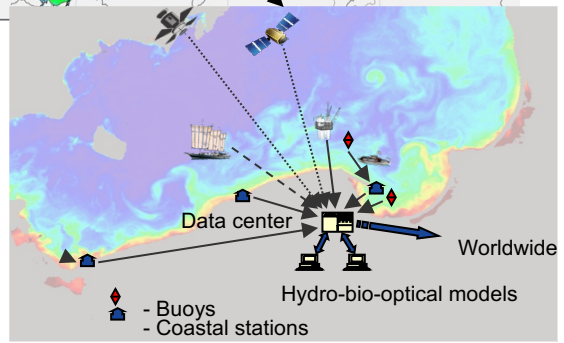
SatBaltyk – Satellite Environment Control of the Baltic Sea

- Sea monitoring system for the Baltic Sea, based on the satellite remote sensing data and eco-hydrodynamical models, uses in situ data from ship surveys, moored buoy (short-term deployment) and Argo floats
- In addition to merged products, 'raw' satellite data products and models' outputs are also available on the web portal







Reflections on the role of NFP at the national level

National connection around ocean observing:
very fragmented system, a large part of in situ observations collected by piggybacking on research projects (lack of sustainability), environmental monitoring networks sustained but only based on ship surveys (no operational data delivery) ➠ the first step in building national connection should be to identify the national contributors to ocean observing and facilitate sharing information on observations and data

National Structure – Committee:
should include representatives of all institutions involved in ocean observing at the national level but the interest from main entities is rather low

Linkages with:
GOOS partners – good connections at the regional level via strong participation in BOOS and ArcticROOS (EuroGOOS)
Ocean Decade – currently no dedicated national activities related to UNDOS (except participation in initiatives organized by larger organisations)

Support needed from GOOS
NFP Terms of Reference (Updated ToR)

National Committee/Hub – challenges

Low visibility of GOOS and benefits of having a national committee among disparate organizations involved in ocean observing in Poland – how to change this?

Help to identify the best strategies for encouraging the involvement by following examples from other countries being in a similar situation in terms of maturity (or rather the lack thereof) of a national observing system

Future plans / sustenance of National ocean observing programme

Limited funding translates to poor sustainability of ocean observations at the national level - how to convey a message to governmental funding agencies about benefits of ocean observing that is better aligned with global and regional efforts and available know-how (technology, best practices, data policies)? How to build capacity to include relevant/more organizations in the national ocean observing program and increase data delivery beyond the current level?

Organize a national meeting with relevant entities to review the current status and plans for sustained observations and discuss better coordination and different ideas for consolidating separate activities into a national program

The Global Ocean Observing System

Thank you

unesco
Intergovernmental Oceanographic Commission

WORLD METEOROLOGICAL ORGANIZATION

UN environment programme

International Science Council