



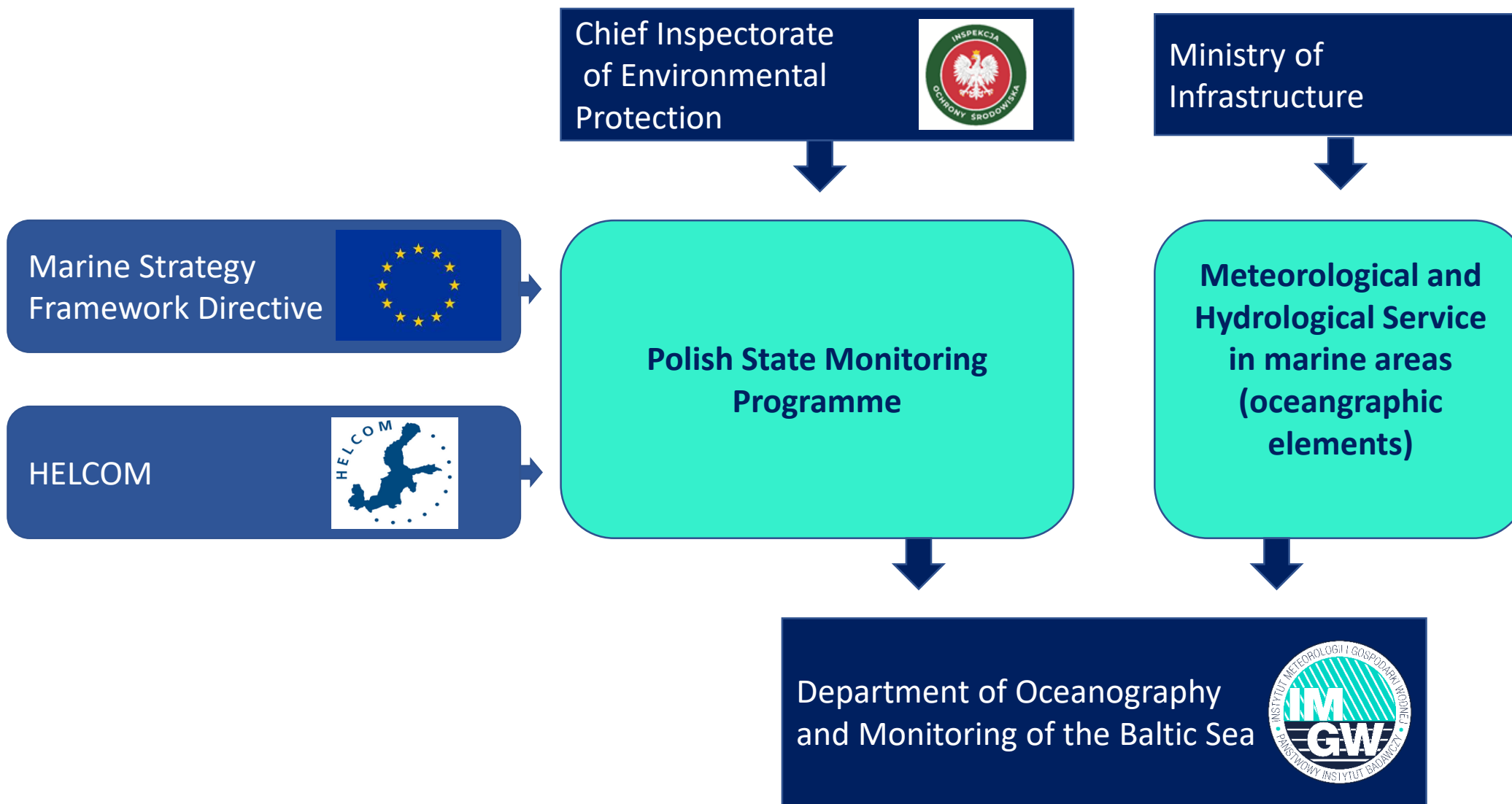
CTD measurements under the Polish State Monitoring and Meteorological and Hydrological Service in marine areas

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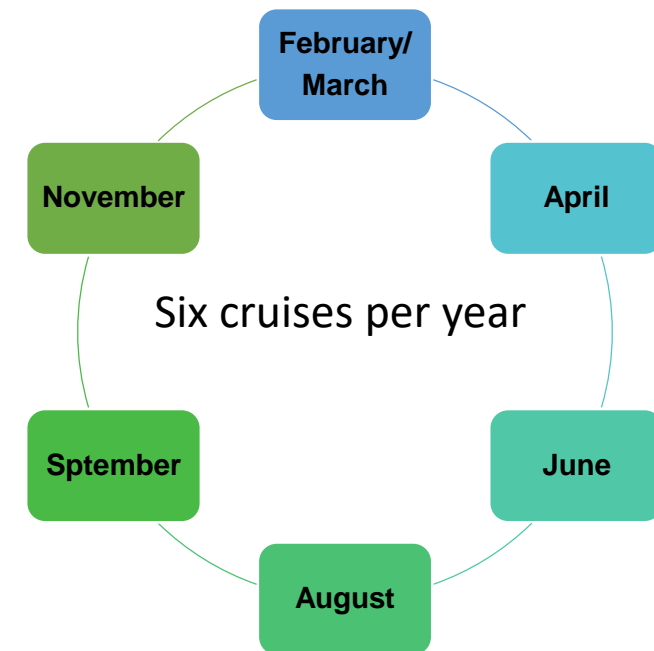
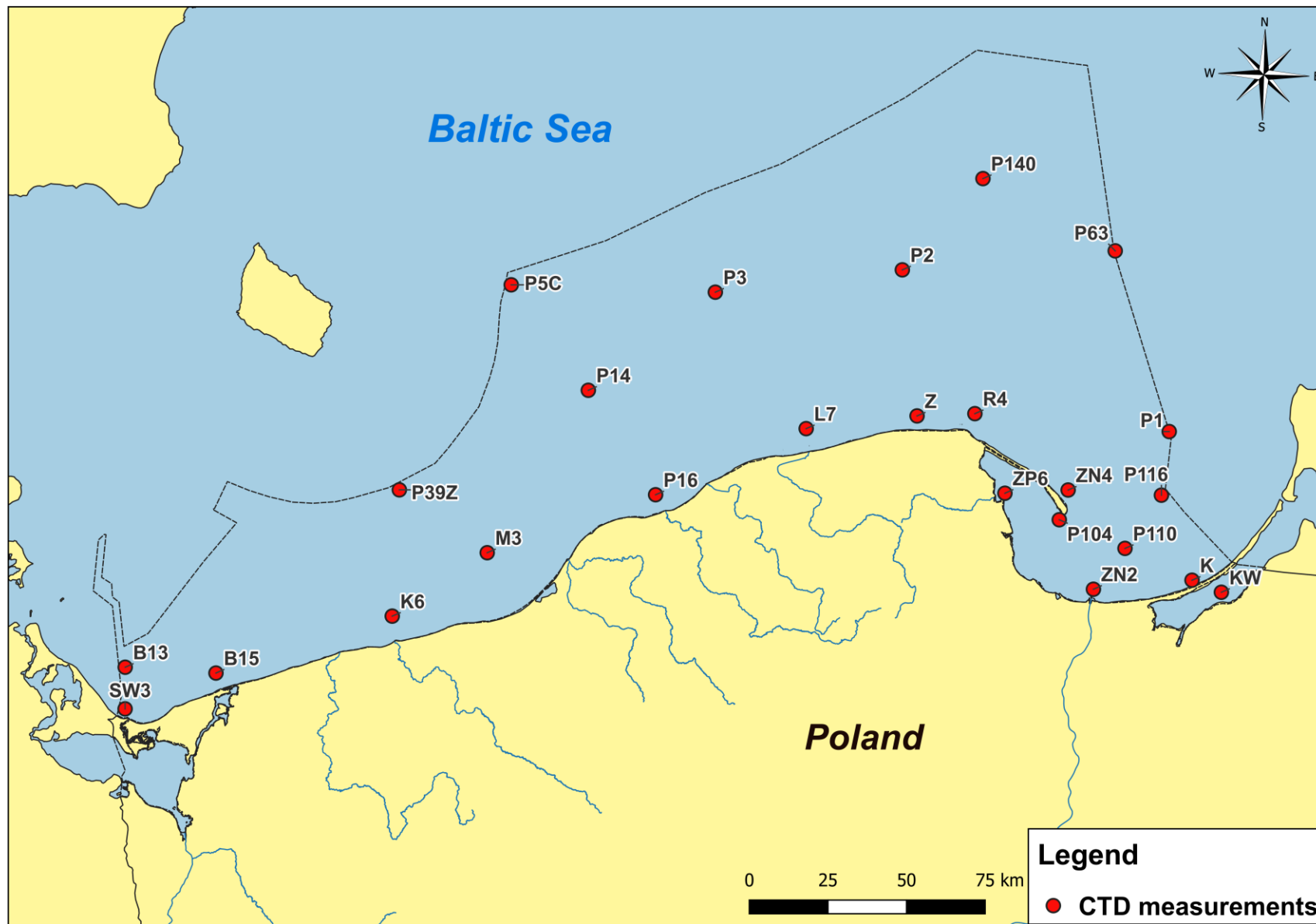
18/04/2023, IOPAS/Sopot



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SBE 911 plus (installed onboard)

24 measurements per second (every 42 ms)

	Range	Precision	Resolution	Reaction time
Pressure	0 - 680 bar	0.015 %F.S.	0.001 % F.S.	15 ms
Temperature	-5°C - 35°C	0.001 °C	0.0002 °C	65 ms
Conductivity	0 - 70 mS/cm	0.003mS/cm	0.0004mS/cm	65 ms
		% FS. = percent of full scale		



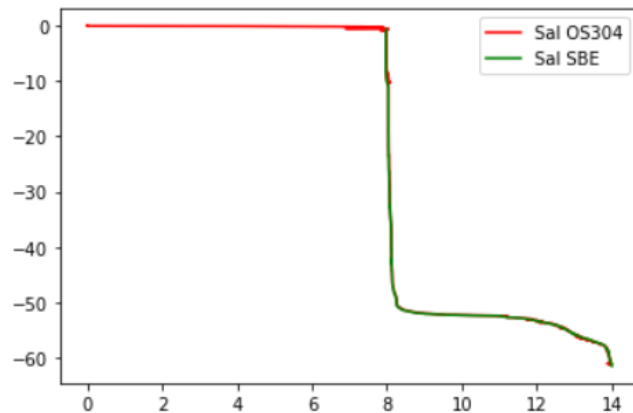
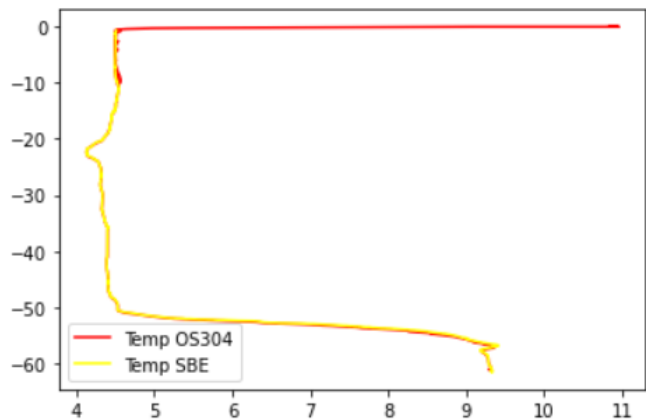
OS304 Plus

6.67 measurements per second (every 150ms)

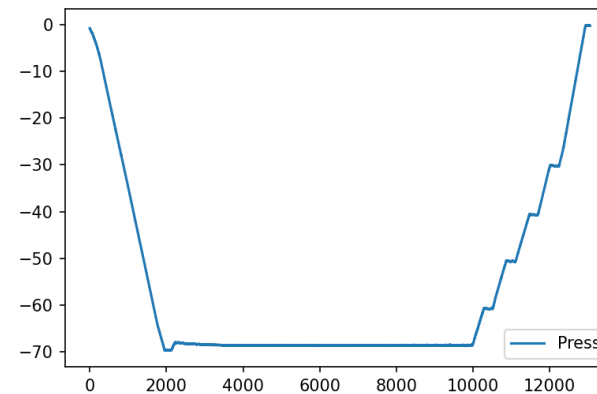
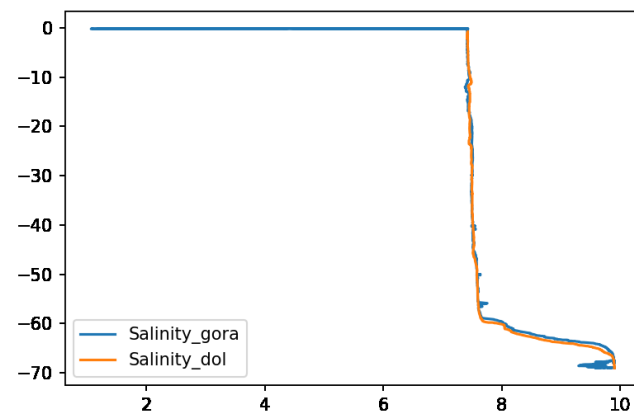
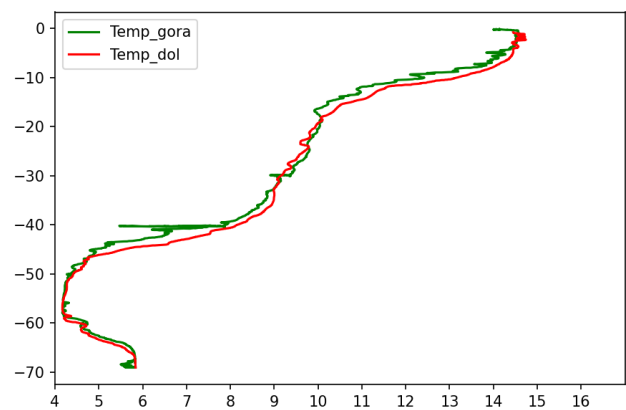
	Range	Precision	Resolution	Reaction time
Pressure	0 - 700 bar	0.05 %F.S.	0.0015 % F.S.	50 ms
Temperature	-5°C - 35°C	0.003 °C	0.0006 °C	50 ms
Conductivity	0 - 90mS/cm	0.009mS/cm	0.001mS/cm	50 ms
		% FS. = percent of full scale		

Producer calibration once a year

Bornholm Basin (23.03.2023)



Gdańsk Basin (11.06.2023)



Local database

Station code	Measurement data	Time	Total depth	Measurement depth	Temperature	Salinity
	[RRRRMMDD]	[UTC]	[m]	[m]	[°C]	
B13	20210204	14	14	1	1.580	7.420
B13	20210204	14		2.5	1.581	7.420
B13	20210204	14		5	1.579	7.420
B13	20210204	14		10	1.587	7.416
B13	20210204	14		12	1.559	7.443
P1	20210206	14	106	1	4.435	7.809
P1	20210206	14		2.5	4.429	7.809
P1	20210206	14		5	4.457	7.810
P1	20210206	14		10	4.456	7.810
P1	20210206	14		15	4.500	7.818
P1	20210206	14		20	4.536	7.827
P1	20210206	14		30	4.717	7.952
P1	20210206	14		40	4.756	7.975
P1	20210206	14		50	5.308	8.125
P1	20210206	14		60	5.934	8.381
P1	20210206	14		70	6.890	9.776
P1	20210206	14		80	7.702	11.118
P1	20210206	14		90	7.705	11.650
P1	20210206	14		100	8.080	12.021
P1	20210206	14		104	8.306	12.216



Reported depths
1
2.5
5
10
15
20
30
40
50
60
70
80
90
100
104

Chief Inspectorate of Environmental Protection



2 m above the bottom at deep stations,
0.5 m above the bottom at shallow stations

ICES-Oceanography-Data-Submission-Format.zip

	Required*	Datatype	Description	Occurrence	Example	Vocabulary
ODV Metadata variables header row**						
//<MetaVariable></MetaVariable>	O	string	ODV meta variables mapped to ODV column header required to read the metadata correctly into ODV	0 - many	See example file	
ODV Data variables header row**						
//<DataVariable></DataVariable>	O	string	ODV data variable mapped to ODV column header required to read the data correctly into ODV	0 - many	See example file	
ICES Parameter mapping						
//<subject></subject>			Subject corresponding to the ODV data variables without unit		//<subject>ICES:LOCAL:Pressure</subject>	
<object></object>	M	string	Object corresponding to the ODV data variables parameter mapping to NERC P01 vocabulary	1 - many	<object>ICES:P01::PRESR01</object>	
<units></units>			Units corresponding to the ODV data variables unit mapping to NERC P06 vocabulary		<units>ICES:P06::UPDB</units>	
ODV Column header row						
Cruise	M	string	Cruise label to identify the given cruise	1		35HT202001
Station	M	string	Station label to identify the given station	1		1
Type***	M	string	Type label to identify the given sample type	1		C
yyyy-mm-ddThh:mm:ss.sss	M	string	ISO 8601**** Date and time of the given station (year, month, day, hour, minute and seconds) in UTC	1		2020-01-10T09:13Z
Latitude [degrees north]	M	float	Latitude in decimal degrees in WGS84	1		50.5350
Longitude [degrees south]	M	float	Longitude in decimal degrees in WGS84	1		1.4213
Bot. Depth [m]	R	float	Bottom Depth in metres	0 - 1		108
Platform Code	M	string	ICES Platform Code	1		35HT https://vocab.ices.dk/?ref=315
Device Category Code	M	string	SDN Device Category Code	1		130 https://vocab.ices.dk/?ref=1686
Distributor Code	M	string	EDMO Organisation Code of Data Distributor	1		486 https://vocab.ices.dk/?ref=1398
Custodian Code	M	string	EDMO Organisation Code of Data Custodian	1		486 https://vocab.ices.dk/?ref=1398
Originator Code	O	string	EDMO Organisation Code of Data Originator	0 - many		23~345~12 https://vocab.ices.dk/?ref=1398
Project Code	O	string	EDMERP Project Codes	0 - many		11606 https://vocab.ices.dk/?ref=1402
Pressure [dbar] or Depth [m]	M	float	Pressure [dbar] or Depth [m] of the given sample	1		1.5
QV:ODV:Depth [m]	O	integer	Quality Flag of the given Quality Flag Scheme and variable	0 - 1		0
Temperature [degC]	O	float	Temperature in degree Celsius of the given sample	0 - 1		7.23
QV:ODV:Temperature [degC]	O	integer	Quality Flag of the given Quality Flag Scheme and variable	0 - 1		0
Practical Salinity [dmnless]	O	float	Practical Salinity of the given sample	0 - 1		34.241
QV:ODV:Practical Salinity [dmnless]	O	integer	Quality Flag of the given Quality Flag Scheme and variable	0 - 1		0
Dissolved Oxygen [ml/l]	O	float	Dissolved Oxygen in ml/l of the given sample	0 - 1		6.2
QV:ODV:Dissolved Oxygen [ml/l]	O	integer	Quality Flag of the given Quality Flag Scheme and variable	0 - 1		0
*M = Mandatory, R = Recommended, O = Optional						
**ODV MetaVariables and DataVariable isn't required in the ICES ODV format. However they are required by the ODV software to be read correctly.						
***Type is specified as mandatory in the ODV generic spreadsheet format specification. However is actually not required by the ODV software or ICES ODV format.						
**** https://en.wikipedia.org/wiki/ISO_8601						

Data reporting – ICES database



//<MetaVariable>label="Cruise" var_type="METACRUISE" value_type="INDEXED_TEXT" qf_schema="ODV" significant_digits="0" comment=""</MetaVariable>
//<MetaVariable>label="Station" var_type="METASTATION" value_type="TEXT:21" qf_schema="ODV" significant_digits="0" comment=""</MetaVariable>
//<MetaVariable>label="Type" var_type="METATYPE" value_type="TEXT:2" qf_schema="ODV" significant_digits="0" comment=""</MetaVariable>
//<MetaVariable>label="yyyy-mm-ddThh:mm:ss.sss" var_type="METABASIC" value_type="INDEXED_TEXT" qf_schema="ODV" significant_digits="0" comment=""</MetaVariable>
//<MetaVariable>label="Longitude [degrees_east]" var_type="METALONGITUDE" value_type="FLOAT" qf_schema="ODV" significant_digits="4" comment=""</MetaVariable>
//<MetaVariable>label="Latitude [degrees_north]" var_type="METALATITUDE" value_type="FLOAT" qf_schema="ODV" significant_digits="4" comment=""</MetaVariable>
//<MetaVariable>label="Bot. Depth [m]" var_type="METABOTDEPTH" value_type="FLOAT" qf_schema="ODV" significant_digits="1" comment=""</MetaVariable>
//<MetaVariable>label="Platform Code [C17]" var_type="METAPLATFORM" value_type="INDEXED_TEXT" qf_schema="ODV" significant_digits="0" comment=""</MetaVariable>
//<MetaVariable>label="Device Category Code [L05]" var_type="METABASIC" value_type="INDEXED_TEXT" qf_schema="ODV" significant_digits="0" comment=""</MetaVariable>
//<MetaVariable>label="Distributor Code [EDMO]" var_type="METABASIC" value_type="INDEXED_TEXT" qf_schema="ODV" significant_digits="0" comment=""</MetaVariable>
//<MetaVariable>label="Custodian Code [EDMD]" var_type="METABASIC" value_type="INDEXED_TEXT" qf_schema="ODV" significant_digits="0" comment=""</MetaVariable>
//<MetaVariable>label="Originator Code [EDMO]" var_type="METABASIC" value_type="INDEXED_TEXT" qf_schema="ODV" significant_digits="0" comment=""</MetaVariable>
//<MetaVariable>label="Project Code [EDMERP]" var_type="METAPROJECT" value_type="INDEXED_TEXT" qf_schema="ODV" significant_digits="0" comment=""</MetaVariable>
//
//<DataVariable>label="Pressure [dbar]" value_type="FLOAT" qf_schema="ODV" significant_digits="1" is_primary_variable="F" comment=""</DataVariable>
//<DataVariable>label="Temperature [degC]" value_type="FLOAT" qf_schema="ODV" significant_digits="3" is_primary_variable="F" comment=""</DataVariable>
//<DataVariable>label="Practical Salinity [dmnless]" value_type="FLOAT" qf_schema="ODV" significant_digits="3" is_primary_variable="F" comment=""</DataVariable>
//<DataVariable>label="Dissolved Oxygen [ml/l]" value_type="FLOAT" qf_schema="ODV" significant_digits="2" is_primary_variable="F" comment=""</DataVariable>
//

```
//ICES_parameter_mapping
//<subject>ICES:LOCAL:Pressure</subject><object>ICES:P01::PRESPR01</object><units>ICES:P06::UPDB</units>
//<subject>ICES:LOCAL:Temperature</subject><object>ICES:P01::TEMPPR01</object><units>ICES:P06::UPAA</units>
//<subject>ICES:LOCAL:Practical Salinity</subject><object>ICES:P01::PSALPR01</object><units>ICES:P06::UUUU</units>
//<subject>ICES:LOCAL:Dissolved Oxygen</subject><object>ICES:P01::DOXYZZXX</object><units>ICES:P06::UMLL</units>
//
```

Cruise	Station	Type	yyyy-mm-ddThh:mm:ss.sss	Longitude [degrees_east]	Latitude [degrees_north]	Bot. Depth [m]	Platform Code	Device Cate.	Distributor Code [E]	Custodian Code	Originator Code [E]	Project Code [E]	Pressure [dbar]	QV:ODV:Pressure	Temperature [degC]	QV:ODV:Temperature	Practical Salinity [dmnless]	QV:ODV:Practical Salinity	Dissolved Oxygen [ml/l]	QV:ODV:Dissolved Oxygen	
35HT2020011	B		2020-01-10T09:13Z	1.4213	50.535	6.1	35HT		130	486	486	23~345~12	11606	1.5	0	9.208	0	34.291	0	6.24	0
														2	0	9.207	0	34.29	0	6.25	0
														2.5	0	9.206	0	34.29	0	6.26	0
														3	0	9.205	0	34.289	0	6.28	0
														3.5	0	9.205	0	34.289	0	6.28	0
														4	0	9.205	0	34.289	0	6.27	0
														4.5	0	9.206	0	34.289	0	6.25	0
														5	0	9.205	0	34.289	0	6.24	0
														5.5	0	9.205	0	34.289	0	6.25	0
35HT2020012	B		2020-01-10T10:05Z	1.4505	50.4895	8.9	35HT		130	486	486	23~345~12	11606	1.5	0	9.147	0	34.103	0	6.31	0
														2	0	9.157	0	34.104	0	6.3	0
														2.5	0	9.16	0	34.103	0	6.3	0
														3	0	9.165	0	34.107	0	6.3	0
														3.5	0	9.158	0	34.104	0	6.3	0
														4	0	9.153	0	34.104	0	6.3	0
														4.5	0	9.15	0	34.104	0	6.31	0
														5	0	9.15	0	34.103	0	6.3	0
														5.5	0	9.153	0	34.107	0	6.31	0
														6	0	9.161	0	34.104	0	6.31	0
														6.5	0	9.172	0	34.107	0	6.31	0
														7	0	9.178	0	34.106	0	6.3	0
														7.5	0	9.176	0	34.107	0	6.3	0
														8	0	9.166	0	34.105	0	6.29	0
														8.5	0	9.158	0	34.105	0	6.29	0

<https://data.ices.dk/view-map>

The screenshot displays the ICES data reporting interface. At the top, there is a navigation bar with links for News, Events, Calendar, Library, SharePoint Login, and Admin, along with a search bar labeled 'Search Everything'. Below this is a secondary navigation bar with 'ABOUT ICES', 'SCIENCE', 'DATA', 'ADVICE', and 'JOIN US'. The main content area features a map of the North Atlantic Ocean and surrounding regions, with a search box for 'Add/Edit layer(s) to the map'. A modal window is open, titled 'Here you can find and download data by first adding topics or dataset themes to the map'. This window contains a table with columns for Theme, Dataset, Layer type, First year, Last year, Total events, and Years of data. The 'Ocean hydrochemistry' section is expanded, showing various datasets. A 'Download data' button is visible on the right side of the modal.

Theme	Dataset	Layer type	First year	Last year	Total events	Years of data
<input type="checkbox"/>	Acoustic trawl surveys	Acoustic data in acoustic trawl surveys	2005	2023	507,438	19
<input type="checkbox"/>	Acoustic trawl surveys	Biotic data in acoustic trawl surveys	2005	2022	9,705	18
<input type="checkbox"/>	Biological communities	Biological communities, Phytobenthos	2007	2021	4,862	15
<input type="checkbox"/>	Biological communities	Biological communities, Phytoplankton	1979	2021	30,047	43
<input type="checkbox"/>	Biological communities	Biological communities, Zoobenthos	1979	2021	10,654	43
<input type="checkbox"/>	Biological communities	Biological communities, Zooplankton	1979	2021	9,876	43
<input type="checkbox"/>	Contaminants and biological effects	Contaminants and biological effects data in...	1977	2021	18,570	38
<input type="checkbox"/>	Contaminants and biological effects	Contaminants data in seawater	1979	2022	53,666	39
<input type="checkbox"/>	Contaminants and biological effects	Contaminants, biological effects and diseases	1978	2022	28,273	45
<input type="checkbox"/>	Fish trawl surveys	Biotic data in fish trawl surveys	1965	2023	126,745	59
<input type="checkbox"/>	Ichthyoplankton surveys	Eggs and Larvae datasets	1862	2023	372,702	103
<input type="checkbox"/>	Ocean hydrochemistry	Bottle and Low Resolution CTD Data	1877	2022	1,706,080	132
<input type="checkbox"/>	Ocean hydrochemistry	Expendable Bathythermograph Data	1969	2004	38,270	31
<input checked="" type="checkbox"/>	Ocean hydrochemistry	High Resolution CTD Data	1970	2023	392,933	54
<input type="checkbox"/>	Ocean hydrochemistry	Mooring Data	2001	2005	101,391	2
<input type="checkbox"/>	Ocean hydrochemistry	Pump Data	1980	2020	4,559,566	36
<input type="checkbox"/>	Ocean hydrochemistry	Surface Data	1891	2014	2,658,961	121
<input type="checkbox"/>	Stock assessments	Stock Assessment Graphs	2001	2016	1,025	16



Thank you!

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